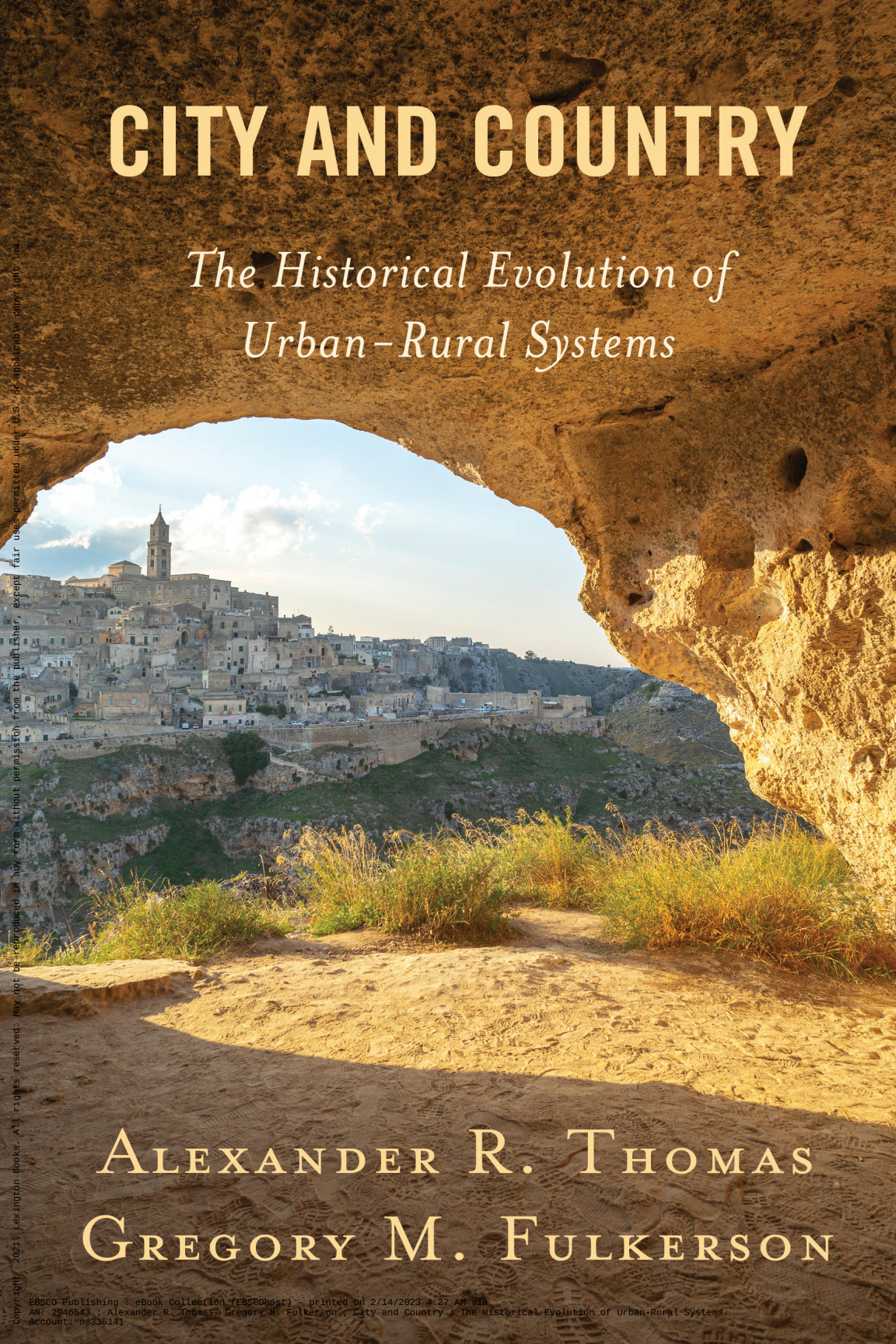
CITY AND COUNTRY

The Historical Evolution of Urban–Rural Systems



ALEXANDER R. THOMAS

GREGORY M. FULKERSON

Copyright © 2021 Lexington Books. All rights reserved. May not be reproduced in any form without permission from the publisher, except fair uses permitted under U.S. or applicable copyright law.

EBSCO Publishing : eBook Collection (EBSCOhost) - printed on 2/14/2023 4:27 AM via
AN: 2946543 ; Alexander R. Thomas, Gregory M. Fulkerson.; City and Country : The Historical Evolution of Urban-Rural Systems
Account: ns335141

City and Country

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

Studies in Urban–Rural Dynamics

Series Editors: Gregory M. Fulkerson and Alexander R. Thomas, SUNY Oneonta

This series focuses attention on understanding theoretically and historically the development and maintenance of Urban–Rural Systems through a spatial, demographic, and ecological perspective. It seeks a blending or reintegration of the urban, rural, and environmental research literatures under a comprehensive theoretical paradigm. As such, we further specify Urban–Rural Dynamics as analysis of human population distribution on social variables, including politics, economics, and culture.

Recent Titles in Series

The Rural Primitive in American Popular Culture: All Too Familiar, by Karen E. Hayden

Urban Dependency: The Inescapable Reality of the Energy Economy, by Gregory M. Fulkerson and Alexander R. Thomas

Urbanormativity: Reality, Representation, and Everyday Life, by Gregory M. Fulkerson and Alexander R. Thomas

Rural Voices: Language, Identity and Social Change across Place, edited by Elizabeth Seale and Christine Mallinson

Reinventing Rural: New Realities in an Urbanizing World, edited by Alexander R. Thomas and Gregory M. Fulkerson

Reimagining Rural: Urbanormative Portrayals of Rural Life, edited by Gregory M. Fulkerson and Alexander R. Thomas

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

City and Country

The Historical Evolution of Urban-Rural Systems

Alexander R. Thomas and
Gregory M. Fulkerson

LEXINGTON BOOKS
Lanham • Boulder • New York • London

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

Published by Lexington Books
An imprint of The Rowman & Littlefield Publishing Group, Inc.
4501 Forbes Boulevard, Suite 200, Lanham, Maryland 20706
www.rowman.com

6 Tinworth Street, London SE11 5AL, United Kingdom

Copyright © 2021 The Rowman & Littlefield Publishing Group, Inc.

All rights reserved. No part of this book may be reproduced in any form or by any electronic or mechanical means, including information storage and retrieval systems, without written permission from the publisher, except by a reviewer who may quote passages in a review.

British Library Cataloguing in Publication Information Available

Library of Congress Cataloging-in-Publication Data

Library of Congress Control Number: 2021018597

ISBN: 978-1-7936-4432-9 (cloth : alk. paper)
ISBN: 978-1-7936-4433-6 (electronic)

♾™ The paper used in this publication meets the minimum requirements of American National Standard for Information Sciences—Permanence of Paper for Printed Library Materials, ANSI/NISO Z39.48-1992.

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

In Memory of Leo Lincourt,
Scholar and Friend

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

Contents

Note on Biblical Quotes ix

Preface xi

Introduction 1

PART I: THE ENVIRONMENTAL DEMOGRAPHY OF URBAN-RURAL SYSTEMS 13

1 Environmental Demography and Urban-Rural Systems 15

2 Classical Urban-Rural Theory 55

3 Contemporary Urban-Rural Theory 81

PART II: FROM THE NEAR EAST TO THE NORTHEAST 103

4 In the Beginning 111

5 Emerging Urban-Rural Systems 133

6 History Begins 157

7 Collapse or Continuity? 187

8 Dynamics Culminating 213

9 World System 243

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

PART III: NEW YORK'S URBAN-RURAL SYSTEM **269**

10 Fur 277

11 Growing the City 313

12 Change amid Growth 347

13 New York and the World-System 385

14 Urban-Rural Dynamics Revisited 407

Further Reading 417

Appendix A: Definition of *Population-Related Municipalities* 425

Appendix B: Coding Downtowns 427

References 429

Index 463

About the Authors 475

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

Note on Biblical Quotes

All quotes from the Torah (first five books of the Bible) are from Richard Elliott Friedman's (2003) *The Bible with Sources Revealed*. All other Biblical quotes are from the USCCB Bible available at http://usccb.org/bible/.

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

Preface

An unsung pleasure of our jobs at SUNY Oneonta is the wooded hilltop behind campus. Mile after mile of marked trails invite us for lunch hour hikes. The terrain is typical of the Northern Catskills, forest astride a long ridgeline tapering to fields below. To the untrained eye, it is a walk that passes through untrammeled nature, but closer examination tells another story.

Our entrée into the woods leads along a trail beside a stone wall in varying states of repair. To this day, it marks a property line dating to the earliest subdivision of the property over 200 years ago. Most of the trees on either side of the wall are only a foot or two wide, indicative of reforestation within the past 100 years or so. Unlike the forest that greeted the earliest European settlers, there are many more sugar maples—the source of maple syrup. Uphill from the wall is a steep ascent to the ridge dotted by rocky outcrops, nearly worthless as farmland but good grazing for sheep in a region once home to a thriving textile industry. The downhill side is a flatter former farm field, the wall the product of plows turning up stones in a desperate bid to farm marginal land. Throughout the miles-long hike, we pass power lines cutting through the canopy, the cleared path now host to black cap and raspberry bushes. Other stone walls greet us further in, sometimes enclosing neat lines of white pines towering over us like giant stalks of maize. The best views from the hilltop are from a 50-foot-wide swath of cleared forest straddling an underground gas pipeline. The College Camp Woods is not a twenty-first-century Walden Pond; it is an urban forest bearing the scars of population impact in the past and present.

During our walks, we have often commented on the contradiction of living in a reforested environment in the shadows of New York City just a few hours away. Oneonta is circled by the smaller cities of Albany, Utica, Binghamton, and the outer reaches of the New York suburbs, now closer to

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

our city than the towers of Manhattan. With over four million people within a two-hour drive, about the same as Denver, it is a wonder to be strolling through any forest at all. The pipeline and electrical lines tell the story, though: resources are gathered from further afield and transported to the great city. As we discuss throughout the work, it is not a new story. In fact, it is *the* story.

Our own lives brought us together as researchers over ten years ago, a new phase in individual trajectories that lead us to this book. For Alex, a childhood that included moves between the New York suburbs and central Florida sparked a later interest in Sociology. Attending college in Utica during the late 1980s and 1990s, he found a city quite unlike the New York of his youth. Utica had suffered decades of deindustrialization and population decline, a "city of broken windows," as he noted in his first book (Thomas 2003; 1). He met Jan DeAmicis, a sociology professor who looked past an awkward working-class youth and encouraged him to a life that, until then, he was incapable of envisioning. DeAmicis noted in many conversations the seemingly intractable dilemma in sociology: the link between micro-sociological processes and macro-sociological structures. Thomas spent the nineties at graduate school in Boston, a city both thrilling and discomfiting for a poor kid from a dirty little upstate town. It was there that he was himself steeped in the macro-micro divide. In his first term, he met Jack Levin, a criminologist known for his stomach-churning studies of serial and mass murder. The two hit it off when Thomas mentioned not Levin's criminological research but rather an obscure book from early in his career: *The Functions of Prejudice*. Thomas absorbed the symbolic interactionism of Levin, but also came under the tutelage of Gordana Rabrenovic, herself a protégé of John Logan. At the time, she was writing *Community Builders*, her study of neighborhood mobilization in Albany and nearby Schenectady. From Rabrenovic, he was steeped in the then-ascendant Neo-Marxism of the Political Economy School of urban sociology. Balancing the macro and micro was Wilfred Holton, a pragmatic and patient researcher engaged in studying the filling of Boston's Back Bay. Holton encouraged a sociology focused on comparative research, and he served as Thomas's dissertation chair. All of these professors were influential in encouraging him toward this work, and no matter the gratitude cannot be repaid enough.

Another influence was a dear friend who, despite holding only an associate degree in Computer Science, was perhaps the most intellectually engaged man Thomas would ever know: Leo Lincourt. The two would spend hours discussing social theory, often while driving aimlessly through the Utica suburbs or sitting in a quiet corner of Doubleday Field smoking cigarettes. It was Leo who introduced Thomas to chaos theory and branches of economics such as Game Theory not typically covered in a Sociology Ph.D. Leo passed

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

after a short battle with cancer in 2017, a spiritual brother and a co-author from beyond.

For Greg, life began in the 1970s in the suburbs of Chicago, where he has only faint memories of snow piled high thanks to a record-breaking blizzard. From there, his family would move to the small rural towns of Derby, Kansas, and Chambersburg, Pennsylvania, eventually landing in Ann Arbor, Michigan. Greg began his scholarly career at Michigan State University, where he would take an interest in Sociology with a Cognate in Environmental Studies. During his graduate studies at Western Michigan University, Greg would pursue questions surrounding the environment, working with Dr. Gregory Howard (Western Michigan University) to whom Greg owes an immense debt of gratitude for introducing him to the world of academia. Along with several other graduate students, he enjoyed a weekly meeting over excellent Mexican food and passionate environmental discussions. At North Carolina State University, pursuing his Ph.D., Greg would develop a relationship with a new mentor, Dr. Ronald Wimberley. It was here that Greg began to make connections between the environment, agriculture, food, and rurality. Dr. Wimberley helped Greg develop an analytical skillset that would lead to the completion of a dissertation on the study of public views—social representations—of food and agriculture. While taking a graduate course with Dr. Wimberley on Rural Sociology, Dr. Wimberley shared his experience attending the American Sociological Association one year, which had the theme: "Cities of the Future." As a proud Rural Sociologist, Dr. Wimberley presented a paper entitled, "Cities of the Future and the Rural Areas that Must Support Them." They all found this hilarious, but also profound. The idea of urbanormativity was growing, though at the time, we were using the term Metrocentrism. Whatever it is called, this added another layer to our concern with the cultural derogation of rural people and privileging of the urban experience. We also learned of sociolinguistic research that was being carried out in rural Appalachia by Dr. Walt Wolfram and his student and friend of Greg's, Christine Mallinson. Christine and Lizzy Seale would go on to co-edit a fascinating book called *Rural Voices* (part of the *Urban-Rural Dynamics* book series). Greg also owes a debt of thanks to Dr. Robert Moxley and his students, Karl Jicha and Gretchen Thompson, who worked tirelessly with Greg on projects surrounding social capital, including two lengthy trips to the island of Carriacou, Grenada. Dr. Moxley taught Greg all he knows about Community Development, and it is from him that Greg first learned about social capital. Toward the end of graduate school, Greg would be joined at NCSU by a bright rising star, Laura McKinney, an incredible ally and friend to whom he will always feel appreciation and gratitude, and with whom he looks forward to continuing collaboration on important projects exploring

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

the world-system dynamics of development, gender, and environmental problems.

After completing his graduate studies at NCSU, Greg encountered a job advertisement for a combined Rural and Environmental Sociologist at SUNY Oneonta. That ad was written by Alex Thomas. After interviewing with SUNY Oneonta, Greg decided to make it his academic home, so he moved with his wife Megan and son Ian to this small upstate city (daughter Laney was born shortly after arriving). Dr. Thomas had already been studying about and theorizing many of the issues that Greg was contemplating in his graduate school days. Alex's books, *In Gotham's Shadow* and *Gilboa*, highlighted the kind of urban-rural dynamic that intrigued Greg, and introduced the notion of urban dependency—the very thing implied in Dr. Wimberley's ASA presentation on rural areas that must support the "Cities of the Future." We (Greg and Alex) would thus find a great deal of common ground, and it is from this point that our collaboration emerged.

There have been many others who have influenced and inspired us through the years. Our colleagues in the Sociology Department at SUNY Oneonta have proven to be fellow travelers along our journey, our co-author on *Critical Rural Theory* Brian Lowe being particularly influential. Elizabeth Seale contributed early ideas to the study of rural communities with some of the Critical Rural concepts that were being developed and presented in our edited book, *Studies in Urbanormativity*. Moreover, as mentioned, Dr. Seale contributed to the *Study of Urban-Rural Dynamics* book series through her edited volume with Christine Mallinson, *Rural Voices*. Also on campus, Fida Mohammad, Leanne Avery, and Jim Zians have been valuable colleagues who contributed to our more recent edited volumes, *Reinventing Rural* and *Reimagining Rural*. Our former colleague and college president, Nancy Kleniewski, has given us food for thought on many occasions. We have shared ideas with a number of people across disciplines who have provided valuable insights, particularly Achim Koeddermann, Richie Lee, Jane Simpson, Paul French, and Dan Payne. We have a vibrant circle of collegial friends we meet at the Rural Sociological Society meetings every year: Stephanie Bennett, Karen Hayden, Aimee Vieira, Tom Gray, and Laura McKinney.

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

Introduction

There has been, for the past generation and a half, a tacit agreement among social scientists upon a post-Marxist paradigm that is in truth neither agreed upon nor Marxist. Our own sociology professors rebelled against the stringent scientism of Parsonian functionalism, branded it conservative, and sought out new directions in social science research. The Political Economy School in Urban Sociology emerged from the insights of such scholars as Harvey Molotch (Molotch et al., 2000), John Logan (Logan & Molotch, 1987), and David Harvey (1973). On a larger scale, Immanuel Wallerstein (1979), André Gunder-Frank (1966), and Chris Chase-Dunn (Chase-Dunn & Hall, 1997) challenged the established order of Modernization theory as well as each other to establish World-Systems Analysis. Later scholars, such as Saskia Sassen (1991), David Smith (1995), and Michael Timberlake (1985), seemingly meshed these literatures into a robust literature focusing on cities as nodes in a massive network of trade.

Furthermore, underlying it all is the carcass of a Neo-Marxism still alive in a post-communist world. We do not aim to argue against the consensus in this book; we argue that beneath the logic of capitalist accumulation is a more fundamental logic associated with urbanization. To see it, we must set aside the consensus and look upon the structure beneath.

THREE PARADIGMS

We were trained in sociology, but today see the rigid disciplinary boundaries in social science and science as an artifact of the twentieth-century university rather than delineating a distinct field of study. Sometime before either of us arrived in college, a consensus formed of a three-paradigm framework in

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

sociology written into every significant introductory textbook. The schema seems an appropriate summary of mid-twentieth-century battles within the discipline. Functionalists were dominant through mid-century. The complexity of their arguments and general positivist orientation was shared with symbolic interactionists. These scholars critiqued the functionalists' methodology: "institutions" were barely measurable and not an appropriate starting point for a proper scientific discipline (Blumer, 1969; Goffman, 1959; Garfinkel, 1996). Interactionists argued that the basic unit of analysis should be social interaction itself and the symbols by which we negotiate the social environment. As the Baby Boomers came to the discipline in the 1960s and 1970s, they rebelled against scientism, stained in their eyes with support for capitalism and American "non-colonialism" colonialism. Conflict theory was not so much born, but its time had come. Today every sociology student learns the paradigms, but the terminology itself rarely escapes the undergraduate classroom. This picture of twentieth-century sociology seems quaintly out-of-place in today's scholarly journals and conferences. In brief, the three paradigms are no longer a useful description of the field as it exists today. They are wholly inappropriate, given an acknowledgment that other disciplines have insights as well.

As late as the 1990s, structural functionalism lived in the ever more complex works of Social theory but has been ever more marginalized since. The intricacies of the social system were described in detail by Talcott Parsons (1937, 1951) as early as the 1930s, building on the work of Emile Durkheim (1984), Max Weber (1958), and Vilfredo Pareto (1991). Much of the scientific terminology found in an introductory sociology textbook today ultimately derived from Parsons, but he is seldom read even in graduate programs. Scholars such as Jeffery Alexander (1988) and Jürgen Habermas (1971, 1984) took up the mantle of functionalism, and in Europe, the work of Niklas Luhmann (1996) addressed the relatively static nature of earlier systems by introducing aspects of Complexity theory. Specific legacies of functionalist thought, such as Strain theory in criminology, continue to enjoy some attention. However, overall, it is unusual to hear the word "function" as anything but a sneer at academic conferences.

A "conservative" structural functionalism is often juxtaposed against a "liberal" or, better yet, "radical" Conflict theory in both introductory courses and the sociologist's imagination. Perhaps the best-known example is C. Wright Mills (1959), "translating" several pages of Parson's prose in *The Social System* into two sentences of plain English. The critique of Parsons and other "grand theories" was explicit: overly complex systems encompassing all the known social universe constructed from strings of other theories were of questionable scientific utility. In short, an essential criticism of structural functionalism is the tendency to construct theory from theory, resulting in grand schemes devoid of empirical grounding.

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

Read through the debates of the 1970s, one might think there was no area of agreement whatsoever. There was a ferocity, for instance, in the way Andre Gunder-Frank (e.g., 1967, 1998) savaged Modernization theory. Underlying the critiques were not only differences in political commitment—although perhaps not to the extent imagined today—but shared assumptions about the importance of social research data. Dependency theory and World-Systems Analysis did not merely critique the Functionalists based on politics but also argued that their vision of the world was more empirically accurate. This critique was true in post-Marxist variants of Conflict theory as well.

That was then. In *Great American City*, Sampson (2012) defends the intellectual contributions of the Chicago School in what may be one of the best histories of social science written, and then summarizes the state of urban sociology today as accepting in broad brush strokes the logic of spatial analysis but adopting the explanations regarding the importance of social processes made by political economists as more empirically accurate:

> Consistent with the original Chicago School, the larger idea is that if neighborhood effects are not merely the reflection of individual characteristics, then presumably they stem from social interactions and institutional processes that involve collective aspects of the community—emergent properties, in other words. (47)

We will examine the ramifications of seeing a community consisting of properties emerging from its members' interactions in chapter 1.

The state of the discipline Sampson describes is not a truce between the functionalists and the Conflict theorists: it is the superordination of both. It is more accurate to speak of macro sociology that empirically tests models rooted in the conflict paradigm that blends with earlier functionalist theoretical insights: segregation resulting from a spatial mismatch and racial discrimination. To the extent this reflects a paradigm, it is more accurate to call it social structuralist. It assumes that social phenomena are best explained by the interaction of forces beyond our control, more mathematical than personal in many cases. Such thinking is evident in functionalism and Conflict theory as well: Marx himself wrote of a capitalist system pushing, even forcing, a capitalist class into the slashing of wages and extraction of surplus labor. Even among the most ruthless capitalists, whatever enjoyment they might derive from such a system does not alter the fact that it is the system itself that pushes them to such behaviors.

The other assault on Functionalist Grand theory was initially highly empirical in focus: symbolic interactionism. Herbert Blumer and Erving Goffman's micro-sociology was more focused on actual lived experience, even to the detriment of systematic research (see Gouldner, 1970; see also Stewart, 1981), but

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

ultimately built on research. Indeed, the ethnomethodology of Garfinkel (1996) claimed an even tighter empirical basis than the Symbolic Interactionists. Inherent in even the earliest observations was the insight that people do not act on reality but rather on their perception of reality. This observation was most thoroughly explored in Berger and Luckmann's (1967) *The Social Construction of Reality*. Summarizing the process of socialization from birth into adulthood, they argue that an individual's understanding of reality is so filtered through such processes that it is more accurate to say that an individual's reality is itself socially constructed. As the 1970s and 1980s passed, this central feature of social life grew ever more important in Social theory, with conceptual tools from the humanities aiding the search for the world's socially constructed nature. By the 1990s, the debate between a social constructionist versus a social structuralist view of the world could be quite contentious. Entire departments were split, and many social science disciplines have found themselves engulfed in the debate. At one university during the 1990s, a Marxist scholar drew his Feminist colleagues' ire simply by posting a sign on his door that read, "Yes, Dorothy, there is a logic to capitalism." Since then, a generation of sociologists has taught three paradigms while creating an academic landscape dominated by only two: *social structuralist* and *social constructionist*.

In actual practice, few if any social scientists take a purist version of either paradigm. Social structuralists acknowledge the importance of culture, with Parsons giving it pride of place in his scheme and Marx addressing it as a superstructure of sorts. For social structuralists, however, culture reflects or undergirds a structure of which it is merely part: it influences reality, and indeed the individual's perception of reality, but it is not reality itself. In contrast, a social constructionist in its purist form sees culture as some component of reality or even the primary driver of that reality. For a social structuralist, the solution to a social problem, such as segregation, might involve the dramatic restructuring of a given economic system (e.g., Marxist revolution that redistributes property or leads to a state takeover of critical infrastructure), resulting in a change in how the system operates. The individual's intentions are important but secondary to the process: attitudes reflect reality as much as they create it. For a social constructionist, the causal arrows are reversed: social structure reflects the culture, and thus the change of culture results in structural change. In practice, most social scientists accept a degree of dialectic between the two, but just as with the nature-nurture debate, most of us default to one view or the other.

ENVIRONMENTAL DEMOGRAPHY

Throughout the writing of this book, we have often found ourselves saying to one another, "and again, Malthus wins." This admission is not because

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

we would identify ourselves as Malthusian. Indeed, reading Malthus reveals keen scientific insights interspersed by desperate moral platitudes. However, we perceive a structural reality that begins and (unfortunately) ends with fundamental demographic realities. Every human is part of the natural world. On average, we all need 2,000 calories per day to survive—even small towns run the risk of outstripping their immediate environment's carrying capacity. We see these assumptions at the heart of environmental demography (see Fulkerson & Thomas, 2021 for a full discussion).

Curiously, in the United States at least and in sociology, the basic research literatures are spread across several sub-disciplines that all too infrequently converse. We have noted the unfortunate split between urban sociology and rural sociology (Thomas et al., 2011). This book argues that urban communities and rural areas are too interdependent to allow for a separate study. Indeed, we see the split as evidence of urbanormativity overtaking a scientific endeavor. The dependency of cities upon rural communities that supply food and natural resources, and indeed any number of manufactured goods for trade, has at times been acknowledged (e.g., Sjoberg, 1955, 1960; Alexander, 1990; Sale, 2000) but all too often is not, or its importance overlooked. This neglect often results in an analytical framework that perceives urban areas as centers of activity and rural areas as residual byproducts—in effect, the places not yet urbanized. Ironically perhaps, we believe that to understand "the city," one must decenter the city as the primary unit of analysis. When one recenters the study of urbanization, rural areas are not so much residuals, but rather cities become nodes in a wider network of environmental production and consumption; in effect, anything not "rural" is "urban." However, it is safer to speak of systems of production and consumption with clusters of population spread amid rural land. Thus, we use the term "urban" to refer to the entire human settlement regardless of internal political divisions. In doing so, we see suburbs as politically distinct neighborhoods that enable one population to separate from another (Thomas & Fulkerson, 2016). This legal separation often produces a range of complications, from a lack of cohesive regional planning to perpetuating racial and class segregation. Nevertheless, we see the entire settlement as "urban" as an aerial photograph of most metropolitan areas fails to show the sharp distinctions between political boundaries that residents on the ground often perceive.

As a network of production and consumption spread across the physical environment, environmental sociology insights are central to understanding how cities function. Such issues as environmental racism, for example, are critical insights for both environmental and urban scholars, and the potential impact of human population growth has similarly been an essential topic for each sub-discipline. We argue that urban areas exhibit urban dependency, a condition that arises when a settlement outstrips its home environment's

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

carrying capacity. Structural reality forces local elites to expand their sphere of influence to access greater rural resources (e.g., farm fields) but, in doing so, gain additional population as well. As hierarchical relations between settlements take hold, they form an urban-rural system, and when balanced, the system can prosper—but prosperity brings population growth, which reestablishes the problem. The urban-rural system expands, often absorbing other urban-rural systems, at which point we can speak of a regionalized urban dependency. The ultimate end of these dynamics is the modern world-system—a super network of component urban-rural systems. It remains to be seen where the cumulative effects of these dynamics lead us, but we fear that, once again, Malthus will win. As such, we see each of these research literatures as reflecting on components of a more extensive study of environmental demography.

MULTIDISCIPLINARY APPROACHES

We envision an environmental demography that incorporates time as a central variable. It is an application of Complexity theory to understand the distribution of population across the environment and its attended impacts. Although we were both trained in sociology, we have come to see the modern university's disciplinary structure as much a hindrance as a help for this endeavor. To understand the dynamics at the heart of urbanization, we have had to venture far outside our formal discipline to familiarize ourselves with the archaeological record. In doing so, we have found the feud between world-systems scholars about the age of the world-system—500 years or 5,000, as noted in one book title (Frank & Gillis, 1996)—to be somewhat naïve. The first cities arose about 5,000 years ago. We have found it necessary to examine the evolution of cities in the millennia before the Bronze Age. To do so requires a radically multidisciplinary mindset, and we have taken insights from anthropology, geography, history, and any number of other perspectives. What has emerged is not a history, and the historian may well be disappointed, nor is it an archaeological study, so the anthropologist will also be disappointed. What has emerged is an analysis of system dynamics as they developed over thousands of years and birthed the world we know today; this is not a complete history of everything.

We discuss the evolution of urban-rural systems, but we do not claim an evolutionary perspective. Complex Adaptive Systems (CAS) grow and change over time, and thus we need to account for time. At any given moment, however, it is individual people who make decisions based on temporally and spatially local conditions, not on some larger evolutionary scheme. Rerun the story and the end changes, and perhaps it does not run at

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

all. We are hampered by a familiar methodological issue: the incalculability of minutiae. It is the accumulation of minute decisions, small coincidences, and seemingly chance occurrences that form our world. No history can be written that can account for it all. We aim to understand the larger system dynamics within which human populations grow, extract resources, and expand across the environment.

We identify four parameters that guide how urban-rural systems develop over time: polity, economy, culture, and environment. These should not be confused with the institutions of structural functionalism (see Parsons, 1951; Luhmann, 1996), but rather are aspects of human populations that necessarily must occur in daily life (i.e., decision making, eating, applying knowledge, and all are taking place somewhere). The parameters are rooted in the biology and cognition of individual humans, and as such, they guide social evolution regardless of scale. As the system evolves through time, individuals' interaction creates the dynamics that ebb and flow through time: societies grow complex but then disperse, markets grow rapidly with new technology but are eventually saturated, and food is plentiful until the population grows too large and must spread out or find new supplies. We look to such structural issues as access to resources and population and see cultural factors as in constant interplay with these factors. As an example, we discuss a cultural byproduct of urban society: urbanormativity.

SOCIAL STRUCTURALISM AND URBANORMATIVITY

The concept of urbanormativity—the cultural phenomenon of considering urban lifestyles and beliefs as "normal and natural," thereby relegating rural life as "unnatural and deviant"—has emerged in its current form as the majority (indeed, 80 percent) of Americans came to live in metropolitan areas (Thomas et al., 2011). As the world recently surpassed the 50 percent urban mark as well, the United Nations has also noted the influence of bias in favor of metropolitan areas and cultures:

> The Special Rapporteur regrets that rural cultures are often not recognized as cultures and risk being undervalued, even though nearly half of the world's population is rural. She will bear in mind the importance of the cultural rights of persons living in rural areas and be sensitive to bias towards urban contexts, what has been labeled "urban normativity." (Assembly, February 3, 2016)

Much of the research literature that has developed around urbanormativity has focused on the cultural phenomenon. As a cultural phenomenon, we stress that it is rooted in social structural dynamics, specifically the process

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

and environmental impact of urbanization itself. Indeed, in a highly critical review of one of our earlier works, Brown (2015) stressed a need for a greater empirical test of the relationship between rural subjugation and urbanormativity. This book, by viewing cultural practice within its deeper context of power relations, economic networks, and environmental realities, at least in part answers that call.

The modern foundations for studying such urban-rural dynamics were developed initially from urban sociology's Political Economy school. Early work developed an understanding of "urban" and "rural" related to different modes of production, in contrast to earlier demographic or geopolitical viewpoints. Building on recent work that saw cities as nodes in larger networks (e.g., Sassen, 2001; Smith & Timberlake, 1995), Thomas (2005) argued for cities' interdependency with their rural hinterlands. They needed resources not available in urban environments at levels capable of supporting the population, especially water and food. This condition of urban dependency on the hinterland required urban elites to look afield for resources and obtain them by any means necessary. This framework was further developed by examining the archaeological record of pristine urbanization in Southwest Asia (Thomas, 2010). Urbanormativity is the ideological justification for extracting resources from rural areas. In effect, rural populations accept the dominance of urban interests and mechanisms (e.g., the "market," urban products themselves) and produce a surplus for urban consumers (Thomas et al., 2011; see also Lichter & Ziliak, 2017).

Urbanormativity has been a useful concept for understanding the portrayals of rural life in such media as in film (Hayden, 2014), as a complicating aspect of identity for LGBTQ youth (Stapel, 2013, 2014), and protecting women's health in the legal system (Pruitt & Vanegas, 2015). Similarly, the concept has been tied to understanding differences in how "locals" and urban "transplants" to rural towns see environmental issues (Hamilton et al., 2013; Boag et al., 2017). Urbanormativity has been debated with regard to public policy in a back and forth between Meyer and Graybill (2016a, 2016b) and ourselves (Thomas & Fulkerson, 2016). Issues of community development throughout the world have been explored by Aimee Vieira (2015), Stephanie Bennett (2015), Martin Phillips and Darren Smith (2018), and in the readings edited by J. I. (Hans) Bakker (2015). Similarly, it has been important in education (Bates, 2016; Prest, 2016; Reardon & Leonard, 2018; Avery & Sipple, 2015; Avery & Fortunato, 2016). Together, the emerging literature points not to culture influencing structure, but structure and culture in a dialogical dance as capitalism both depends upon and defines the urban-rural dynamics at its core.

The modern world-system is founded on capitalism, but capitalism is itself the latest incarnation of the social dynamics put in place by urbanization. It

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

is dependent on its expansion for both resources and markets, and a failure to do so will lead to crisis and eventual collapse (Harvey, 2011). In other words, capitalism, as we understand it, is engaged in the drive for resources set in play by urban dependency. As such, it is not surprising that it carries with it the cultural baggage of urbanormativity. Urbanormativity is seen in various settings, and a prominent trio is that of law and public policy, popular culture, and real estate preferences and settlement patterns.

The centrality and normality of metropolitan existence are central to the functioning of public policy. Urbanormativity operates in the framing of the abortion debate. The placement of clinics in urban centers and relative lack in rural communities is a significant factor in limiting abortion rights (Pruitt & Vanegas, 2015). The disadvantage faced by rural women concerning abortion rights is only part of the equation. However, residence in a rural community disadvantages rural women in various ways: in the legal response to parental rights, domestic violence, and the ability to escape poverty (Pruitt, 2007, 2008a, 2008b; Porter, 2005). Although widely considered to be an urban problem, rurality similarly affects access to healthcare and social services (Thompson et al., 2014; Zians, 2016; Statz & Evers, 2020), legal services (Pruitt, 2013), and the completion of high school (Wilcox et al., 2014) and college admissions (Stevens, 2009).

Urbanormativity similarly influences how gender and sexuality are experienced in rural settings, often disadvantaging the rural as urban expectations of normality interact with prevalent gender stereotypes and homophobia (Stapel, 2014; Pruitt, 2007). Residents of rural areas are sometimes presented as deviant because of their rurality, finding their way into horror films and similar fare as the subjects of fear and derision by the dominant urban and suburban public (Hayden, 2014; Thomas et al., 2011). Rural communities are simultaneously perceived to be more pure and natural than urban communities, a factor in such diverse phenomena as the location of health tourism facilities (Bennett, 2014) to the mythology surrounding the "invention" of baseball (Springwood, 1996).

Urbanormativity also influences the settlement structure itself (Thomas et al., 2011). Rural communities are at times regarded as backward or develop stigmas for inbreeding, thus becoming the butt of jokes in popular culture, even when the communities being ridiculed are suburbs (Hayden, 2014) or even medium-size cities (Thomas, 2003). This phenomenon betrays the fact that rural deviance's urbanormative assumption is more cultural assumption than structural reality. Indeed, millions of suburban homes have been built with the hope of achieving some sort of rural lifestyle amid a low density but urban environment (Jackson, 2009; Hayden, 2014). The appeal of rural goods even helps sell food in urban environments (Ching and Creed 2014). In essence, urbanormativity reflexively shapes the urban environment that structures urbanormative culture.

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

THE BOOK

City and Country is divided into three main sections. In part I, we introduce the model that informs the environmental demographic CAS framework drawn upon throughout the book. A fundamental assumption is that the basic needs of individual humans are found at all levels of society. At higher scales, these traits must accommodate ever greater complexity. It is an axiom in Complexity theory that at higher scales, CAS exhibit emergence, or the introduction of traits that were not necessarily evident at lower levels of complexity. In other words, an approach that relies on the simple aggregation of effects cannot capture the nature of CAS, and this is increasingly true at greater levels of complexity. Each human needs, on average, 2,000 calories per day to survive, and an aggregation of ten humans will need 20,000 calories per day. However, a settlement of 100,000 will require more. At that scale, additional energy is required to transport resources from the hinterland to the core—historically, this was provided by animals and today by fossil fuels. An urban-dependent settlement grows in complexity due in part to the simple addition of more people. This concept is true for other parameters as well: every person must make decisions, but as the number of individuals increases, this introduces emergent characteristics—a modern state makes decisions as well, and although this decision making is also an aspect of polity, it is quite different from an individual's decision-making process. In chapter 1, we discuss the model in our theoretical terms, and in chapters 2 and 3, trace how past social scientists have addressed varying aspects of the model in relation to urban-rural research questions. The goal is to show the core points of contention as well as highlight important insights that have accumulated from the last 200 years of scholarship.

In part II, we trace urban societies' earliest development from the Fertile Crescent to the colonial settlement of the northeastern United States. There is no particular reason to use this specific trajectory in scientific terms: we could just as well start with the emergence of complex societies in Mesoamerica or China and tell a similar, though not identical, story. We begin with the Fertile Crescent region as it was the earliest and most influential on subsequent European societies that eventually colonized the northeastern United States. However, the overall narrative cannot be discussed without mention of these other core regions as contact between them and the Fertile Crescent system took place. Our approach is not perfect. At various points, the reader will yearn for a more detailed discussion of parallel developments in other parts of the world or even grow irritated by the rapid sweeps through time that, by definition, leave undiscussed large swaths of the human story. We remind you that this is a story of complex system dynamics, not a general history, and direct the dissatisfied reader to suggested readings at the end of the book.

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

In part III, we discuss in greater detail the growth of the New York urban-rural system. New York was home to a fairly complex mix of societies before the arrival of Europeans, and the political organization of the Iroquois was itself quite impressive. The European system was expanding into North America. New York is discussed as an outpost of this system and concomitantly a settlement of conquest. As the four chapters continue, the relationship between New York and its hinterland is discussed in greater detail than was possible for the sweeping discussions of part II. Chapter 13 of this section discusses the globe as New York's hinterland, focusing on the status and struggles of rural populations the world over laboring to benefit increasingly large global cities.

Chapter 14 reviews the insights of the book and its lessons for general Social theory. We also discuss ramifications for future research, both in the social sciences and beyond. Although our focus is on human societies and urbanization, many of the concepts we discuss—caloric wells and resource horizons—can, in principle, be applied to understanding the socioecology of any sedentary species that dramatically alters its environments, such as bees or beavers.

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

Part I

THE ENVIRONMENTAL DEMOGRAPHY OF URBAN-RURAL SYSTEMS

Humans and the societies we create are part of the natural world. Environmental demography starts from this seemingly obvious assumption. As part of the natural world, human populations are nurtured, influenced, and constrained by the natural environment. In this part of the book, we outline the import of this observation to social scientific theory. We begin with two further assumptions: (1) that human organizations, from small primary groups to entire societies, are complex adaptive systems; and (2) that the daily caloric need of each and every one of us has been the central driving force of our social evolution over the past 20,000 years. We elaborate on the wider significance of these insights in chapter 1, "Environmental Demography and Urban-Rural Systems." Of the three chapters in this part, this is the most central. In chapters 2 and 3, we examine the way social theorists, from Thomas Malthus and Adam Smith, through Karl Marx and Max Weber, through to the present, have dealt with the dynamics discussed in chapter 1.

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

Chapter 1

Environmental Demography and Urban-Rural Systems

Nearly every human on Earth today lives an existence orders of magnitude different from those of our earliest ancestors. Thus, it may at first seem surprising to say that the fundamental biology of humans has changed very little in the fifty thousand years since the emergence of our particular subspecies, *Homo sapiens sapiens* (Tattersall, 2012). Human settlements and overall societies are not the product of biologically evolved individuals but are instead the result of uncountable haphazard and accidental interactions between human populations and the environment. In other words, they are the result of social forms of adaptation—cultural, economic, and political. Human achievement is cumulative and accrues unevenly over long spans of time. Our current state is the result of humanity's evolving experiment with social organization and settlement, resulting from millennia of trial and error. We feel compelled to begin with a reminder that, while populations have changed remarkably, individuals have changed little.

The study of population and environmental interactions—*environmental demography*—examines the full range of history, from nomads traversing the natural landscape, to the emergence of sparse agrarian settlements, and on through the most densely settled urban areas trading globally with distant rural lands and workers (for an overview, see Fulkerson & Thomas 2020). While this may be familiar terrain to urban and rural scholars, what sets our approach apart is a focus on complex adaptive systems, whereby the urban and rural are viewed to exist as mutually interacting parts of an overarching and encompassing system we refer to as an *urban-rural system*. As we explore in this and in chapters 2 and 3, scholars have devoted sustained attention to understanding the process of urbanization for hundreds of years. At various times, this body of theory has considered the driving political and economic forces giving rise to cities, investigated the natural limits to

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

population growth, theorized the driving forces of urban migration, reflected on the social interactional and cultural consequences of urban and rural life, mapped and investigated the spatial forms of urban organization both internally and externally, and sought to uncover the underlying principles of sound urban development and planning. A more modest level of scholarship has been given to studying social changes in the rural countryside, either independent of or resulting from urbanization.

For those readers interested in touring the evolution of urban theory, we chronologically trace developments from the political economy of the eighteenth century through contemporary post-modern critiques of urban theory in the 2000s over the subsequent two chapters. We offer these chapters to show how urban-rural scholarship has evolved, ultimately stalling out with a dearth of new ideas. We believe this book's ideas add new life to some of the centuries-old questions of urban-rural systems. For those who wish, you may bypass these chapters and jump directly into the historical-comparative tour of human history demonstrating the evolution of urban-rural systems. The present chapter draws on prior theories while offering distinct contributions owing to the simultaneous consideration of urban and rural, and of ancient and contemporary history, as shown in parts II and III of this volume.

COMPLEX ADAPTIVE SYSTEMS

One thing that sets this approach apart from earlier scholarship is the adoption of Complexity theory as an organizing framework. This approach sees urban and rural as mutually interacting parts of an overarching and encompassing Complex Adaptive System (CAS) (Thomas & Fulkerson, 2019). Viewed in this light, we can begin to ask questions not only about the urban and rural as separate entities, as has heretofore been a limiting feature of urban and rural scholarship, but also as interconnected sets of Political, Economic, Cultural, and Environmental (PECE) exchanges and social relations.

As with any CAS approach, our focus on urban-rural systems carries with it a concern for two somewhat underappreciated concepts in social science: *time* and *scale*. Time is, of course, at the heart of history, especially for those specializing in event structure analysis and the stuff of good science fiction in the guise of thought experiments where, for instance, Hitler was victorious in World War II. All systems evolve through time, events unfolding in seemingly chaotic means, and emerging from underlying dynamic subsystems whereby logical sequences of action result in seemingly illogical outcomes. *Scale* refers to the magnitude or order of a system within the grand totality of the universe, from a galaxy to individual star systems, on down to the ecosystems of planets, human settlements, and individuals. Systems

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

reflect the dynamics and parameters of their subsystems that are magnified at higher levels. We ourselves are subsystems of ecosystems, while simultaneously higher-order systems are composed of subsystems that function within us: circulatory systems, limbic systems, microbial ecosystems, and so on. As these subsystems interact, they create organisms that are greater than the sum of their parts, and so we should not be surprised that urban-rural systems cannot be reduced to mere aggregations of sub-parts (Lansing, 2003).

We see environmental demographic systems as encompassing "such diverse processes as the prebiotic chemical reactions that produced life on Earth, biological evolution itself, the functioning of individual organisms and ecological communities, [and] aspects of human cultural evolution" (Gell-Mann, 1994, 18). As part of nature, humans are subject to natural laws that govern behavior and can be compared to other animal species such as other Great Apes. The complexity of such systems creates patterns of order and chaos that extend well beyond the mere aggregation of individuals, creating a system-level phenomenon called *emergence*, whereby the system itself develops a level of agency. Emergence is associated with *self-organization*, or the capacity of individual components—for example, humans—to spontaneously organize themselves into higher-level systems, such as a dyad, triad, or larger organization (McMillan, 2004; Byrne, 1998; Eve et al., 1997). Such behavior involves learning and adapting to new circumstances. As time progresses, circumstances in the external environment require the system to recognize such changes and create new modes of behavior that will adapt to such changes. Not surprisingly, *co-evolution* with other systems is frequent: biological changes in the human brain and throat co-evolved with human culture and language, which in turn influenced genetic fitness in future generations (Durham, 1991). Put simply, someone with good language abilities is unlikely to reproduce with someone who cannot talk.

As a result of emergence and self-organization, systems develop *collective agency*—a collective sense of purpose or "we" feeling—that enables action on behalf of the whole. For example, a "state" declares and wages war, a "corporation" manufactures goods, a "community" fixes its roads, and a "team" plays a sport. Though composed of individuals, the loss of one ultimately entails a replacement by another so that the system continues in much the same manner as the flaking of skin from your arm does not affect the functioning of you as an individual. For this reason, a higher-level system such as a state or corporation cannot be considered as a "person" and vice-versa. Understood in this sense, urban-rural systems are subsystems of Earth's biome (Lansing, 2003). As such, the theory of urban-rural systems we offer takes the roles of biological and environmental dimensions of human settlement very seriously, in addition to the social and cultural. We turn

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

first to a brief discussion of the ultimate urban-rural system: the capitalist world-system.

THE WORLD-SYSTEM AS A COMPLEX SYSTEM

Since World War II, the study of CAS has spread, rather dynamically, throughout the sciences. It is seen in Chaos theory in mathematics, with colorful fractals serving as screensavers during the 1990s as a very visible manifestation of this trend. It has aided in the refinement of weather forecasts and global warming models in meteorology and has been applied to a whole set of other scientific questions (Gleick, 1987). And for our purposes, it has been applied to the study of world-systems (see Wallerstein, 1979; Wellman, 1979; Craven & Wellman, 1972). The literature on complex systems is, well, complex, but several characteristics of the world-system as complex systems are apparent.

In addition to those previously noted, the first of these characteristics is that of *autopoiesis*. The concept refers to a complex system's ability to create the components out of which it is perpetuated; the classic example is that of a cell (in biology) producing the components that reproduce the cell, such as nucleic acids, and so on. An autopoietic system thus is continually regenerated and thus new while at the same time in continual existence. Maturana and Varela (1980) note that

> An autopoietic machine is a machine organized (defined as a unity) as a network of processes of production (transformation and destruction) of components which: 1) through their interactions and transformations continuously regenerate and realize the network of processes (relations) that produced them; and 2) constitute it (the machine) as a concrete unity in space in which they (the components) exist by specifying the topological domain of its realization as such a network. (78–79)

One may immediately recall the description of capitalism by Schumpeter (1984) as "creative destruction," but the dialectics so famously demonstrated by Marx (1981) are also brought to mind.

Discussions of the world-system structure have, frequently without using the language, stressed the system's autopoietic qualities. Like the capitalist economic system itself, the world-system is in a continual state of reemergence from its own operations. Investment does not so much solve an economic issue but rather continues the system so that additional investment will again be necessary. The continual cycles of investment and decline are also evidenced most graphically in the physical structure of many cities,

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

particularly capitalist cities such as New York. In the central business district, new investment in a building has a useful life, necessitating an occasional rehabilitation and eventual replacement—this is seen, for instance, in the gleaming office towers of Fifth Avenue that have replaced the mansions of the late nineteenth century. However, such replacement should not be seen as inevitable: in many American cities, rather than just the downtown buildings being replaced, entire districts are replaced as suburban office parks take the place of the once vibrant downtowns (see Garreau, 1992). In either example, however, it is the system itself that provides the basis for their replacement.

The second characteristic of the world-system is *emergence*. Like all social systems, the world-system's basic aims are actually quite simple: the provision of human needs (Thomas, 2010). There are basic needs common to all humans that must be met and act as parameters that guide social evolution. As we note and will discuss in greater detail below, the PECE parameters (polity, economy, culture, and environment) that guide system evolution are rooted in individual behavior that takes on new characteristics at higher levels of scale, from the small group level to larger settlements, societies, and the world-system as a whole. At higher levels of scale, each basic human institution displays characteristics that may not be apparent at simpler levels. In other words, new characteristics emerge from fairly simple traits, though with increasing complexity.

An example of an emergent characteristic is urban dependency. A community with a relatively low population can often live within the boundaries of its local resource base. This is why, assuming a stable resource base, an agrarian village can survive for many generations with relatively little change; indeed, this was exactly the case as cities first began to develop in southwest Asia. At higher levels of scale, however, as populations increase relative to the local resource base, communities become dependent on their hinterlands for resources. Success in acquiring additional resources typically results in more population and, thus, a need to acquire even more resources by extending greater influence over the hinterland, extending trade networks (Thomas & Fulkerson, 2020).

The third trait of world-systems is *dynamic growth*. Systems grow dynamically based on two basic patterns: *reflexivity* and *path dependency*. *Reflexivity* refers to the creation of feedback mechanisms built into the system. As such, the system becomes self-referential. This creates difficulty in measurement as individual humans are aware of the measurement device (a survey or even a researcher doing fieldwork) and adjust their behavior accordingly. Similar to Werner Heisenberg's *Uncertainty Principle* in quantum physics (Sen, 2014), this means that the act of measurement can potentially alter the measurement. This trait is part of the system's essential operation: interaction with the environment, and the ability to alter behavior based on the perception of the

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

environment, is a survival technique for all animals and not a small number of plants. This also means that as the system as a whole grows, individuals learn from past experience or, in the case of animals capable of culture (humans, but others as well), the accumulated knowledge becomes part of the environment and influences the future direction of systemic evolution.

A complex system exists in time and evolves new states based on the previous states—path dependency. As such, the ability to rerun system evolution will not necessarily result in the same result. In the social sciences, this is generally referred to as the current state being contingent upon the previous states or states. For example, the current state of a particular cultural attitude toward the proper roles of men and women is contingent upon the evolution of such beliefs over time, even over thousands of years.

The world-system's final aspect as a complex system is perhaps already evident from this discussion: complex systems exhibit *scaling*. The world-system is an accumulation of many separate subsystems that each share a similar structure. Just as individual humans must make decisions, small group dynamics must exhibit some ability to make decisions—often through some combination of intra-group negotiation or episodic leadership. At higher levels of scale, bureaucracy may be viewed as an emergent characteristic, but the basic structure—the need for polity—remains intact. Not surprisingly, the city's basic structure is similar regardless of the size of the city (within a given cultural context), and the basic structure of subsystems within the world-system exhibits a fundamental similarity (West, 2017). To further understand the specific structures that human societies take on as CAS, we need to begin with humans themselves.

HUMANS AS BIOLOGICALLY ADAPTIVE

Environmental demographic systems involve populations of biological humans interacting with one another in pursuit of particular aims. Although the root is the individual, it must be understood that humans are interdependent—so much so that our biological constitution evolved to assume interaction with other humans and the environment at large. In contrast to other animals, humans are biologically predisposed toward maximal behavioral plasticity: the ability to modify behavior in response to external stimuli (West-Eberhard, 2003). Of course, in the natural world, sociality does not demand social learning as biology can substitute. Wilson (2000) demonstrated that social insects are quite adept at complex social behaviors, including communication, social hierarchy, and a complex division of labor. For such social animals as ants and bees, however, the biological root of their sociality relies too heavily on particularistic adaptations to specific

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

environmental niches—the result is a seemingly infinite number of species of ants or wasp or other social insects as their adaptation to new environments often result in speciation. In contrast, mammals have an evolutionary history of developing the cerebral cortex to allow learning that, in effect, is capable of "overruling" genetic coding. The result can be seen throughout Mammalia but is particularly evident in Great Apes: there are comparatively few species, and the most successful of these—*Homo sapiens sapiens* —relies heavily on learning that it is tempting (but not accurate) to deny a biological basis for human behavior entirely.

The closest living relatives to humans genetically are two species of chimpanzee: *Pan troglodytes* (Common Chimpanzee) and *Pan paniscus* (Bonobo). Humans share about 99 percent of their DNA with both species, who share 99.6 percent with each other, making the three species more similar to each other than any other animal (Prüfer et al., 2012). Indeed, the species are so similar that it has been suggested that all three be classified in the genus *Homo* (Wildman, 2003; see also Diamond, 2006). There are four subspecies of the common chimpanzee, each concentrated in a different area of central and western Africa, but no subspecies of bonobo. The relationship with humans is so close that they are vulnerable to many of the same diseases, such as influenza and the common cold. Indeed, it appears that the most virulent form of HIV, the virus that causes AIDS in humans, originated with chimp populations in the region of Cameroon and the Congo (Gao et al., 1999). Politics among chimpanzees look rather similar to that of humans, competing as they do over not only for food and sex, but over position within the larger social group (de Waal, 2007; Goodall, 1996; Peterson & Goodall, 2000). Not surprisingly, they have been observed using medicinal plants in the wild and using both wood and stone tools. This knowledge is cultural: chimps in some regions of Africa build a stick in order to use it to lure termites out of their mound and eat them; the stick must be selected for the task and then carefully transformed into the appropriate instrument. In other regions, this toolmaking technology is not part of the culture. Similarly, in some regions, chimps use stone tools—specifically a larger stone as a base and a smaller hammer stone in order to crack nuts and extract the contents inside. These are not technologies that chimps learned from humans, either: a 4,300-year-old archaeological site in the Ivory Coast demonstrates that chimps were capable of making these cognitive and cultural leaps on their own (Mercader et al., 2007). The authors of the study even speculate that both human and chimp stone tool technology had, in a sense, evolved together.

Chimpanzees seemingly exhibit both extremes of human behavior: a capacity for love and a capacity for violence. Both are most apparent in the common chimpanzee. Common chimps form stable social groups led by a

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

dominant male with privileged access to a harem of females; other males are typically around and have sexual access to females as well. Females tend to their own and others' offspring, the youngest clinging to their mothers' backs in a manner similar to that of other primates. Males hunt for food in sizable groups, coordinating their actions to capture prey. On a number of occasions, these same groups of males have been observed hunting down the offspring of rival males who had been recently vanquished, the infanticide evidence of the extremes of violence that chimpanzees occasionally exhibit.

Chimpanzee society is based on social rituals: regularized behaviors that reinforce social roles and behaviors between individuals. Individuals reinforce affection for one another through various grooming rituals, for instance, a practice with not only a social significance but a practical benefit of ridding hair of insects. Chimps also have culturally specific rituals of obeisance to those more powerful than themselves. Ritual behavior is utilized to reinforce social relations because chimps, like other apes, actually exhibit *less* sociality than do monkeys and many other species. Most monkey species appear to form strong emotional bonds with members of their own family and wider society, and consequently, many monkey societies grow into the hundreds. Ape social groupings tend to be smaller, their members being more likely to seek alone time or eschew social contact altogether. Whereas gibbons most often choose a mate for life, for instance, they also tend to avoid extensive contact with other individuals and tend not to seek out new social contacts even for sex. Orangutans are even more likely to avoid social contact even with those with whom they mate, preferring relative isolation instead. Although chimps and gorillas are arguably more social, they too seek out alone time and need constant reinforcement of social relations. In short, in contrast to monkeys, lemurs, and many rodents, the biological mechanism that forms social relations, the feeling of affection and love, wears off more rapidly in apes and is thus in more or less constant need of reinforcement (Maryanski & Turner, 1993).

Perhaps the most interesting example of chimp social ritual is found among bonobo sexual behavior. Bonobos spend much of their day foraging for food and having sex with one another. The frequency of sex is extensive and widespread throughout the social group, with individuals having sex with others in order to reinforce a sense of emotional attachment to one another, for political position, and for something to do. In short, for the same reasons that humans engage in conversation. The only apparent sexual taboo is sex between a mother and her son; any other combination is found, from sex between members of the opposite sex to that between members of the same sex, from sex between unrelated individuals to that between those closely related. All manner of sexual activity is also found, from conventional vaginal sex to oral sex to anal sex. Not surprisingly, bonobos are the only species

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

besides humans to utilize the missionary position for sex. Nevertheless, all this sex has a social function: it reinforces the emotional bonds between individuals and, networked across the entire group, strengthens group cohesion (Hohmann & Fruth, 2002).

We contend that humans are, like our closest living relatives, animals and thus neither good nor evil, rational nor instinctual. Given the wealth of research on the linguistic and cognitive abilities of other Great Apes, we would posit that debate should not so much assume that we have (or have not) *underestimated* other apes but rather that we have *overestimated* humans. Humans' impressive abilities are elaborations of those of our ancestors and made possible through system changes as our ancestors were shaped by evolutionary selection in favor of ever-greater behavioral plasticity. Other mammals, particularly apes, have varying degrees of these same adaptations because they were present in our common ancestors millions of years ago.

The ability to participate in a given behavior does not rest on one particular attribute but rather arises out of an organism, as a complex system, dynamically enhancing the abilities of subsystems to create new behaviors. For example, considerable evidence exists for other great apes' ability not only to understand language but to think in cognitively complex ways (de Waal, 2005). Several species have demonstrated the ability to utilize sign language and/or a keyboard that allows an individual to communicate. Nevertheless, even in chimpanzees, the vocal cords are not sufficiently aligned to allow for the full complexity of human speech, and human language evolved among organisms capable of speech; even when another species has the same cognitive ability, the morphological difference in the throat limits the ability of the other species to communicate in a human way. Add to this the fact that humans have more cognitive abilities than other apes, and the difference between species is somewhat more straightforward. However, language is arguably the most complex cognitive function humans regularly engage in, and although an important part of behavior, it is certainly not the only component of behavior (Friederici, 2017). Much human behavior takes place in a manner that conserves the energy of thinking: learned routines and habits, ritual, and yes, instinct.

Our starting point, then, is a big-brained primate with sufficient cognition to override genetic coding (behavioral plasticity, and ultimately culture), to learn and remember at a higher level than other primates, and with a unique set of adaptations for communication that enables us to transfer considerable knowledge from individual to individual. The interactions of these individuals are intended to meet human needs. Since all humans have roughly the same abilities and requirements, they form networks across time and space that reflect their basic biological constitution.

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

HUMANS AS SOCIALLY ADAPTED

Like our primate kin, we humans have a set of biological tools that create a foundation for adaptability, but these are complemented by a sophisticated array of population-level social adaptations that allow us to form a beneficial relationship with the environment. Other primates share this quality, but it is the complexity of human adaptation that sets us apart.

At its most basic, the *economy* aims to satisfy the population demand for goods and services, such as the necessities of food and water and luxury items that transcend basic needs. In the pursuit of these ends, we must decide how to organize production, distribution, and consumption. This need for decision making establishes the need for our second parameter: *polity*. Decisions that have consequences for the distribution of resources in the economy are fundamentally important political decisions. How power is distributed within a given population will have consequences for how the economy is arranged. The third parameter encompasses the ability to learn, communicate, and transfer knowledge, and that is *culture*. Both the economy and the political system are shaped by values and ethics that have a foundation in cultural beliefs and norms. Together, these three parameters interact with the fourth and perhaps most fundamental parameter—the *environment.* This primarily includes the natural environment, which we see as holding the total available energy supply that humans, not unlike other non-human populations, must access to survive and thrive. The other three parameters are often encoded in the built environment: political expressions in the form of government buildings, cultural expressions in the form of museums or houses of worship, or economic expressions as factories or of economic inequality in the form of spatial segregation.

From the interaction between and within these parameters emerge three environmental demographic systems: (1) nomadic foragers, who comb through the natural energy reserves as they occur; (2) agrarian farmers, who cultivate energy supplies by fostering plant and animal growth; and (3) urban-rural systems in which urban areas exchange manufactured products for natural resources harvested by rural producers. These systems have historically weathered ever-changing threats (e.g., big animals, aggressive humans) and opportunities (e.g., food, willing sexual partners). As environmental demographic systems evolve over time, they are not shaped by static social institutions but by dynamic parameters. These dynamics will be revisited often throughout parts II and III, and we now offer a closer look at the core PECE parameters.

Polity

Herbert Blumer (1969) long ago noted that humans are social creatures and unfit as a unit for social scientific analysis. Instead, it is the interactions

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

between individuals within populations and, by extension, their environment that are the starting points for analysis. Similarly, the parameters of environmental demographic evolution are so intricately entwined that there is no natural starting point. As populations seek ways to consume resources found in the environment, they organize economic activity while drawing on cultural knowledge. The decisions that are made in the end are political, drawing on the power structure that exists within the population, from influential individuals to small groups, and sometimes involving the whole collectivity. Power is dispersed in multiple ways, as is the exercise of power. We will consider these variations below.

Individual Decision Making

Individual decision making is not purely rational if, for no other reason, rationality relies too heavily on emotions. Much decision making is intuitive, subject to quick decisions, and often falling back on habit—this is referred to as "system 1" (Kahneman & Tversky, 1979; Kahneman, 2011) thinking. In some cases, a more conscientious effort will be made utilizing available information and analysis—system 2 thinking—and this is what most people would consider rational thought. System 1 decision making constitutes most of our day-to-day lives as it is the realm of habit and snap decisions. One would think that driving would be near impossible without it. System 2 decision making relies on the information at hand, but information is often insufficient or lacking entirely—this condition is referred to as "bounded rationality" (Simon, 1991). In addition, one should be calm in order to analyze the information: this is not a lack of emotion, however, but rather a particular emotional state that favors analysis.

In interaction with the environment, an individual will form cognitive associations between particular stimuli and neurological responses that form a biological basis for future decisions (Kahneman, 2011). For example, a past experience of eating a particular fruit that resulted in a stomachache will predispose the individual against eating the same fruit again. The endorphin rush created during sexual intercourse will predispose an individual toward wanting to be with that person again in the future. This learning, much of it derived from the culture, guides decision making for the individual and the group. The individual will often have preferred environmental stimuli, such as food or a particularly aesthetically pleasing location. The interaction with such stimuli, for example, eating raspberries, will trigger an endorphin rush that becomes associated with the stimulus that enables the individual to remember in the future. Even when a preferred stimulus is not available, the individual will often be satisfied with a utilitarian replacement, for example, eating blackberries, thus triggering a neurological response that enables

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

memory. It is thus functional for the individual to satisfice as this produces a desired neurological response and cognitive association. As part of the individual's environment, the presence of other humans is processed in much the same way.

Small Group Decision Making

The introduction of a second individual allows for social interaction between the two but also complicates decision making. The basic structure of individual decisions—system 1 and system 2, bounded rationality, stimuli-response, and past experience—remain in place for both individuals, and so acting in concert with one another as a collective adds complexity. Decision making is easiest and most efficient when individuals agree, and this agreement is the basis for *hegemonic power*: the "ideological predisposition on the part of the masses (or an individual) to conform to the demands of the powerful" (Thomas, 2010, 28). In addition to individual decision making, some process for deciding which individual will prevail in a disagreement over a course of action must take hold if the collective—in this case, a dyad—can function effectively. An obvious solution, and one that is biological, rests on the differential size (dimorphism) of the individuals involved: the bigger individual can better exert force to make the decision. *Coercion*, or the use of force, requires an outlay of energy and may not always be the most efficient response; indeed, compromise often is the preferable solution as it preserves energy and maintains a positive social relationship in the future.

In addition to the cost of energy when coercing another individual, the neurological response in both the aggressor and the victim can potentially result in a long-lasting cognitive association that inhibits social interaction. In some cases, the aggressor may prefer that the victim of aggression continue in such a state—a state of fear of future aggression—as this fear could inspire in the victim a desire to act in the aggressor's interests at a future date. This choice on the part of the victim to conform with the aggressor's wishes should not be confused with mutual agreement as it is founded in a coerced relationship: it is merely that the victim may seek to evade a negative experience (e.g., violence) by conforming in advance. Indeed, as a result, victims of violence have been known to sympathize with their aggressors, a condition known as *Stockholm Syndrome* (Adorjan et al., 2012). Coercion need not always be a direct act of violence, either: placing another (or threatening to do so) in a disadvantageous political circumstance vis-à-vis others is also coercion, as is the withholding (or threatening to withhold) of economic necessities (e.g., food, water, etc.). In order for the threat of coercion to actually work reliably, there must, from time to time, be demonstrations on the part of the aggressor that they can effectively follow through on such threats.

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

In many interactions, a purified air of hegemony over coercion gives way to some combination of both. Even at the scale of a dyad, differences in status or ability may hinder agreement as individual self-interest inhibits it. Such differences could be physical (e.g., dimorphism), but they could also be socially constructed (e.g., race, gender). However, even without status differentiation, social interaction involves considerable facework intended to develop and maintain a favorable status. Goffman (1959) noted that facework typically involves the individual playing a role for the other individual (frontstage) that is related to but not the same as how one feels about her or himself (backstage). Put another way, one's inner self is not exposed to others as the interaction process involves a projection of the individual suitable to the particular social context. The individuals strive to maintain a level of minimal respectability between them so as to make interaction as proximate equals possible. When minimal respectability is not possible, the interaction is unbalanced as one individual may face embarrassment or relative lack of power vis-à-vis the other.

Throughout this process, a shared understanding of reality is also an aim. Not all interactions rely on coercion, and indeed two individuals can agree without the exertion or threat of force. As the ability to agree on a course of action saves considerable energy and potentially negative neurological states, individuals often strive for agreement even in cases when objective reality may not actually align. Indeed, much social interaction aims to achieve a consensus about how to understand reality, and such consensus enables joint decision making (Garfinkel, 1967).

The addition of a third individual creates a triad. Each individual brings to the triad the individual characteristics discussed earlier, but decision making is more complicated at this scale. Of course, when hegemony leads to agreement, there is peace, but coercion, even taking place within a by-and-large peaceful and mostly hegemonic framework, is more complicated. Whereas dimorphism or some similar quality (e.g., knowledge, skill) may be a strong predictor of power in a dyad, the presence of a third individual, forming a triad, has the potential to form an alliance with the second individual against the third. The potential for some people to form an alliance against another is the (mathematical) root of factionalism. As the number of individuals in a group increases, the likelihood of factionalism increased. When or if the alignment of factions becomes stable, we might say that tribalism has developed.

Collective Decision Making

The number of factions possible in a population increases exponentially as additional individuals can generate alliances with large contingents or

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

numerous dyadic combinations. When populations are low, factions tend to be interpersonal and, subsequently, permanent tribes relatively unlikely. At higher populations, however, relationships with others may be impersonal or non-existent. When this is the case, individuals tend to generalize the characteristics of faction members with whom they have a personal relationship with the tribe overall. To the extent that the similarities among individuals are consistent, the tribe will display solidarity.

Collins (1975) referred to *interaction ritual chains* as networks of individuals arrayed according to a position as "order-giver" or "order-taker." A network sociogram well captures the networked nature of these chains, and the relative hierarchies of individuals in the network somewhat defies a standard understanding of bureaucracy. For example, while it is apparent that the president of an organization holds considerable power, the secretary of that individual will also hold considerable power even above those who are, in principle, granted more authority by virtue of title. This is because the secretary will often be able to act as an order-giver by acting under the authority of the president. As many bureaucrats know, the number of order-takers subject to a particular order-giver is a measure of power within the organization—and hence why so often managers inquire as to another's "direct reports" as a way of measuring relative power. At high populations, it is not possible for an order-giver to lead on the basis of coercive power alone: one must have surrogates willing to act on one's behalf. As a result, there is at least some modicum of hegemonic control. This control will often take the form of such cultural mechanisms as religion, appeals to loyalty, or fear of a perceived threat. The goal is not to cause others to act but, instead, to mobilize one's supporters and disenchant into inaction those not so readily in the leader's camp. Hegemonic control is aided in lower populations as interaction rituals reinforce the political culture, a condition Collins calls *high ritual density*. Conversely, higher populations or those more culturally diverse display low ritual density. The chief benefit of high ritual density is solidarity, but it comes at the expense of potential cultural innovation due to the prevalence of differing ideas; the converse is true of low ritual density.

The Exercise of Power

Adapting the work of Michael Mann (1986), Thomas (2010) discussed social power as arrayed around military, political, and economic power, each ranging across the continuum from coercion to hegemonic methods of engagement. Military power is the use or threat of force, and although rooted in interpersonal violence, at higher scales, the term *military*, especially in the context of complex societies, is appropriate. Weber (1946, 1978) defined

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

the state by the legitimized use of force, and all states utilize this trait to one degree or another, but none do so to the exclusion of hegemonic means.

In early states, such as the Roman Empire, the military's role was not only foreign conquest but also domestic security. Indeed, a soldier's career path typically involved a significant degree a role today identified with the police, particularly in occupied territories, but in defense of the elite and their interests closer to home. In many modern states, the use of coercive power is softened by the occasional inclusion of terminology aimed at obscuring this power dynamic, particularly "police," "national guard," and "security forces." The cultural mechanism of justifying the threat or use of force and thereby converting coercion to hegemonic control can be met in less subtle ways. For example, a staple of American popular entertainment is the crime show. The typical television show features one or more police officers portrayed as fighting the evil of crime, thereby justifying the use of force in the entertainment and reinforcing the assumed validity of such force in the real world. The overall effect is that cultural mechanisms not only justify force but also portray resistance as futile, thereby requiring only sporadic outbursts of violence in order to demonstrate military power and reinforce the threat.

Political power is based on the structure of the social network and the cultural mechanisms that legitimize social relations. Political power is most efficient when exercised through hegemonic means. As Weber (1947) noted, all power centers, be they states or bureaucratic organizations, expend considerable effort fostering a sense of legitimacy for the powerful. At smaller scales, this is reasonably straightforward: leadership can be legitimized by having a particular set of skills or knowledge, for instance, or perhaps through association with a former leader. At higher populations, however, staving off a crisis of legitimation requires considerable effort. Bourdieu (1972) noted that among villagers in Algerian high-ranking families would throw tremendous feasts, sometimes plunging themselves in debt to do so, which obligated the recipients of such largesse to the family. Political power is thus intertwined with such cultural concepts as honor, morality, and respectability. An act of coercion would be to deprive another of these attributes, a common thread in ethnic and gender oppression, among other forms of stratification.

The heart of power is economic power, or the ability to grant or deny another access to some desired or necessary resource. Coercive mechanisms involve direct usurpation of basic resources by denying an individual or group of those resources. Hegemonic means involve creating a cultural assumption that there is a natural way to distribute resources that, in general, favors elites. Historically, this has been tied to religious ritual; for example, the Biblical centralization of ritual at the temple in Jerusalem also (ideally) had the effect of directing all meat slaughter through Jerusalem at the expense of temples and sanctuaries in the countryside that was subsequently destroyed. Similarly,

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

the role of debt throughout economic history amounts to a threat to one's basic resources.

Authority

Power should not be understood as equivalent to authority even though the two concepts are linked. *Power* is the ability to affect the behavior of another, whereas authority is a claim to the legitimacy of one's power. Weber (1947) discussed three forms of authority: charismatic, traditional, and rational-legal. *Charismatic authority* is based on the leader's personal appeal but ultimately granted by her or his followers. The leader demonstrates some unique qualities that inspire confidence, trust, and even genuine emotion in one's followers.

Consequently, they become exceedingly loyal and pursue the aims the leader inspires. In time, such authority becomes routinized through one of the other forms of authority. In *traditional authority*, leadership is determined by traditions that may date back to a charismatic founder but have since been routinized. Theocracies are the primary example, although traditional authority has been the basis of monarchies and other such organizations. In contrast, rational-legal authority is legitimized by an appeal to a system of regulations and a bureaucratic organization's functioning. Most modern corporations and governments operate according to such precepts, although to varying degrees. Weber himself noted that in real life organizations are typically legitimized through some combination of the three. For example, the Mesopotamian king Hammurabi ruled through traditional authority but is most associated with a stele engraved with a law code complete with offenses and punishments. Similarly, the British government is organized according to bureaucratic concerns but officially headed by a monarch. Although in his translation, Talcott Parsons chose to use the word authority, it is notable that in the translations by Hans Gerth and C. Wright Mills (1946), the term used is *domination*. This meaning is telling as each form is typically utilized for the purposes of elites who seek to retain power. For example, rational-legal authority is often legitimized by references to bureaucratic rules and laws, the qualifications of those holding offices, the offices themselves, and a vocal commitment to "transparency" that often is not technically possible due to personnel and political considerations.

Rooted as it is in basic decision making that becomes more complex at higher scales, polity must be understood not as a static institution but instead as one parameter that guides the evolution of a social organization over time. Any social organization "learns" and "adapts" at the systemic level as new circumstances arise. Of course, decision making is just part of the human experience, and often those decisions are made within the context of securing basic resources for survival.

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

Urban-Rural Polity

As urban areas tend to enjoy greater political power than rural areas, the question then becomes how and why. As we will note in part II, the economic foundation of urban life is built on the import of rural resources, and it is therefore imperative for urban claims on those resources to be viewed as just and legitimate, conferring authority on urban political entities. Culture supplies the underlying logic of the ideology of urbanormativity: a hegemonic control mechanism that is most frequently utilized whereby rural areas understand the export of their resources to urban populations as normal and even desirable. In sum, the parameters are not freestanding institutions but rather guideposts to social evolution over time, each interdependent on the others. Just as politics and culture are linked, so too are economic structure and the environment.

Economy

The economy coordinates the production, distribution, and consumption of resources, at minimum meeting basic needs, but often evolving to produce more complex goods. Driving from the financial district of Manhattan through the industrial zones and dozens of miles of suburban malls and office parks, it is easy to lose sight of the economy's core functions: the provision of basics such as food and water. As with any other animal, humans require these necessities for survival, and without them, the quest for reproduction, knowledge, or self-fulfillment is not possible. Ultimately, the economy should enable humans to balance their demands with the resources available in the environment—the energy economy's fundamental concern. In other words, the socially organized, often currency-based economy should find a way to align with the energy ebbs and flows between population and environment.

Meeting Basic Energy Requirements

The economy has its ultimate foundation in the natural environment, and we refer to this as the *energy economy*—the activities associated with balancing the Total Energy Demands (TED) of a population with the Total Energy Supplies (TES) available in the environment (Thomas & Fulkerson, 2019; Fulkerson & Thomas, 2021). In terms of TED, individuals require a minimal caloric intake averaging roughly 2,000 calories per day to survive, though it varies by several physiological (e.g., body size and levels of exertion) factors. If we multiply that by population size, we arrive at TED as it pertains to a population surviving at the level of subsistence. In terms of TES, we must examine the amount of land available and estimate factors that shape its caloric efficiency (calories per acre), as this will inform us how much caloric

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

output can be generated to support the population. This is also shaped by an array of factors (e.g., soil nutrients, rainfall, temperature, and so on). Once this is determined, we can assess whether a given population is living within the limits of the available supply. Energy balance is the goal, where the ratio of TED is less than or equal to TES. If TED outstrips TES, we experience an overshoot that risks Malthusian corrections. We can portray this dynamic with the aid of the *caloric well* (see figure 1.1).

If we imagine a plain with calories distributed evenly, and if this plain provides two calories in a 10' by 10' square (100 square feet), then one individual can survive in the square for a day. If, in the course of a day, 2,000 calories are replenished, then the individual can be sedentary, but if not, the individual must move to another square the next day. (As noted, the rate of replenishment depends on numerous factors, including the amount of waste dumped back into the environment by the individual, the availability of sunlight for photosynthesis, nutrients in the soil and available water, and so on.) If we conceptualize our plain as adapting to the relative weight of the calories themselves, then the depletion of calories in a square causes a bulge that pushes to individual away from the depleted area. In principle, an individual can wander aimlessly across the plain when alone in a search for calories, but the presence of others in the environment acts as a constraint on this mobility that results in circuits through the environment around a central attractor point. When the rate of depletion and the rate of replenishment are closely matched, the circuit of mobility can be smaller. However, when depletion is faster than replenishment, then a wider circuit is necessary. We postulate that the circuit from which an actor draws calories can be understood mathematically as an *attractor basin* around an *attractor point* (Fulkerson & Thomas, 2019).

If we assume a carrying capacity of 2,000 calories per 100 square feet and a replenishment period of 24 hours, hypothetically, a population could be spread evenly at 10-foot intervals. However, as noted earlier, humans are social and thus will not be spread evenly across the environment as solitary beings. At its more rudimentary level—the dyad—two people will require 200 square feet of space daily for survival. We can represent this caloric need as "weight" on our hypothetical plain—a downward bulge with calories "flowing" toward the dyad representing the point of attraction. With each additional individual, the daily caloric need increases by 2,000 and subsequently weighs down our hypothetical plain even more and thus spreads the horizon from which resources must be gathered by another 100 square feet; we will call this the *resource horizon*. Indeed, at higher populations, the overall model shows deep weights and appropriately large resource horizons; mathematically, we would say that the attractor basin becomes both deeper and broader. It is the contours of the caloric well, the mathematical

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

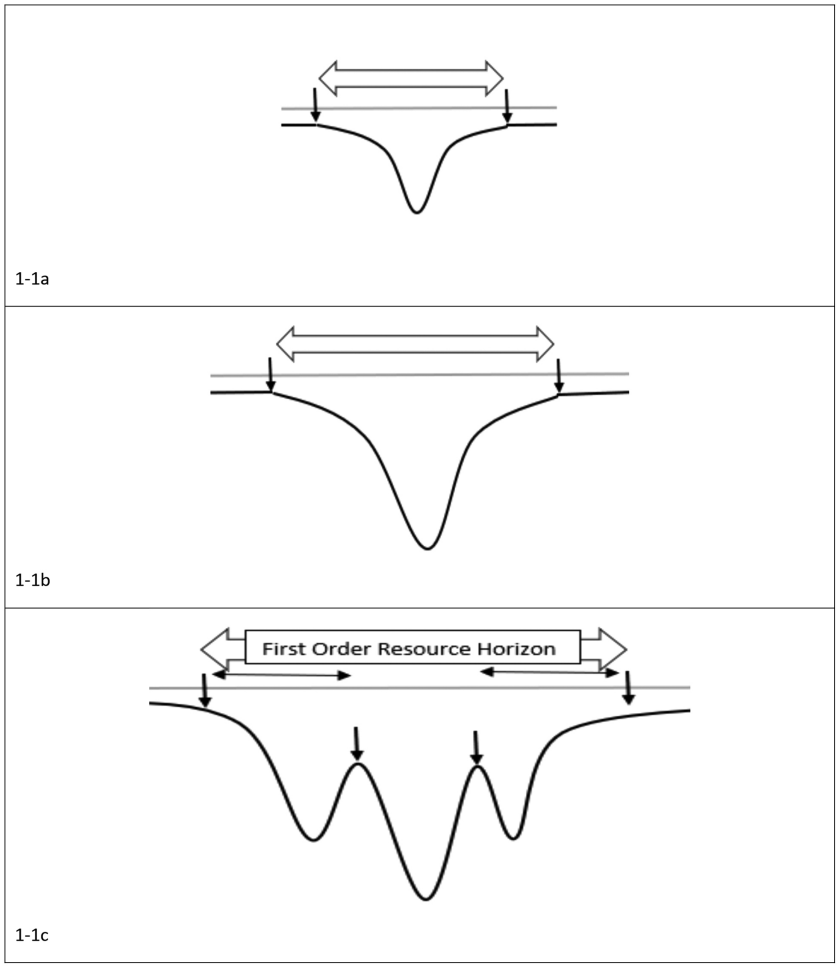


Figure 1.1 Caloric wells. A smaller sedentary settlement utilizes the resources nearer the village (1a), whereas a larger population widens the resource horizon from which food is harvested or farmed as the well deepens (1b). Larger towns and cities require secondary centers to expand the resource horizon and support the center, which exhibits urban dependency on the second-order centers. The smaller centers have a smaller resource horizon, but the first order horizon encompasses the entire system (1c). Created by author.

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

relationship between the population and the ability of the environment to support it, that predisposes a population toward one of three environmental demographic adaptations: nomadic foraging, agrarian self-sufficiency, and urban-rural systems.

Nomadic Foraging

The most basic human society consists of relatively large groups of nomadic foragers hunting and gathering through an environment that replenishes seasonally. As noted, a given group could meander aimlessly across our hypothetical plain without competitors in adjacent areas and never exploit the same location twice. In reality, however, nomadic foragers cycle through the same environmental locations as a means of avoiding conflict with adjacent groups (Lewin, 1988). Indeed, in the real world, a level of trade exists between groups to form alliances and lesson conflict. As the purpose of such trade is to (among other reasons) protect the food supply, it should be expected that trade in luxury items (as gifts) is found earliest in the archaeological record.

Agrarian Self-Sufficiency

As foragers were faced with an environment with increasingly more humans, the competition for resources required further economic adaptations. As we discuss in part II, these adaptations included, over vast periods, an increase in the types of prey hunted and, eventually, the cultivation of crops. These adaptations proceeded in a dialectical fashion toward sedentary agrarian settlements that were increasingly self-sufficient. Though challenging, as long as agrarian populations remain small, the goal of energy balance is achievable. The population could live within the local environmental energy supply limits without the need for constant movement, although sedentary agrarian villages often traded with nomadic populations. Nevertheless, the consequence of successful economic adaptation was very often population growth.

Urban-Rural Systems

At high populations, the weight of caloric need distorts the hypothetical plain dramatically at the spatial center of population, and accordingly, the resource horizon is quite broad. As will be discussed below, such a large geographic area creates difficulties in transporting calories from the periphery to the core as well as requires additional energy expenditure to accomplish. This would be true even if no population existed in adjacent areas, but when burdened by neighbors (as in real life), there is potential for conflict. As the population outstrips the carrying capacity (see Hui, 2006) of the immediate environment (TED outstrips TES), the resource horizon expands to a point where

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

secondary centers for collection and transport of resources to the core develop as a mechanism for reducing energy expenditures for such activities. In our hypothetical plain, some segment of the population from the core would create such centers, creating additional weights within the attractor basin. With more complexity within the system (i.e., a higher number of tiers), the greater the number of secondary, tertiary, etc., attractor basins within the main system will develop. Of course, in the real world, it is more likely that a population outstripping the local environment will enlist existing adjacent populations in the provision of resources, either through hegemonic (trade) or coercive (war) means. In either case, the dependency of a central (urban) population on resources of peripheral (rural) populations is *urban dependency* (Thomas, 2005).

The complexity of urban-rural systems eventually generates a more developed hierarchy. At a certain point, the need to conserve energy creates secondary, tertiary, or even more complex points of transit of resources with their own attractor basins. These *transit points* can function both ways, serving as nodes in the system for getting resources to the core and as nodes for getting what resources may be coming from other parts of the system from the core to the periphery. Such resources could be those of other lower-order centers in the far-flung corner of the system, but they also often involve manufactured goods from the core. The evolution and maintenance of the system often involve not only products from the rural periphery but also those from an urbanized core. Transit points in an urban-rural system not only function as collection points for economic goods that are then traded, but they also serve to bring in ideas from the hinterland and then "broadcast" them throughout the system with critical cultural implications. Transit points are centers of transit functions, typically related to trade and communication such as retail stores, newspapers, and even the local post office. They are also typically are home to service functions, local services such as healthcare, and governmental functions. Of course, the resources themselves must also be produced.

Urban and Rural Production

Calories from natural resources are produced through natural processes and then collected by people. For example, plant resources, be they for food, timber, textiles, medicine, or some other use, require a certain amount of space and available resources to grow. This includes ambient heat, sunlight, water, and the appropriate amount of nutrients in the soil, and these parameters of growth limit where a given plant can grow. With these conditions met, a plant requires an appropriate amount of time to be transformed through natural

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

processes into the desired resource. Human technologies can encourage (or discourage) growth through artificial fertilizers, greenhouses, irrigation, and other technologies. However, it is the plant itself that is ultimately responsible for its growth—human activities can only mitigate natural processes. Similarly, the production of some natural resources takes such a long time that it is tempting to forget that they have been produced at all, such as mineral ore and petroleum deposits. In each case, the production process may have taken millions of years but nevertheless occurred through natural processes; humans do not "produce" such resources at all but rather harvest them from the environment in mines and wells. The dependence of rural production on natural processes means that such resources must be harvested on their own terms. As such, rural production requires that natural processes be given the required space and take place in suitable environments. Economic activities oriented toward the harvest and use of these naturally occurring resources are referred to as *rural production* (Thomas, 2005).

Rural production does not necessarily need to result in a surplus of production for a population, but as we will see in part II, even hunter-gatherer societies perceive more material comfort when there is a surplus of food and other resources in the environment. As such, the production of surplus is built into the logic of urban-rural systems, and as the social distance between producer and consumer widens, the demand for surplus increases. Simply stated, it is easier to exploit strangers than kin. In Neolithic villages, this emphasis on surplus was minimal and little challenged the egalitarian ethos of the earliest agrarian societies. As such societies grew, both in the size of primary villages and especially with the formation of secondary centers, elite demands for surplus grew. To the extent that rural producers are denied a portion of the fruit of their labor, we can say that urban-rural systems are often founded on *alienated rural labor*.

Once rural products have been harvested, they may be processed further as an aid to consumption, and such processing is the ultimate goal of *urban production* (Thomas, 2016). Simple processing of naturally occurring resources is found throughout the natural world, such as the construction of beaver hutches, bird nests, and anvil stones used by chimpanzees to crack nuts. In most cases, however, the processing occurs on-site with locally available materials or, in the case of tool use among humans and chimpanzees, may be carried from location to location. In evolutionary terms, such processing as an intermediary step toward consumption is a precursor to true urban production, but:

> true urban production involves a multiplicity of circuits of production: it is the collection of multiple resources from differentiated environments in a specific site for the purpose of transforming them into a finished product. (Thomas et al., 2011, 45–46)

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

Urban production does not necessarily have to occur in large cities, but rather in central locations with adequate access to resources originating from differentiated environments through reasonably efficient transportation options for accessing resources and trade (Thomas, 2005). Thus, urban production relies on the existence of a network of exchange to access necessary resources, but not necessarily a high population (Thomas, 2012, 2014). As nodes in this network of exchange, multiple transit functions develop, which encourages population growth, as does enhanced defense capabilities and the economies of scale and agglomeration that come with higher populations. As such, whereas the natural environment more or less determines the locations for the harvest of resources, human ingenuity and need interact with the environment to determine the location of major transit functions. An urban settlement can grow only to the extent that it has access to necessary resources. The development of trade systems that facilitate urban-rural exchange are precursors for the growth of cities (Thomas, 2014). As Thomas (2016) noted:

> It is with the maturation of socioeconomic systems based on the exchange of urban products through social networks spread across space that we can say urbanization has taken place. Urbanization is thus not a phenomenon involving the growth of cities *per se* but rather reflects the conditions that allow for the growth of cities; it is not the city but rather the network. (18)

Although trade can, and did, exist without urban dependency, urban dependency reinforces the dynamics of urban-rural systems by making it a requirement for the urban settlement's survival. Indeed, as the number of settlements with populations that outstrip the local carrying capacity increases, the urban-rural system's complexity necessarily increases to supply all of the population centers with basic resources—a failure to do so would result in famine. The purpose of trade in pre-urban communities is to reinforce social bonds between populations so as to reduce the potential for conflict, but as urban-rural systems develop, they retain this function but emphasize another as well: a hedge against drought or natural disaster. As the system evolves, more and more urban production occurs for the purpose of trading with other centers, some urban and some rural. As we suggested earlier, the world-system is the result of a giant network of urban-rural trade.

Summary of Economy

Thus, the parameter of *economy* must be understood as dynamic and ever-changing but not without an underlying logic—driven by the need for energy balancing. This logic serves as a reminder of our dependence on the natural environment (discussed later). As did Marx (1981), we can posit that the underlying logic of such systems can be altered at various points in system

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

evolution without adopting wholesale his progressive view of such system evolution. Indeed, there is no logical endpoint of system evolution: an economic system evolves toward complexity when it is functional to do so, but can also collapse partially or in whole when complexity no longer adequately or efficiently addresses people's core needs such systems. The various environmental demographic strategies that have been employed, nomadic foraging, agrarian self-sufficiency, and urban-rural systems, are neither progressive nor exclusive. They have historically coexisted in many regions, and they have transitioned from one form to another—or something in-between—as demographic and environmental conditions have changed.

Emile Durkheim (1984) noted that the expansion of the division of labor results in a tight interdependency among individuals living within the more extensive social network—organic solidarity. He posited this as the end result of a progression from mechanical solidarity, a form of group solidarity he viewed as being more "primitive." As we will see in part II, there has been a general trend toward increasing social complexity over time. Indeed, that trend has resulted in increasing levels of interdependency at all levels of the system. The case can be overstated, however, as the term "progression" is simply not accurate: urban-rural systems frequently experience partial or near-total periods of deceleration during which there is a reversion to less complexity (but nonetheless building upon the earlier period). This can be seen at the end of the Pre-Pottery Neolithic B (ca. 6000 BCE) in the Jordan River Valley as villagers abandoned their homes and turned to nomadic foraging, at the end of the Bronze Age (ca. 1200 BCE) as complex trade relationships simply collapsed, and perhaps most famously in the "fall of Rome" in the fifth century—itself a product of accelerating and decelerating dynamics of social complexity. These are not merely economic relationships, however, but reverberate across each of the parameters.

The economy interacts with polity so closely that many social scientists refer to social structure as simply *political economy*. Indeed, as polity is at its core about decision making and economy about food and other resources, it is not surprising that these two parameters would be so intertwined. However, political economy cannot be understood on its own: how does one know what one knows?

Culture

Earlier, we discussed the biological elements of human adaptation in relation to our close relatives, the common and bonobo chimps. Primates in general are adept at cognitive adaptations that preclude the necessity for further biological adaptation, and therefore have experienced significantly less speciation relative to birds and reptiles, for example. Humans are exceptionally

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

well suited for cognitive adaptations at the individual level and collectively orchestrated group-level adaptations that we refer to as culture. *Culture* is defined here as the accumulation of beliefs, values, and norms, within a given social entity that allows for successful adaption to new threats and changing conditions. As we will elaborate, social adaptations within and between human groups are significantly varied, with some groups persisting thousands of years and others disappearing seemingly overnight. Different cultural configurations are typically found across environmental demographic systems, and there has been considerable diversity across cultures.

As a parameter of social life, culture is a product of the interactions among individuals over time. It is a direct consequence of the collective and a product of scaling. Individuals learn, and learning requires memory. In principle, each individual can learn the same lesson about an environmental concern—say, which fruit is edible—independently of other individuals nearby. In such a circumstance, even though the knowledge is known to all involved, the lack of communication of said knowledge means that the knowledge is not *shared*. Shared knowledge requires some ability to communicate with another through mimicry or, in the case of modern humans, language. As culture becomes independent of the individual once communicated, culture can take on a life of its own, even reverberating through successive generations.

Cultural knowledge can span various areas, from the utilitarian, the social, and the impractical. Knowledge itself is a product of cognition, and in and of itself does not have a form. It can, however, give rise to cultural artifacts. For example, a technology such as pottery production exists as a cognitive process that can be communicated, verbally, or through written forms. However, the product of the technology, pottery, is an artifact of its production. This artifact can, and does, far outlast the cultures that produced it. Sometimes, they are the only window we have on ancient cultures.

Psychological Adaptation

As individuals encounter threats or changing conditions, they respond psychologically to their biology and socialization into a given culture. As noted, this is handled primarily through system 1 thinking, sometimes called fight or flight, and for most organisms, this is the end of the story. At times, a more elaborate response is required, resulting in the initiation of system 2 thinking that is slower and more complex, and this is where human psychology excels and draws more heavily on culture. With the development of communication, humans became equipped with the ability to transmit their learned system 2 adaptations to other individuals so that they would not have to arrive at their own complex adaptations. Eventually, the shared systems 2 adaptations become stored, as a property of the collective as much as of the individual,

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

handed down generationally and cumulatively. Over time, the collective group becomes rich in culturally adaptive strategies that further aid the survival of the group.

The dynamics engendered in culture are thus preceded by individual psychological adaptations and not surprisingly focused on meeting basic needs. Maslow (1969) posited that there is a hierarchy of needs in terms of psychological motivation. The basic needs are related to physiology (food, water, shelter) and safety: without these needs met, one is hard-pressed to work on "higher" needs. Maslow's hierarchy should not be understood as occurring over a lifetime, but rather continuously. Perhaps the most fundamental human need is simply to breathe, and no matter how wealthy or enlightened one may become, the deprivation of oxygen will immediately become of foremost importance. This is true regarding hunger and thirst, exposure to the elements, or threats to safety or security. On a daily basis, time must be devoted to meeting such goals, and those for whom the goals are met quickly are freer to address higher needs. As with other mammals, humans evolved to have cognitive adaptations that maximize the likelihood of meeting at least the most basic of needs that ensure continued survival. In pursuit of satisfying needs, we each face the genuine possibility that necessary resources are scarce or unavailable. Interactions with the natural and social environments alike carry the threat of injury, some minor but others carrying writhing pain and perhaps permanent debilitation. The true nature of the threats an individual faces, from embarrassment to illness to death, dawns on the individual slowly over time—perhaps an entire lifetime.

In short, it is the human capacity for thought, a key component of system 2 decision making, which can threaten our survival and mitigate the threat. The ability of the individual to convince oneself of the value of survival, to delude oneself that happiness is more than a fleeting emotional state conjured by endorphins and serotonin, is itself a survival aid. As cognition and behavioral plasticity evolved, so too must have the capacity for self-delusion. Brought to the level of the dyad and higher levels of complexity, the collective of knowledge must have also simultaneously evolved both higher levels of knowledge and the capacity to justify survival as an achievement of inherent value.

Intimately tied to basic physiological needs are safety and security needs: the reality and perception of being safe and secure. An aspect of this security is epistemological and ontological security: security not only that one's knowledge is correct but that the mechanisms for accumulating knowledge are effective. Practically speaking, this involves the ability to predict future events, thus requiring a degree of reliability but not necessarily validity. For example, the ability to use the position of the stars to predict the coming of the rainy season in an agricultural society justifies such beliefs even if the

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

presumed mechanism—that the stars are watchful spiritual beings—is incorrect. Security needs, including the security of belief, are fundamental to the human experience. Not surprisingly, culture is generated with an eye toward reinforcing reliable belief systems not only for utilitarian purposes (e.g., predicting the spring rains) but to avoid an ontological crisis in individuals.

The need for belongingness comes next in Maslow's hierarchy, and the evolutionary benefits of kinship groups for maximizing the potential for survival are evident. In contrast to the assumption of constant competition, humans (like other animals) derive more competitive benefits from cooperation than from selfish competition. The formation of kinship groups is a human cultural universal, although such groups' precise structure is highly variable. Kinship is often based on a group of biologically related individuals, but there is often a wider group with whom kinship is assumed but where minimal or no biological relationship exists, or fictive kinship. The need for individuals to belong to this group is encoded in one's psyche. The group as a whole will generate a culture that emphasizes the common group identity and social bonds to promote continued social integration. At even small group scales, an emphasis on conformity to group norms is evident, with deviance subject to ostracism or even banishment. The experience of social ostracism—embarrassment and shame—is not only a cognitive experience but also quite physical. The ostracized may experience increased blood pressure, an upset stomach, and dysphoria, all biological traits that encourage conformity.

Once belongingness is met, the need for esteem from others and oneself is to be met. Maslow himself believed esteem from others to be even more fundamental than self-esteem. It can be considered part of a continuum from the need to feel that one belongs to a group, feel respected by members of the group, and respect oneself. Not surprisingly, Maslow's Hierarchy continues along this trajectory to self-actualization and, in his later years, self-transcendence.

There is an almost spiritual tone to Maslow's ideas when discussing higher levels of needs, but if we come to understand the hierarchy of needs in terms of the ability to spend time considering such concepts, we should expect that higher and higher levels of theory, whether theological or scientific in nature, develop in tandem to a society being able to commit personnel to exactly these functional specializations. This, of course, requires a political economy complex enough that some individuals are released from labor-oriented to basic needs to specialize in such matters. Indeed, as will be evident in later chapters, the emergence of social classes is tied to such differentiation in knowledge. The complexity itself predisposes members of different classes to perceive the world in very different ways that ultimately reinforce the political-economic system.

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

Cultures are generated through social interaction. In some way, everyone expresses a culturally ascribed reality and, with the recognition of others, has their supposed reality reinforced. However, it is a matter of social learning and perception and only loosely related to reality as it exists in nature. Every article of the environment, from a food source to a tool to the political structure in one's group, is learned through interaction with the environment and filtered through one's perception from a particular position in the interaction ritual chains, in time (and age), and physio-emotional state. At times, the learning of culture is intentional on the part of a teacher, and at other times lessons are learned with no intentionality whatsoever. Cultures are thus not structures but rather cognitive glue residing in the individual that is continually learned and reinforced; culture does not exist independently but is always being generated (Matyrana & Varela, 1980).

Socialization

The individual does not merely respond as a brain to external stimuli but learns through socialization an acceptable lifestyle within a given culture. This is certain in terms of the type of environmental demographic system: a nomadic forager will be comfortable with the lifestyle with which they grew up. Thus, it is not surprising that there is evidence of resistance to agricultural technology in the Late Paleolithic archaeological record. Similarly, it is also found in social classes in modern societies: a habituated affluence to which a member of the upper-middle class is accustomed might be quite unsatisfactory to a member of the upper classes but considered overly luxurious to a member of the working class.

Socialization is the process by which one comes to learn culture, and it proceeds throughout one's lifetime (Berger & Luckmann, 1967). The initial learning is called *primary socialization*, and such ideas serve as the archetypes for concepts later in life. The modification of ideas learned earlier is *secondary socialization*, and this occurs quite naturally throughout later life. In *anticipatory socialization*, an individual identifies with a new group identity (such as a college) and begins to learn and display symbols and ideas associated with the institution in anticipation of formally joining. In resocialization, the individual is radically taught new concepts and beliefs, often through some degree of force that involves invalidating earlier ideas in lieu of new ones. As each individual learns from their own unique perspective, they learn a version of reality that is unique to themselves, and through social interaction, people attempt to agree as to the nature of reality (Garfinkel, 1967). As such, over time, groups with high ritual density can agree on a high number of common perceptions of reality, whereas groups in low ritual density, particularly because of high populations, will find it difficult to agree on more than

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

a rudimentary array of symbols with the possibility that each symbol holds somewhat different meaning as well. In this way, we can discuss the "social construction of reality." It is not reality being constructed but rather the collective perceptions of reality. The continual interaction of these perceptions is transmitted through time as individuals interact and reinforce such concepts.

Culture is both reproduced and shaped by interaction. It establishes what can or cannot be thought. It informs our perceptions of the world and limits our ability to see reality as it is. As vivid as the imagination can be, it is nevertheless encouraged by our sense of the possible and thereby limits our ability to think the unthinkable. Thought is shaped by language, for instance, and similarly, our dream of new technologies is shaped by our understanding of those we use every day. Culture functions as a glue of sorts: it is through our acquisition of culture that we learn not only the accumulated knowledge of our various social groups, including the technology by which we acquire what we need to satisfy our basic needs, but also our knowledge of where to acquire such resources, important symbols that guide us through the physical and social environment, and the status hierarchies that reflect power relations. Culture serves an essential role in human collectivities as it provides the means to adapt and succeed in either familiar or newly emerging conditions. It is a toolkit that members can rely upon for making crucial decisions and a roadmap that points to various ideals for what life should be.

Urban-Rural Culture

As humans have become spatially sorted into urban and rural contexts, the experience of culture has become disparate. As we have theorized previously, the physical and social separation of urban and rural communities creates an epistemic distance that informs how we understand, interact with, and adapt to the world (Fulkerson & Thomas, 2019). The disparate lived conditions lead to alternative rustic and urbane identities that may intersect with other elements that comprise the self through the process of socialization. As a dimension of identity, being urbane or rustic is consequential for how we live and how we come to be perceived by others. While rural dwellers are likely to visit an urban context out of necessity, such as the need to go shopping in a grocery store or find work in an urban establishment, there is no reciprocal need for most urbanites to visit rural areas. Of course, many urbanites have a desire to visit idealized rural areas as they are perceived to be a place of simplicity and escape (Thomas et al., 2011; Fulkerson & Seale, 2012).

In an urbanormative culture—one in which urban life is viewed as normal and superior, while rural life is abnormal and inferior—urbane identity becomes a source of cultural capital and rustic identity is often stigmatized (Hayden, 2020). The ability to gain access to cultural institutions and

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

membership with the social elite is at least partly contingent on displaying urbanity. Entire communities, like individuals, can come to acquire an image of urbanity or rusticity. Unlike individuals, the rustic images of towns may serve as a benefit if it brings urbanites to visit on vacation or as second homeowners. Because of this potential, rural communities may wish to emphasize their bucolic qualities through the phenomena of rural simulacra—images and objects that serve as props in the presentation of a rustic community. This is especially the case for rural areas that are no longer dominated by rural production strategies that define other rural communities, relying instead on economic growth from rural tourism and related service sector employment. Traditional rural communities, though ironically more authentically rural, will be found far less appealing by urbanites with the possible exception of agrotourism—where production and tourism intersect. Few urbanites want to vacation near an animal feedlot, an exposed coal seam, a fracking field, or a clear-cut forest. Those participating in rural production as we define it—as being on the front line of the energy economy—serve a vital function in the urban world but generally receive little acknowledgment or receive just compensation. Such primary sector activity is often viewed by the urbanormative as "backward" or taken as a sign of failure. Any difficulties that rural workers experience, such as poverty, are in viewed as justly deserved: the expectation is that more adapted individuals will gravitate to an urban area, receive more education, and work in the superior urban economy. The perceived superiority of urban life fuels rural-urban migration, which often overwhelms the capacity of cities. This can result in overurbanization, as is often the case in the developing world, where rural populations are locked out of the city proper and forced to live in edge cities built from makeshift materials.

Thus, the role of urbanormativity is vital for urban areas in accomplishing hegemonic political and economic power over the countryside. Through the lens of urbanormativity, the uneven economic transfer of rural resources to urban areas for consumption or further production appears justified. In the absence of hegemony, a system must turn to raw political coercion to enforce power, which is typically costly. The moral indifference of urbanites for the lot of rural workers, stemming from epistemic distance, is fuel for the devaluation of rural production. This cultural devaluation is translated into less favorable terms of economic trade. It also serves to mask the reality of urban dependency, the fundamental need of urban areas for rural energy resources. This vulnerability is the Achilles Heel of urban domination.

Culture is thus utilized in conjunction with other societal parameters, polity, and economy, in order to achieve balance with the natural environment. Cultural items, whether particular concepts or specific artifacts are vehicles for accumulating and maintaining power. The ideology of urbanormativity is

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

the foundation of efficient urban-rural systems, who are spared the need for raw power exercised through violent coercion. Urban demands for a higher surplus of rural resources warp the caloric well beyond subsistence levels, deepening and broadening the resource horizon. Any perceived scarcities enhance the tendencies by elites to insist upon ever-higher surplus yields, furthering the alienation of rural labor while widening the network of trade and control (Fulkerson & Thomas, 2019).

Environment

As should be clear by now, each of the parameters guiding social evolution interacts with the others, which is true of the environment. The word environment definitionally refers simply to one's surroundings. When we typically discuss the "surrounding" area, we are implying the built environment, the settlement space for a given population. We will discuss the built environment, but believe it is important to begin with the natural environment as it is the source of all energy that populations rely upon to survive and thrive. The three previously discussed parameters—political, economic, and cultural dynamics—ultimately interact to ensure a reliable pipeline between naturally occurring energy supplies and populations who demand them to survive and thrive. Without a viable environment, there can be no population, let alone a political, economic, or cultural system. In an urbanizing world, the growing sense that humans are exempt from natural processes has grown culturally, as aptly observed by environmental sociologists over the last four decades. At no other point in time, leading up to the development of urban-rural systems, did humans have the luxury to ignore their complete dependence on the natural environment for what it could provide. If nomadic foragers or agrarian farmers ignored declining natural resources, they would have likely perished.

The Natural Environment

Though humans now tend to forget, our population and our settlements remain dependent on the natural environment's energy stores to provide the basic materials we have always required as a species. Nomadic foragers, who long participated in the energy economy directly, possess cultural knowledge of where to look for food, medicine, textiles, along with other naturally occurring items of interest. They adapted by passing this knowledge down through generations, leading to a gradual perfecting of foraging within a particular region. Agrarian farmers similarly and unavoidably held heightened awareness that they depended on the natural environment, albeit in a slightly more controlled manner. Even equipped with the cultural knowledge of how

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

to domesticate plants and animals, the farmer cannot control factors like rainfall, temperature, sunlight, nutrient levels in soils, or the occurrence of disasters such as flooding. If environmental conditions are unfavorable, the intended crops will not produce the expected bounty, and this could lead to catastrophe.

With the emergence of urban-rural systems, the awareness of environmental dependence diminished. This results from large segments of the population being relieved of meaningful participation in activities associated with growing or collecting natural resources—the energy economy. Because urban-rural systems have grown in scale and complexity, especially over the last few hundred years, awareness of urban dependency on rural producers has diminished. Now separated by vast tracts of physical distance, urbanites today may never encounter a rural person or bother to reflect on where their food came from initially, thus rendering the energy economy invisible. Entire urban nations exist today that have no rural population. These nations can only exist because they are able to trade internationally with distant rural producers whom they may never see or meet (Fulkerson & Thomas, 2020). Urban landscapes exist as strange islands of population that somehow thrive in sometimes inhospitable environments (think Las Vegas) that has no visible activity associated with cultivating natural resources, save for the occasional urban garden or wind turbine that generate modest levels of energy relative to the vast needs of the surrounding population.

When we conceptualize the natural environment in relation to environmental demographic systems, we adopt an energy accounting perspective. This pertains to our earlier discussion of the energy economy, summarize in the following way: all consumable goods can be understood as quantified energy that comprises TED, and the capacity of the natural environment to provide energy can be quantified as the TES. Our accounting technique of Caloric Well Analysis (CWA) weighs the TED against the TES, in order to determine if there is Energy Balance (EB). If TED outstrips TES, we have the outcome of overshoot, which necessitates some adaptation in the political, economic, and cultural parameters. Failure to adapt to the limits of the environment, as has always been the case, can lead to Malthusian corrections that include famine and war. The goal of any environmental demographic system is to stay within natural limits at or below the point of EB.

As we consider the natural environment, our central focus is on its ability to provide calories. When we examine the contours of different habitats and biomes, we find the environmental energy potential to be quite variable. In stark contrast to our earlier discussed hypothetical caloric plain, flush with a predictable amount of energy, the natural environment is neither flat nor necessarily calorie-rich, posing a far more complex problem. Factors such as topography and climate are strong determinants of how and where humans

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

can derive nutrition and other resources. Hassan (1981) compares different environmental conditions in terms of biomass while showing what this means for a nomadic foraging population surviving within a 314 km^2 catchment area. He finds that in the foreboding artic environment, only three individuals can be supported, relying on a sparse 200 kg/ km^2 of biomass. On the other extreme is the rich subtropical savanna, wherein 136 people can be supported on 10,000 kg/ km^2 of biomass. In between these extremes are the grassland (54 people, 4,000 kg/ km^2) and semidesert (11 people, 800 kg/ km^2) environments.

Though agrarian farmers held necessary knowledge that may have allowed some flexibility in response to diverse environmental conditions, they remained nearly as vulnerable as nomadic foragers on the vitality of the local environment. Agrarian settlements in a desert clime would have been very difficult to maintain. The bifurcation of the human population into rural and urban settlements has meant that only the rural portion of humanity substantially engaged in rural production remains immediately vulnerable to fluctuations in available environmental energy. Urban settlements, embedded in global networks of trade, may find that while one of their rural partners is suffering from poor conditions such as an extended drought, they can always shift trade to rural settlements that are faring better. This ability to reconfigure urban-rural trade networks provides a layer of insurance to urban populations that may serve to reinforce their blindness to urban dependency, not to mention a callous disregard for the suffering of distant rural populations.

The Built Environment

Besides providing the energy needed by human populations, the natural environment is also transformed by humans to enhance what is naturally available. Transformation of the natural environment into a built environment is not limited to humans: beavers construct hutches and entire pond systems in a dramatic alteration of the environment. Burrowing and nesting behavior in other species, such as birds, similarly modifies the environment. The transformation of forestland with fire, the construction of tools that allow for big game hunting, the construction of small-scale huts and other structures are found deep in the Paleolithic period (over 340,000 years ago), long before the domestication of plants and animals, among our ancestors, *Homo heidelbergensis* (Tattersall, 2012). Nevertheless, the later development of agriculture created a dramatic shift in our relationship with the environment. Not only was the landscape changed by creating a built environment for human settlement, but the genetic structure of other species was likewise transformed, such as in the case of Mesoamerican farmers who modified native teosinte

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

into the varieties of maize enjoyed today. We began to see the environmental consequences of our actions would ripple throughout the natural world.

The emergence of urban-rural systems meant that entire built environments could be constructed with less concern for natural resource cultivation. Viewing the urban landscape of a global city like New York, London, or Tokyo will inspire awe at humans' capacity to erect enormous structures in the forms of office buildings, apartment complexes, retail spaces, industrial factories, transportation hubs, and commercial centers. Housing millions of people within a few square miles also requires impressive infrastructure that includes water/sewage lines, electric transmission, telecommunications, and miles of pavement for sidewalks, bridges, and roads. The street grid system of New York is instantly navigable due to careful urban planning. These massive built urban environments are dynamically changing. At all times, they are, as engineers understand, in a continual state of decline, requiring huge outlays of energy to maintain and support. Not all urban environments can secure the energy needed for such maintenance, and their decline may lead to crisis, as we find in deindustrialized cities today.

A useful concept for thinking about built environments as dynamic is place-structuration (Molotch et al., 2000). This concept suggests that any built environment will convey two qualities: tradition and character. These qualities are themselves an intangible part of the social environment and history of a particular place. *Tradition* refers to the historical patterns of social interaction and culture. The character reflects economic and political patterns that have given shape to a given place. Industrial cities have a starkly different character than a rustic retreat. The traditions that form culturally in these different contexts will reflect their alternate realities. To fully understand place-structuration requires an understanding of the social environment.

The Social Environment

Unlike the natural and built environment, the social environment is largely intangible in terms of physical space, though it interacts with it in meaningful ways. Bourdieu (1972) offered useful ways for understanding the social environment through his concepts of *habitus* and *field*. *Habitus* refers to the internalized structures of social groupings that become reflexive habits that both reflect structure and reproduce it—a feedback loop of sorts. Norbert (1994) traced the development of such patterns in Europe, identifying the "self-restraint" of attitudes toward sex and violence with Freud's (1961) concept of *superego*. Bourdieu expanded on this concept to incorporate the individual's social, financial, and cultural capital as reflective of structural position that further generates social action. These capitals seemingly emerge from the system parameters: social capital maps to one's position in the

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

power structure (polity), financial capital to one's access to resources (economy), symbolic capital to one's influence, and cultural capital as knowledge and learned mannerisms. Bourdieu noted that individuals act within a given environment, or field. One presents capital in a field in accordance with their abilities and habitus, adjusting their "performance" based on the audience (see also Goffman, 1959). People respond according to their perceptions of one's capital, reinforcing the legitimacy of social relations and power structure in each other's minds and thus in actuality.

Summary of Environment

As rural areas are vast and support a small population, the environment is rich in natural resources. By contrast, the urban environment is small and overcrowded, with very few natural resources available to support the larger population. Environmental factors interact with the economic, political, and cultural dynamics discussed earlier. With sufficient complexity of economic exchange, urban-rural systems maintain a core population with access to rural resources nearby. The resource horizon will change based on topography and population. As we will see, early sedentary villages were often found near several different environmental niches, an adaptation to the fact that seasonally variable resources are as close as real physical environments come to our hypothetical caloric plain. At high enough populations, urban dependency develops, and trade based on urban production becomes more prevalent. With increasing complexity in urban-rural systems, from the two-tier systems that predated the first cities to today's elaborate systems, higher-order centers grew to be larger than their lower-order satellites in the hinterlands and corridors, often along waterways or roads, connected these centers in a multilevel system. This is the underlying dynamics of colonialism, and as sophisticated states developed, the colonial imperative was both outward in the form of conquest and inward in the form of urban domination.

The logic of environmental balance in highly urbanized states results in the extraction of rural surplus by urban elites, or *internal colonization:* a "geographically-based pattern of subordination of a differentiated population, located within the dominant power or country" (Pinderhughes, 2011, 236). Internal colonization is "in all important respects external colonization and that they are in essence the same process" (Calvert, 2001, 53). The central feature of this process is the city, and cities have dramatic social and environmental impacts on their surrounding regions:

> They sterilise agricultural land, raise local mean air temperatures by some 3°C, generate solid, liquid and gaseous waste in huge quantities, reduce rainwater

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

> runoff, but increase the risk of flooding, create the need for elaborate transport systems and, while offering job opportunities, also create an apparently insatiable demand for more cheap labour. (Calvert, 2001, 56)

The cultural aspect of urbanization's impact is urbanormativity, and urbanormative beliefs and practices reflect the logic of internal colonization.

COMPLEX ADAPTIVE URBAN-RURAL SYSTEMS

To this point, we have discussed the concept of CAS while applying it to understand the core parameters shaping environmental demographic systems. Settlements within an urban-rural system will typically require similar institutions to function, particularly trade, communication, and culture. This often necessitates that such institutions be accommodated in some ways at all layers of the system: big cities and small require a post office, for example, and all settlements in a system practicing the same religion will have a house of worship. Similarly, mechanisms for trade will resemble others throughout the system. Roman cities had state-run markets, forums, and amphitheaters throughout the empire, for example, just as most towns in the northeastern United States today typically have downtown business districts. No matter how well-financed (e.g., state, religious, or private funding), such institutions will be at a scale appropriate to the overall size of the settlement in question. In turn, we can say that cities within an urban-rural system will scale to one another, with smaller settlements having settlement structures roughly analogous yet less complex than those of larger settlements. Indeed, settlement structures will not only have such institutions, but their presence functions to reify the social structure by encoding it onto the built environment itself. As such systems are in a constant state of change, it is not surprising that change at one level often results in changes at other levels as well, at different scales. For example, the transfer of major retail from city centers to suburban edge cities in large metropolitan areas in the last half of the twentieth century was mimicked in smaller metropolitan areas but at lower scales, and even small towns witnessed competition with retail strips on the periphery of a village's settlement space. In very low-order settlements, all that might remain is a convenience store at the edge of town.

In urban-rural systems, each parameter interacts with the others in reflexive patterns that enable it to learn and adapt. At times, changes within the system as a whole appear slow as much change occurs at lower levels, whereas at other times, diverse events build on one another ever more quickly in what amounts to an escalating dynamic, where social change accelerates the

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

complexity of the system. No matter the speed, systemic complexity stabilizes the system as a whole; often, servicing the totality of the system results in segments of the urban-rural system being sacrificed to the "greater good." In such cases, the discontent at lower levels of organization can spread and, over time, become a force that threatens overall system integrity if not dealt with properly. In a sense, the operation of a network of rural communities working for the benefit of the higher-order urban settlement has the potential for creating conditions internally that can create instability. For example, if an urban area places too much demand for water on the countryside, the growing of food may be stifled, leading to a threat to the integrity of the urban settlement. Hence, the overarching urban-rural system.

Due to a high level of interdependency, a rapid change in any of the PECE parameters can undermine an urban-rural system's overall functioning, bringing with it the threat of partial or total reduction of system complexity. For example, changes in the environment can accomplish this, as numerous societies—from the ancient Maya to possibly our own—have been victimized by dramatic shifts in precipitation that triggered a decline in agriculture and overall social complexity. Of course, other PECE parameters can do the same: economic depression in the 1930s was a factor at the beginning of World War II and the subsequent collapse of the world order as it was in 1900 and the rise of one dominated by the United States and the Soviet Union. Similarly, the political shift brought about with Abraham Lincoln's election was a final straw of sorts that led to South Carolina's secession from the United States that triggered the beginning of the American Civil War. Nevertheless, we should be careful in looking for one-dimensional explanations to understand complex adaptive systems—the real world is multifaceted, interdependent, and locked in feedback mechanisms. The Sumerians did not merely decline due to salinization brought on by irrigation systems, but events unfolded dynamically from the invention of the first such systems after 6000 BCE that led to salinized soils 4,000 years later. Similarly, a final straw in President Lincoln's form followed on the heels of decades of conflicts between north and south. Indeed, even the constituent English migrants to the New World—primarily Calvinists in New England and those loyal to the king in Virginia—point to a long-standing potential for regional conflict that dates to the earliest European settlement of the Americas.

CAS are dynamic. As they change over time, they cannot be fully appreciated without an understanding of time and scale. This introduces potential difficulties in studying them. One mechanism is to perform studies at one point in time—cross-sectional studies—that enable the researcher to study the structure of what is being studied in-depth. For example, a census of population can (depending on the questions) yield a detailed description

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

of a population that includes where people spatially cluster, the relative wealth of varying clusters, and other factors such as education, health, and age. However, as human communities existing within urban-rural systems are dynamic, the day after the census is taken, the data is already outdated. The further from the date in question, the more out of date it becomes. In a sense, then, social structure is an illusion created by cross-sectional analysis: just as one's body changes as some cells die and others take their place, so too does a social structure transform over time. At the least, it is safe to say that "structure" is ever-changing, and thus a longitudinal approach to environmental demographic system evolution captures the dynamic nature of the system more effectively. The cost, however, is the rich detail and specificity of a cross-sectional approach.

What do we learn from this model of environmental demography? There are fairly simple assumptions from which can arise great complexity. We can surmise the following:

- Sufficient population pressure deepens the caloric well, expanding the resource horizon, and results in urban dependency. The environmental demographic adaptation is the urban-rural system.
- Urban-rural systems are CAS that evolve over time within the parameters of polity, economy, culture, and environment. These are rooted in human biological realities, and to some extent, are shared with other social animals.
- CAS are constituted by individual agents, at the most basic individual humans but, at higher levels of scale, bureaucratic, and other social organizations that develop an agency of their own. Urban-rural systems are thus constituted by people but also other complex systems at varying scales (e.g., corporations, the state).
- Urban-rural systems are bound in the environment but also alter the environment. In this way, social relations are "coded" into the built environment.
- As constituted by agents interacting with one another, they are in a constant state of regeneration and evolution. They can recenter and grow and collapse.
- Urban-rural systems are self-organizing, and individual elements adapt to changes in one or more parameters. For example, in a system reliant on the movement of surplus from one region to another, the ideological culture may change but often not to the detriment of the underlying political-economic structure.

Looking ahead, in part II, we will trace the development of urban-rural systems from the earliest appearance to the present in light of the model. But

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

first, in chapters 2 and 3, we consider how previous scholars have examined urban-rural dynamics. Overall, the basic concepts outlined in the remainder of this book build on a long tradition of social science research, each theorist glancing at urban-rural dynamics from a unique perspective. The present chapter is indeed a result of standing on the shoulders of giants.

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

Chapter 2

Classical Urban-Rural Theory

Urban-rural systems are dynamic, having evolved erratically over long periods marked by relative calm and punctuated by intervals of rapid social change. At times, they experience accelerating growth, while at others, a partial retreat or even total collapse. Such systems are defined by the complexity of their circuitry, designed to bring food and other rural resources to distant urban populations. When successful, urban-rural systems can promote massive urban population growth that, in turn, further increases systemic complexity and differentiation. If urban growth occurs in the absence of such systemic adjustment, the result will be an overshoot that nature may resolve through Malthusian population checks. Classical theorists across the sciences have attempted to understand these dynamics. Although their inquiries did not resolve in the creation of a complete urban-rural theoretical framework, many of the essential foundations were put in place.

The classical social theorists, including such names as Adam Smith, Thomas Malthus, Karl Marx, and Max Weber, did not have the historical and archaeological data that we do today. As a result, their historical analyses often limited their focus to periods for which we have written sources, such as the Roman Empire. Blind spots emerged from the paucity of data, although this is hardly a vestige of the past. More recent ahistorical understandings of urban-rural dynamics have also led to some regrettable outcomes. For example, Soja (2010) and Taylor (2012) have both repeated the same mistake, comically seizing upon an offhand remark by Jane Jacobs (1969) that a city could form before agriculture, based solely on trade. As noted by Smith et al. (2014, 1525), this was "so completely contrary to archaeological data that archaeologists (had) never bothered to mount a targeted attack on the notion." Jacobs, known primarily for her opposition to urban renewal and her work on urban planning, offered the *fictional* "New Obsidian" to highlight cities'

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

centrality in modern life. The first significant critique from archaeology was not published until forty-five years after its publication in 1969.

In Parts II and III, we will attempt to fill this void based on currently available and emerging archaeological data. In this chapter, we review the contributions of the classical theorists, and in chapter 3, we examine the varying directions in which their research proceeded. The combined efforts of hundreds of scholars are the intellectual universe from which we can discuss environmental demographic systems.

FIRST WAVE THEORIES: POLITICAL ECONOMY AND ECONOMIC GEOGRAPHY

The earliest attempt to theorize urbanization, as dense settlements of humans moving into villages, towns, hamlets, and cities, may be found in the British political economy tradition. The first attempt was penned by Sir James Steuart (1767) in his, *An Inquiry into the Principles of Political Economy*. Steuart notes that larger populations are more likely to emerge when the earth provides abundant resources in his concise and brief discussion. Therefore, population density is found where a higher abundance of resources is naturally occurring. He postulates that if more food is produced than is consumed by the labor of the cultivators, a class of non-agricultural workers may arise—which he labels the "freehands." When this happens, there is an adequate potential for manufacturing to develop, giving rise to trade and still higher density. He suggests that dense populations have the best chance to be sustained when located along trade routes, such as waterways and roads, so that required inputs may be continually imported cheaply. Finally, he observes that seaports are typical of larger cities as they allow access to foreign trade. These foundational ideas may now be considered as somewhat basic facts in the contemporary social science lexicon. However, it should be recalled that Steuart was writing 100 years before the invention of rail travel. The tenets of his prototypical theory contain many of the seeds of thought relevant to the current theory. Critical linkages are made between natural resources and population size and density; he identifies the relationship between trade, transportation networks, and city location; and outlines the related notion of specialization and the division of labor. Steuart's ideas were surprisingly cogent and insightful for his time. While his ideas were not fully developed or applied to historical cases, they were foundational and influential.

Steuart offered his contributions to urban-rural theory nine years before Adam Smith would complete the *Wealth of Nations* and almost three decades before Malthus would pen the *An Essay on the Principles of Population*. These later works would expound the notions of the division of labor and natural

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

resource limits—both relevant to our current considerations of urban-rural theories. Smith offered his chapter, "Of the Rise and Progress of Cities and Towns after the fall of the Roman Empire," as a historically based explanation of urban development, focusing mainly on ancient Europe. Theoretically, Smith holds similar ideas to Steuart but goes further in situating them historically. Beyond geography and economic trade, he devotes greater attention to collective security issues, the role of political sovereignty, and the relation of city to state or royalty in centralizing power. For example, Smith finds the Germanic Hanseatic League to be a case of strong city-based political sovereignty that exceeded the strength of the royalty's attempt to consolidate power. Consistent with Steuart, Smith highlights the primary dependency of the city or town on the country while further theorizing the roles of trade and transportation in the rise of cities and towns. Smith (2018[1776], 313) notes:

> The inhabitants of a city, it is true, must always ultimately derive their subsistence, and the whole materials and means of their industry, from the country. But those of a city, situated near either the sea-coast or the banks of a navigable river, are not necessarily confined to derive them from the country in their neighbourhood. They have a much wider range, and may draw them from the most remote corners of the world, either in exchange for the manufactured produce of their own industry, or by performing the office of carriers between distant countries and exchanging the produce of one for that of another.

In other words, cities come to exist as the result of 1) trade in domestically produced manufactured goods or (2) through functioning as "the office of carriers"—a broker trading goods that originate between two or more external parties. Interestingly, the second hypothesis is that domestic manufacturing is unnecessary to urbanization—the crucial variable is trade. Performing the function of "the office of carriers" happens when location dictates the need for a broker of some kind. Typically, this function arises when there is, as Cooley would note a century later, a "break in the transportation system."

Unlike Steuart and Smith, Malthus (1798) was not necessarily interested in the concept of urbanization or population density but exceedingly concerned with the notion of populations running out of resources. He worried that the rate of population growth would outpace the earth's ability to produce food, leading to eventual crises that he called "population checks"—famine, war, and disease. Malthus notoriously (and incorrectly) blamed overpopulation on the poor for their immoral reproductive choices and advocated against any state policies that would help the poor survive, as he believed this would only prolong the inevitable. Adam Smith was more optimistic that a rise in manufacturing and trade could boost nations' overall wealth and improve the lot of the nation's poor. Malthus devotes an

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

entire chapter (16) to rebutting this point, insisting that the production of food becomes *less* efficient when wealth increases. For example, he claims that the production of corn will be replaced with pastureland, as increasing wealth promotes the desire and ability to integrate meat into diets. Since fewer mouths can be fed with pastureland than cropland, Malthus reasons that wealth may actually exacerbate the coming food crisis by transforming plant-based into meat-based agriculture. Though his overarching ideas of blaming the poor have largely been rejected, his notion of resource constraint was a breakthrough that continues to inform thinking about the environment, ecology, and population. These ideas have now largely been subsumed in the ecological perspective we later review. We may imply from Malthus's views that highly dense settlements are risky, as the prospects of supporting such populations become increasingly tenuous. Malthus looked upon the burgeoning urban centers of Europe at the nineteenth century's turn and believed that natural laws would necessarily dictate a painful population correction.

A few decades after British political economy was established, new ideas began to emerge independently from Germany. The first work on urban-rural dynamics that incorporated spatial concerns was *The Isolated State* (1826), by Johann Heinrich von Thünen. Though his ideas were not initially read widely, they did establish spatial concerns related to the political economy of urbanization and human settlement. The theory offered by von Thünen posited a series of concentric zones of agricultural activity surrounding a city. These zones are based on economic rents and build on the importance of such variables as the distance to markets, cost of production, locational rent, agricultural yield, and a given product's market price. The model suggests that cities would be surrounded by dairy and vegetables in the closest zone, surrounded by forestland in the next zone, grains in the third, ranching in the fourth, and unproductive wilderness as a fifth zone where agriculture is not profitable. Writing in the early nineteenth century before the automobile and, in most regions, he could not foresee the impact of such technologies on cities' rural landscape before the railroad. Neither could the Chicago School sociologists (discussed later) foresee the automobile's impact on metropolitan areas when they were writing. Like the Chicago School sociologists, von Thünen envisioned a landscape forged by market forces and *Homo economicus*; he envisioned a rural landscape shaped by cities' economic needs. In this sense, von Thünen advanced political-economic explanations of urbanization by envisioning their spatial impact on the rural landscape. The work of von Thünen remains impressive, though the changing nature of extraneous factors, such as new modes of transportation, cultural, economic, and political changes, renders the original parameters somewhat problematic. The essential goal of implementing spatial analysis in the organization of

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

human settlements remains relevant. His ideas about the connection between urban and rural development are essential.

In the same time frame that von Thünen was writing, Marx and Engels were busy outlining their critique of political economy, mainly in response to Steuart, Smith, and Malthus's work. Marx was primarily focused on the nation-state and the class relations that formed within it. Therefore, his analysis of what was happening within smaller territorial units, such as cities and rural communities, was not developed. However, Engels (1969[1845]) wrote *The Condition of the Working Class in England in 1844 and* had plenty to say about the alienating and challenging nature of urban life under industrial capitalism. While Engels was horrified by urban conditions, he also maintained a view that the city can provide the working class with the unique ability to self-organize: "Without the great cities and their forcing influence upon the popular intelligence, the working class would be far less advanced than it is" (Engels, 1969[1845], 152). Engels's insightful writing was meant to showcase the horrors of capitalism, and not necessarily the horrors of urbanization. The problems of urbanization were taken to be the result of capitalism and did not deserve an independent examination. Of relevance is that capitalist systems benefit from a large population of landless proletariats residing in the city, forced to sell their labor in competition with one another, thus driving labor costs down to their lowest possible level. In turn, capitalists are rewarded with the highest levels of profit, leaving the working classes to languish in paltry conditions. These ideas connecting urbanization to capitalism through a critical lens have become foundational for the contemporary political economy approach that would not receive much social scientific attention from urban-rural scholars until the late twentieth century.

Marx's views on urbanization came through most clearly in his theory of metabolic rift, as noted by Foster (1999). This portion of Marxian theory is found in the third volume of *Das Kapital* (posthumously published in 1894 by Engels), in the chapter, "The Genesis of Capitalist Ground-Rent." Here we find Marx building upon the notion offered by Steuart, suggesting that urbanization itself grows out of the excess productivity of agricultural labor, leading to a budding division of labor that is required to support an urban population:

> A level of productivity of agricultural labour which goes beyond the individual needs of the worker is the basis of all society, and in particular the basis of capitalist production, which releases an ever-growing part of society from the direct production of means of subsistence, transforming them, as Steuart says, into "free hands" and making them available for exploitation in other spheres. (p. 921)

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

Once this population of "free hands" is formed, cities begin to fill, manufacturing grows, and trade replaces agriculture as the primary economic basis. At this point, Marx sees urbanization as becoming an unnatural abomination, disrupting natural processes of metabolism that historically replenished and renewed natural resources such as soil fertility, and now leads to filthy environmental conditions and degraded landscapes. Marx (p.588) writes:

> large, landed property reduces the agricultural population to a constantly falling minimum, and confronts it with a constantly growing industrial population crowded together in large cities. It thereby creates conditions which cause an irreparable break in the coherence of social interchange prescribed by the natural laws of life. As a result, the vitality of the soil is squandered, and this prodigality is carried by commerce far beyond the borders of a particular state. ([von] Liebig [1862])

His reference to natural laws makes it clear that Marx views cities as an abomination, but it must be recalled that he feels this way because, in his view, cities are a manifestation of capitalism.

For his views on rural life, Marx is often derided for his statement regarding capitalism's role in rescuing people from the "idiocy of rural life." This statement was uttered in the *Communist Manifesto*. Before his work on the metabolic rift, he suggests that Marx may have viewed urbanization as potentially superior to rural life. For Marx, urbanization offers more opportunities to develop people's creative capacity though also posing several ecological threats. The term "idiocy" may be a mistranslation of Marx's German, "idiotismus," meaning idiom, or a form of expression. He may have meant to say the rural way of life, in other words, and not rural life as "idiotic." On this, we may speculate that, far from a view toward urban superiority, Marx is sympathetic to rural populations' fate. He discusses town-country relations as a set of almost universally exploitative social relations. He notes that urban populations have sought ways to dominate the rural, using any means made available by capitalism:

> the town everywhere and without exception exploited the countryside economically through its monopoly prices, its taxation system, its guilds, its direct commercial trickery and its usury. (p. 937)

Marx suggests that the spread of the capitalist mode of production gradually engulfs the countryside. It begins with the privatization of land and continues through the continual commodification of agricultural products. As the urban population expands along with trade growth, the peasant farmer gradually shifts from a subsistence-orientation to a market-orientation, slowly

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

becoming a capitalist farmer. Rather than producing primarily for survival, selling any excess through trade, the capitalist farmer produces for trade and uses the excess for survival. Hence, for Marx, the spread of capitalism and the urban population's growth are intertwined, both happening alongside the demise of peasant farming and the growing division of labor.

Marx is so critical of this process that it may be tempting to conclude that he would endorse a return to peasant agriculture as the dominant economic system—a return to primitive communism. This conclusion would be a mistake. Marx's position appears to be that peasant farming holds people too close to the level of subsistence, creating a hard life that always risks falling below the level of survival and thereby dramatically limits human potential. Therefore, while sympathetic to the countryside's fate, it is also the case that Marx held hopeful views of urbanization as a potentially liberating force. Though created by capitalism's forces, urbanization could prove a more rational form of existence in the post-capitalist era.

Summary

The early political-economic and geographic explanations of the eighteenth and early nineteenth centuries viewed urbanization as a new development, supported by a division of labor and expanding industry and trade. Steuart and Smith pointed to the importance of transportation routes giving rise to the location of new cities, villages, and towns. Both understood the dependency of urban centers on the countryside. More concerned with the ability to feed the growing urban populations was Malthus, who feared the prospects of overshooting natural resources and food supplies were inevitable. Marx and Engels offered pioneering critiques of city life under capitalism, raising some of the first questions about the value of urbanization and noting the countryside's exploitation. The work of von Thünen introduced spatial considerations by attempting to understand the optimal design of an urban-rural system that would best meet the population's economic needs. Block and Dupuis (2001) noted that, despite the rise of the global economy, von Thünen's ideas remain useful when examining certain commodities, such as milk, that require production in the nearby hinterland of cities.

Taken together, this first wave of urban-rural scholarship offers the following set of essential ideas:

- The role of the division of labor in developing manufacturing, and hence urban production (Steuart, Smith, Marx)
- The role of trade as a prerequisite for urban existence (Steuart, Smith, Malthus, Marx)

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

- The role of transportation in determining the location of towns and cities (Steuart, Smith)
- The role of seaports in giving rise to larger cities as a result of global trade (Steuart, Smith)
- The exploitation of the countryside for the sake of the city (Marx)
- Spatial dynamics in the movement of goods from country to city/town (von Thünen)
- The relation between natural abundance and population size and density (Steuart, Marx, Malthus)
- The tendency of urbanization to undermine natural resource capacity, such as through soil depletion (Marx, Malthus)
- The rise of urban social problems (Engels)

These pioneering considerations share an attempt at theorizing far-reaching political and economic changes, and they viewed urbanization as central to these changes. The understanding of urbanization they developed would be carried forward in the closing years of the nineteenth century but would be overshadowed by a new set of urban-rural concerns that were less political and economical and more social interactionist in nature.

SECOND WAVE THEORIES: CULTURE AND COMPLEX ADAPTIVE SYSTEMS

The political-economic framework was the original and dominant perspective for understanding urban-rural dynamics for more than a century. It has remained an operational perspective in one form or another through the present. However, despite this long-established record of scholarship in political economy, many scholars identify the beginning of urban, rural, and community theory, and some would say sociology itself, to be with the pioneering work of Ferdinand Tönnies (2001[1887]). Unlike his predecessors, Tönnies's ideas were predicated on a social micro-interactionist framework of competing wills. Rural community life could be defined by gemeinschaft, "natural will," and urban city life by gesellschaft, "rational will" interaction.

The framework offered by these concepts is ideal-typical, expressed in either/or terms, sometimes referred to as the "typological approach" (Lyon & Driskell, 2012). Historically, the essential idea is that human communities have tended to operate based on kinship, familiarity, closeness, intimacy, and friendliness. Under these conditions, social interaction is more expressive than instrumental, with more sociability and less room for purely transactional interactions. However, as urbanization commences, communities begin to grow larger, creating a context of impersonality, strangeness, unfamiliarity,

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

anonymity, and greater social distance. In urban settings, social interactions tend to be more instrumental than expressive and more accommodating of transactional exchanges than of sociability. Tönnies, therefore, created a framework that allows us to understand how urbanization has impacted the nature of social interaction and social relationships—from natural to rational, from warm to cool, familiar to strange, and from close to distant. People become less interested in one another and more interested in what value they can provide through a transactional exchange. A closer inspection of Tönnies' writing reveals that, since he understood the typology of gemeinschaft and gesellschaft to be ideal-typical, he maintained that they rarely exist in pure form. He would argue that all human settlements have elements of both qualities in different proportions.

While the work of Tönnies is a unique advance in that it focuses attention on social micro-interaction as the basis of community—perhaps the first purely sociological theory of community—his contribution also marks a point of disjuncture as the old questions of how and why cities form, or of the roles of trade, manufacturing, and transportation in urbanization, are left unaddressed. He does not theorize the aggregate or structural levels in the political-economists' manner from Steuart to Marx, nor does he count any of the political-economists as being influences on his work, save for Marx, who is only relevant in small ways. Instead, Tönnies cites Spencer (1898) and Comte (translated by Martineau, 1896) as his primary intellectual forebearers, each of whom focused on "society," and not specifically on questions about the origin or development of cities or communities. Comte and Spencer both developed evolutionary ideas that would implicate urbanization as the inevitable and desirable future of humanity, representing a more evolved form of social organization. Spencer would routinely refer to rural people as "primitive," while Comte's three-stage theory would place an urban scientific society at the pinnacle of human development. Thus far, this intellectual tradition is far more urbanormative than the political-economists or economic geographers discussed earlier, who at least maintained an understanding of urban dependency.

Outside Germany, and one year before the publication of Marx's earlier discussed contribution of the metabolic rift (published posthumously by Engels), Emile Durkheim (1984 [1893]) proffered his dissertation, *The Division of Labor in Society*. This theory of social organization was mostly a commentary on the process of urbanization. Like Tönnies, Durkheim relies heavily on the evolutionary and organic perspective of Herbert Spencer (1898) as his foundation, but unlike Tönnies, acknowledges the importance of Adam Smith (2018 [1776]) for contributing the concept of the division of labor. Durkheim departs from Smith's narrower economic version, offering a social conception defined by increasing levels of specialization that result

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

from moral, dynamic, and physical density (urbanization), in addition to the increasing volume of social interaction that accompanies population growth and density. Durkheim (1984) states this formally as a proposition:

> The division of labor varies in direct proportion to the volume and density of societies and if it progresses in a continuous manner over the course of social development it is because societies become regularly more dense and generally more voluminous. (p.205)

The level of division and specialization resulting from demographic causes would, in turn, give rise to different forms of social interaction and forms of solidarity. Small settlements with minimal divisions of labor are characterized by their mechanical solidarity or the notion of interacting based on shared symbols and ideas. Alternatively, larger settlements would be defined by their divisions of labor, resulting in organic solidarity. In this case, the basis of social interaction is not sameness and a shared symbolic universe, but rather complementarity and difference. In other words, individuals under organic solidarity are mutually dependent and reliant upon one another to do their parts and make society function properly. Suppose we were to integrate Tönnies into this typology. In that case, we might view mechanical solidarity as having a basis in the natural will, while organic solidarity is based on the rational will.

Durkheim identifies as the causal mechanism for the division of labor competition resulting from redundancy—consistent with evolutionary theory writ large. For example, if there are two accountants in a small town, they compete for survival. Each accountant is pushed to find a new niche that will narrowly define them, perhaps as commercial or personal tax accountants. Without further specialization, each would risk going out of business, just as two competing species occupying the same niche in a habitat risk extinction from redundancy. The reasoning offered by Durkheim is sound, but the foundation makes the same egregious mistake as that made by Spencer—confounding cultural and natural evolution. Ultimately, a fair interpretation of Durkheim would conclude that the most advanced societies are such because of density (urbanization) leading to the division of labor and a higher level of social organization. More simply put, urbanized societies are held to be the highest form of evolution. By disguising the social process of the division of labor as a natural process of competition and evolution, Durkheim and Spencer have made normative claims about the inherent inevitability and value of urban life as anchored in the natural order. This urbanormative assumption needs not to accept the basic proposition that population density encourages a more articulated division of labor, which is the more critical point. As a Complex Adaptive System, urban society, evolving in response to new realities, is a crucial advance, provided it is understood as social evolution. Like Tönnies,

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

Durkheim is concerned with social interaction, but unlike Tönnies, he incorporates demographic processes into his evolutionary theoretical framework. Also missing in the work of Durkheim is an explanation for the growing population density, so clearly articulated by Steuart and Smith, to result from manufacturing, trade, and transport.

A year after Durkheim finished his dissertation, Charles Horton Cooley was finishing his dissertation, *The Theory of Transportation*, published by the American Economic Association in 1894. Cooley's work, and later, Adna Weber's (discussed below), picks up the mantle of the political economy tradition while entertaining geographic themes reminiscent of von Thunën. The fact that Cooley is carrying forward the political economy tradition may strike some as odd, given Cooley's later interest in the social micro-interactionist approach, evident in his more widely known theory of the Looking-Glass Self. This aside, it would appear that Cooley's previous work was macro-focused and more conventionally political-economic.

In his theory of transportation, Cooley walks through the different ways transportation systems can be arranged, shifting between hypothetical conditions where geometry principles can be applied to examining real-world settings where physical geography complicates the flow. His analysis looks both at the internal organization of cities and towns and cities' external location into a broader network. For example, Cooley compares the radial street layout (also known as hub-and-spoke) to the rectangular layout (also known as the grid system) of other cities, noting the different time frames of development. He posits that slower city development encompassed country road systems that tended to have the radial street system, while faster-growing cities developed around rectangular street designs intentionally planned. These ideas are some of the first to study cities' internal spatial arrangements, now most closely associated with the human ecology tradition.

Turning his focus outside to the more comprehensive network of cities, Cooley provides insight into locational causes. In Chapter X, reminiscent of Smith's thinking, Cooley's "The Location of Towns and Cities" identifies the importance of "breaks" in the transportation system as critical to a city location, asserting: "Population and wealth tend to collect wherever there is a break in transportation" (Cooley, 1894, 91). This idea echoes Smith's concept of performing the office of carriers, where cities act as the go-between, exchanging goods between outside parties (typical of foreign nations). Like Smith, Cooley is not a reductionist and concedes a vast and complex set of conditions that lead to a city's rise, such as military advantage, religious importance, political advantage, or just plain chance. He does, however, find that breaks in the transportation system are important. A break refers to a change in transportation mode from one to another, as cargo is off-loaded from sea vessels and placed onto rail cars. Therefore, Cooley privileges

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

economic causes as the guiding force in urban development but notes how these are intertwined with and bound to the spatial arrangement of transportation networks. This notion extends and elaborates upon the more rudimentary insights offered by Steuart and Smith on cities' location and are combined with similar geographic ideas as offered by von Thunën.

It is worth noting that Cooley collaborated heavily with John Dewey while at the University of Michigan. Dewey would later relocate to the University of Chicago, where several urban development ideas would later be worked out. One might speculate that Cooley indirectly influenced the Chicago School through his collaboration with John Dewey. The same could also be said for symbolic interactionism, as Cooley later offers theoretical foundations for this perspective. However, Chicago School scholars such as George Herbert Mead (1934)—hired by Dewey—generally get credit. In any case, for our present purposes, Cooley's dual focus on internal and external organization of cities remains an impressive and vital contribution to urban-rural theory.

The influence of Cooley and British political economy is evident in the subsequent and complementary work of Adna Weber (1899), who would adopt Cooley's definition of *cities* as breaks in transportation systems for his dissertation on, *The Growth of Cities in the Nineteenth Century*. Weber acknowledges Cooley as offering the best statement on the role of transportation in determining cities' location but implies the explanation is incomplete, neglecting other essential forces. A closer reading of Cooley, as noted earlier, reveals his awareness that there are other factors at play beyond transportation. In the end, Weber's work provides a more descriptive history than a theoretical development of urban development. Nevertheless, in describing the growth of cities, he makes theoretical positions clear (p.170):

> Without trade and commerce, indeed, no towns or cities could come into existence, for they presuppose a non-agricultural population that buys its food-supply. When a portion of the tillers of the soil abandon agriculture and obtain their food-supplies by the exchange of other products of industry, the foundation of trade is laid; the specialization of function, or the division of labor in its broad sense, has then begun its course, which tends to an ever-widening circle of exchange and enlargement of the commercial centres.

Weber explains city development in the British political economy tradition while integrating Cooley's ideas concerning where the towns and cities are most likely to emerge within transportation routes.

In the same time frame that Adna Weber was completing his cross-national demographic analysis, W. E. B. DuBois was busy with empirical studies of rural and urban settings, from a comparative perspective in the United States. As argued by Morris (2015), DuBois deserves credit for completing the

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

first genuinely rural sociological study in 1898, through his examination of Farmville, Virginia. In this analysis, DuBois shows Farmville's black population's socioeconomic and demographic conditions, relying on interviews, census data, and statistical analysis of data collected from an ambitious survey of roughly 1,200 respondents. His research was funded and published by the U.S. Department of Labor, and as such, had a real-world applied impact—it was not obscure. His report provides a painstakingly detailed analysis of work, occupations, family life, income, and wealth in the community. DuBois's underlying research question was geared toward finding out if the black population was seeing any improvement in the post-slavery era. He concluded his report by noting uneven progress had created a growing class differentiation among the black population in Farmville. DuBois's analysis went on to counter widely held stereotypes about the black population as being "lazy," by suggesting that such stereotypes were an unfair way to characterize the upwardly mobile black residents, many of whom had become wildly successful and "industrious." This kind of sociology, debunking stereotypes related to race, is well ahead of its time.

DuBois's more widely known 1899 study followed his work of rural sociology. *The Philadelphia Negro* undertakes an even more ambitious and pioneering approach to African Americans' urban experience. This study is perhaps the first empirical work of urban sociology, with the possible exception of Engel's 1844 analysis of the working class in London. DuBois singlehandedly distributed questionnaires and conducted interviews with over 2,500 respondents in Philadelphia. He triangulated this data with other sources such as data provided by the U.S. Census. As with his Farmville study, DuBois's study of Philadelphia was committed to the questions of racial progress and continuing inequality. This study is not always understood as a point of comparison that started with the Farmville project. Understood in this light, DuBois was engaged in a comparative analysis that considered the importance of both urban and rural contexts for the African American experience.

In terms of intellectual influences, DuBois's studied political science at the University of Berlin between 1892–1894, meeting Max Weber along the way, who was only a few years ahead of him in his studies (Morris, 2015). DuBois also encountered the ideas of Tönnies and other scholars of rural and urban issues from a comparative perspective, and thus learned the methods and theory that would influence his future scholarship. DuBois's significant contribution to the study of urban-rural dynamics was his commitment to studying social inequality, and this theme is now one of the most central in urban-rural scholarship, extending beyond the class-based critique of Marx and Engels to include race. The earlier discussed political-economists neglected broader social justice and inequality concerns, and many accepted social inequalities as a normal or even natural condition (e.g., Thomas Malthus).

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

Tönnies' colleague, Georg Simmel, writing in the early part of the twentieth century, was interested in understanding the social-psychological implications of the transition to urban society. His essay on the "Metropolis and Mental Life" (Simmel [1903], in Levine, 1971) is his most precise and relevant statement about interactional differences of city life. Simmel observed that individuals become overwhelmed by stimuli in metropolitan areas, developing a calloused coat of armor—the "blasé attitude." Simmel's contributions do not end there. He also articulated a mid-level theory about the "quantification" of life, whereby city life is increasingly driven by numbers and rural life by qualitative attributes. He notes the importance of keeping time and coordinating activities in urban areas, leaving less time for idle chat, and building familiarity with personalities that is more common in rural locations. Of course, the key to this notion of quantification is the money economy and the reduction of interaction to market exchange. Therefore, the perspective of Simmel is highly compatible and supportive of the basic social micro-interactionist framework offered by Tönnies and Durkheim (Levine, 1971). Simmel is also known for developing a theory of small groups based on geometry. We might note that Cooley had developed geometric theories of urban spatial arrangements a few years before this, but it is unlikely Cooley's ideas influenced Simmel. Simmel's social distance ideas would be necessary to our conceptualization of cultural differences between urban and rural areas, which help explain the emergence of urbanormative ideology (Fulkerson & Thomas, 2019).

Up to this point, the late nineteenth- and early twentieth-century rural-urban scholars were focused on social interaction, social solidarity, and social inequality in ways that were not considered or consistent in the political economy tradition. They were not at odds but were asking different questions. Their work was built on a different intellectual tradition that includes Comte and Spencer, who were more evolutionary and organic in their thought. This wave of scholars raised qualitative questions about what life in urban society is like compared to small-town communities. While they feared the city's impersonality and cold exchanges, they also marveled to some degree at the very possibility of urban society, ushered in by new technologies and forms of social organization, such as bureaucracy. Their influence on subsequent urban scholarship is undeniable, especially in the tradition of human ecology and the Chicago School.

THIRD WAVE THEORIES: SPATIAL ORGANIZATION AND RURAL-URBAN COMPARISONS

According to Ritzer (1996), Albion Small was the force behind the Chicago School and played a role in recruiting such figures as W. I. Thomas,

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

George Herbert Mead, and John Dewey. Small was himself educated in the German tradition at the University of Leipzig and the University of Berlin, 1879–1881, though later awarded his Ph.D. from Johns Hopkins in 1889. In the early years of the Chicago School, he was instrumental in creating an American sociological presence by creating *The American Journal of Sociology*, and flagship association, the *American Sociological Society* (now the *American Sociological Association*). From Small's efforts, the seeds of the Chicago School would be planted. They would later grow into the Symbolic Interactionist perspective that dealt with social psychology and micro-level issues. The human ecology tradition dealt with meso-level issues of urbanization. Recall, however, that long before the Chicago School launched into human ecology, some exciting things were happening in the lesser-known Atlanta School, headed by DuBois (Morris, 2015). It would be decades before the human ecology research agenda would take off in Chicago.

Other advances in rural-urban sociology—now more closely identified with rural sociology—were influenced by the typological approach. This work was pioneered by Charles Galpin, who studied Walworth County, Wisconsin, in 1915. Like DuBois, Galpin was interested in comparisons of urban and rural contexts. He offered "rurban" as a synthetic term, although it did not receive much attention or become widely used. The motivation behind coining the term *rurban* was to offer the position that town and country are not separate and distinct entities and that both are important and mutually dependent. In the forward to Galpin's *Rural Life* (Galpin, 2018, IX–X), Russell comments:

> Professor Galpin has been fortunate in opening a fresh vein of thought that bids fair to be a mine of increasing richness in that it offers a pertinent and tangible foundation for the molding of rural life, not on a basis of separate development where the city and the country are unrelated to each other, but where the two forms of expression are mutually dependent on each other.

American sociology was reluctant to acknowledge and even worked purposively to ignore DuBois's contributions—especially Robert Park, in collusion with Booker T. Washington (Morris, 2015). This suppression may explain why rural sociologists, such as Wilkinson (1991), give Galpin credit for conducting the first rural sociological study. DuBois's analysis of Farmville predates Galpin's study by twenty years. Though not the first rural sociologist, Galpin contributed the rurban perspective that helped lay a foundation that would inform rural and urban sociology alike. Galpin's later collaboration with Sorokin and Zimmerman would result in a complete rural-urban comparative perspective—a point to which we return later. Importantly, these individuals were all inspired by the typological approach.

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

Also drawing on the ideas of Tönnies, Max Weber, in his 1921 work, *The City*, wrote extensively about rationalization, the hallmark of gesellschaft society, while maintaining that European (occidental) cities formed around the process of bureaucratization and the decline of kinship loyalties. He connected the inevitable bureaucratization of society to rationalization and noted such negative consequences as alienation and depersonalization. Indeed, Weber feared we were moving toward an "iron cage" of rationality, promoting a cold and hard image of a society with little individual freedom. On this point, he departed from Simmel, who offers some alternative ideas, casting life in small towns as at times stifling of individual freedom while suggesting that the anonymity of cities affords more opportunities and freedom to express individuality. In any case, this lesser studied portion of Weber's scholarship builds on the social interactionist approach to urbanization, highlighting the experiential differences of urban and rural life. Weber, however, is hard to pin down. Unlike his contemporaries, Simmel and Tönnies, who were strictly focused on social interaction and the clash of wills, Weber, in his analysis of the "Nature of Cities," goes into some of the same themes identified by the political economy tradition. Weber is often viewed as Marx's debate adversary on several important political-economic issues.

Regarding the rise of cities, Weber notes the importance of manufacturing, trade, and transportation—themes that were well established by now. His historical-comparative analysis of ancient Greek and Roman cities led him to identify the primary features of a city: a fortification for defensive protection, a market in which to exchange and obtain goods, a legal system with a court and autonomous law, forms of association, and autonomy as a political unit. His analysis is far more historically grounded than the work of his contemporaries. His work marries the old and new classical theory waves and may be regarded as the most complete treatment of urbanization to this point. Much of our work expands upon his analyses, though we offer a far longer historical window with nuanced causal forces in Parts II and III.

To this point, urban-rural scholarship contributed the following:

- The role of urbanization in reshaping and changing how people interact—distant, rational, and impersonal (Tönnies, M. Weber, Simmel)
- The social-psychological effects of urban life—alienating and overwhelming (Simmel)
- The evolving Complex Adaptive Systems concept of urban change (Durkheim)
- Continued examination of transportation and trade in urban development; identifying of "breaks" in transportation systems in determining locations of cities (Cooley, A. Weber, M. Weber)

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

- Further development of the division of labor, concerning modes of solidarity and urbanization (Durkheim)
- Synthesis of urban and rural into a single "rurban" term—emphasizing mutual dependence (Galpin)
- Comparative urban-rural differences (DuBois)
- Expanding the focus on social inequality in urban-rural research to include race (DuBois)

Further Development of Ecological and Typological Approaches

At roughly the same time that Weber's work on *The City* was posthumously published, the seeds of Albion Small's efforts were beginning to bear fruit, and the human ecology school in Chicago was coming into fruition. The central figure, Robert Park, was influenced by the German tradition, having worked directly with Georg Simmel in 1899 and 1900, and earning a Ph.D. in Philosophy in 1903 from Heidelberg. After graduation, Park would work at the Tuskegee Institute with Booker T. Washington, and it would be some time before he engaged in urban sociology questions. Park and Washington worked to promote their ideas of industrial education for the black population while criticizing DuBois's work, who advocated liberal arts education (Morris, 2015). Park and Washington worked to suppress the efforts and credibility of the Atlanta School in order to advance their ideas, thereby hindering and suppressing DuBois's significant development of urban-rural social science.

Together, Park, Burgess, and McKenzie would (1925) publish *The City*, four years after Max Weber's work of the same name, posthumously publish in 1921. This work is the source of the now widely cited Concentric Zone theory, concerned with cities' internal spatial organization—now a fixture in Introductory Sociology courses. This theory's essential idea is that there are different natural areas of the city that result from competition between different groups for scarce urban resources, including land. Land use shifts were argued to occur through competition and succession—a concept borrowed from plant ecology (Clement, 1916). As land became sought after, its value pushed out those less able to compete, thereby allowing those more fit to move in and dominate the area. Cities were thought to begin in a natural area—a good harbor, a break in the mountains suitable for a road, and so on—and the settlement would expand outward in concentric zones as newer neighborhoods grew at the fringes and older areas were left to those who could not afford new construction. The result is a succession pattern from the central business district where new buildings and land uses supersede the old,

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

surrounded by the oldest and poorest neighborhoods in the city that were in effect "waiting" to be absorbed by the business district; the so-called "zone of transition." Neighborhoods grow newer and wealthier as one travels from the downtown to the suburban fringe.

Though Concentric Zone theory is the most recognized product of the Chicago School's human ecology, it is not the only one worthy of note. Other theories would emerge with a similar goal of explaining urban spatial arrangements and their intersections with social processes, notably the multiple nuclei model (Harris & Ullman, 1945) and sector theory (Hoyt, 1939). The city's spatial analysis through the various models turned out by the Chicago School is like the pioneering spatial analysis offered by von Thünen. However, it is not clear if Park or his colleagues ever read this work—it is not cited in *The City*. What is clear is that they were not influenced by the political economy tradition or the Marxian examination of urbanization under capitalism. Instead, the Human Ecologists treated urban changes as natural phenomena that progressed through natural evolution. This thinking is reminiscent of Durkheim's evolutionary logic, but neither is Durkheim cited. Instead, they were basing their theory more directly on the work of Clements's (1916) ecological analysis of plant succession.

A few years later, in 1929, at the University of Minnesota, Pitirim Sorokin and Carle Zimmerman published *Principles of Rural-Urban Sociology*. This ambitious monograph examines urban and rural as social worlds, mainly influenced by Galpin's earlier work. Sorokin and Zimmerman would collaborate with Galpin (1930) to produce *A Systematic Sourcebook in Rural Sociology*. As noted earlier, these scholars cite Max Weber as their inspiration, noting his typological, ideal type approach. At the beginning of the book, they lay out their framework of the rural world and urban world (see table 2.1). The first row in the table, dealing with occupations, is the most important as it is the definitional row since urban and rural are defined in occupational terms. At the same time, the remaining characteristics result from the occupational differences between rural and urban places.

The Principles of Rural-Urban Sociology is informed by hundreds of pages of examples and observations worldwide. The analysis involves typologically comparing urban and rural contexts (worlds) for a host of different outcomes, consistent with Weberian approaches. Like many in the political economy tradition, the Sorokin-Zimmerman model equates rural with agriculture, leaving urban to contain all remaining forms of social life, including mining and forestry activities. Their definition privileges occupation as the most critical criterion for demarcating rural from urban, thereby minimizing the more common demographic definitions based on density or sociocultural definitions—although these issues are at least considered. This is a definitional choice that would be sound were it not for the narrow understanding of rural occupations

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

Table 2.1 Sorokin and Zimmerman's Rural and Urban Typological Comparison

	Rural World	Urban World
Occupations	Totality of cultivators and their families. In the community are usually representatives of several non-agricultural pursuits. They, however, do not compose the proper subject of rural sociology.	Totality of people engaged, principally in manufacturing, mechanical pursuits, trade, commerce, professions, governing, and other non-agricultural occupations
Environment	Predominance of nature over anthropo-social environment. Direct relationship to nature.	Greater isolation from nature. Predominance of man-made environment over natural. Poorer air. Stone and iron.
Size of community	Open farms or small communities, "agriculturalism" and size of community are negatively correlated.	As a rule in the same country and in the same period, the size of urban community is much larger than the rural community. In other word, urbanity and size of community are positively correlated.
Density of population	In the same country and at the same time period the density is lower than in urban community. Generally density and rurality are negatively correlated.	Greater than in rural communities. Urbanity and density are positively correlated.
Heterogeneity and homogeneity of population	Compared with urban populations the populations of rural communities are more homogeneous in racial and psycho-social traits. (Negative correlation with heterogeneity.)	More heterogeneous than rural communities (in the same country and at the same time). Urbanity and heterogeneity are positively correlated.
Social differentiation and stratification	Rural differentiation and stratification are less than urban.	Differentiation and stratification show positive correlation with urbanity.
Mobility	Territorial, occupation, and other forms of social mobility of the population comparatively less intensive. Normally the migration current carries more individuals from the country to the city.	More intensive. Urbanity and mobility are positively correlated. Only in the periods social catastrophe is the migration from the city to the country greater than from the country to the city.

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

Table 2.1 Sorokin and Zimmerman's Rural and Urban Typological Comparison (*Continued*)

	Rural World	Urban World
System of interaction	Less numerous contacts per man. Narrower area of the interaction system of its members and the whole aggregate. More prominent part is occupied by primary contacts. Predominance of personal and relatively durable relations. Comparative simplicity and sincerity of relations. "Man is interacted as a human person."	More numerous contacts. Wider area o interaction system per man and per aggregate. Predominance secondary contacts. Predominance of impersonal casual and short-lived relations. Greater complexity, manifoldedness, superficiality, and standardized formality of relations. Man is interacted as a "number" and "address."

Source: Sorokin and Zimmerman (1929, 56–57) (recreated table)

as solely agricultural. Much of our understanding of rural-urban differences is occupational, though we include any activity in the energy economy as rural production, as discussed in chapter 1. Although the Sorokin-Zimmerman approach embraces typological comparison, it fails to examine urban and rural as truly connected systemically, thereby abandoning Galpin's initial synthesis goal. The choice of the typological approach forced this unfortunate outcome, greatly hindering the development of "rurban" sociology. The goal of synthesis is more consistent with the Hegelian and Marxian dialectical method.

In the same year that Sorokin and Zimmerman offered their ideas, Redfield (1930) would publish his initial work on Tepoztlán that builds on the same typological thinking. Redfield offers the folk-urban continuum with an eye toward understanding cultural differences and intending to promote a more sophisticated way of theorizing urban-rural relations than was the case for Sorokin and Zimmerman (1929). His later and more famous article, "The Folk Society," is a counterargument to Wirth's "Urbanism as a Way of Life" and highlights the Yucatan's gemeinschaft qualities. Therefore, Redfield differed from the simple dichotomous notions of urban-rural found in Sorokin and Zimmerman by espousing the continuum concept. As noted, Tönnies was more interested in the continuum than the typologies about which he is best known. In this regard, Redfield is methodologically closer to Tönnies than Weber.

Against this theoretical backdrop, rural sociological research would flourish through the 1930s and 1940s based on an ambitious and far-reaching analysis of communities around the United States. Much of this activity was sponsored by the Bureau of Agricultural Economics (BEA) division of the Department of Agriculture (USDA) under Carl Taylor's leadership. The best-known product was the *Rural Life Series* (Taylor et al., 1949) that provided a catalog of

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

empirical case studies that illustrated "The Culture of a Contemporary Rural Community" (Wilkinson, 1991). While the series showed considerable diversity in rural life experience, this catalog was unfortunately not comparative, and attempts to theorize general patterns were not offered. For an extended period, rural sociology was purely inductive, resting on descriptive community studies that documented small-town life decline, loosely extending ideas from the typological tradition (Lyons & Driskell, 2011). Unlike the Chicago School's focus on internal spatial dynamics, rural scholars remained interested in urban-rural relations from small rural communities' vantage—as documented in ethnographic case studies. In this regard, rural sociology remained committed to the ideas of Tönnies regarding gemeinschaft and gesellschaft, as well as Redfield's folk-urban continuum. Early rural sociology was influenced by the human ecology view, although it did not become preoccupied with spatial concerns (Fulkerson & Thomas, 2021).

Apart from developments in the American arena was at least one other significant contribution coming out of Germany. While von Thünen (1844) theorized the impact of an individual city on the rural hinterland, Christaller (1966 [1933]) envisioned entire regions shaped by urban systems in his *Central Place theory*. Settlements in Central Place Theory (CPT) are understood as market, transportation (in a similar vein as political economy), or administrative centers that serve and/or control surrounding territories. Higher-order centers serve larger territories, including lower-order centers that function as intermediaries between the countryside and the higher-order centers. In a sense, each settlement is a node in the network, acting as a center for exchanging goods within the surrounding region or hinterland.

Christaller's (1933) theory posited an external spatial pattern in the settlement of towns in Southern Germany, where size was observed in relation to distance. This idea led to the use of geometric shapes to model settlement based on several assumptions: flat surfaces, even population distribution, even resource distribution, equal purchasing power, minimal travel time to market by consumers, equal transportation costs, and perfect competition. In other words, this extends some of what Cooley offered earlier, although he exclusively focused on transportation networks.

Two concepts come into play in CPT. First, the notion of "threshold" suggests a minimum population required to support certain goods or services. Second, the "range of goods or services" refers to the average maximum distance people will travel to purchase goods or services. Together, the *threshold* defines the lower limit, and the *range* defines the upper limit of where goods and services may be found. In isolation, this takes the form of a circular market surrounded by a vast hinterland—much as von Thünen suggested in his Isolated State. As the density of settlement increases, the pattern connecting them looks increasingly hexagonal.

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

In figure 2.1, the isolated central place is displayed in row A. In row B, there are non-adjacent markets and unserved hinterland areas in-between. In row C, we have adjacent markets that are not serving all areas optimally. In row D, there is the optimal hexagonal settlement pattern, where no areas are left out. Of course, that means there is no hinterland from which to draw resources, thereby implying a fully urbanized landscape supported entirely by trade. Christaller would add that settlement is influenced by three principles: marketing, transportation, and administration. Generally, a higher-order settlement would offer more goods and services while serving a larger area (e.g., a city serving nearby hamlets and villages). The hierarchy from top to bottom includes:

1. Metropolis
2. City
3. Town
4. Village
5. Hamlet

While critics of CPT note that the theory struggles to predict current patterns of settlements, it must be acknowledged that the conditions identified by the

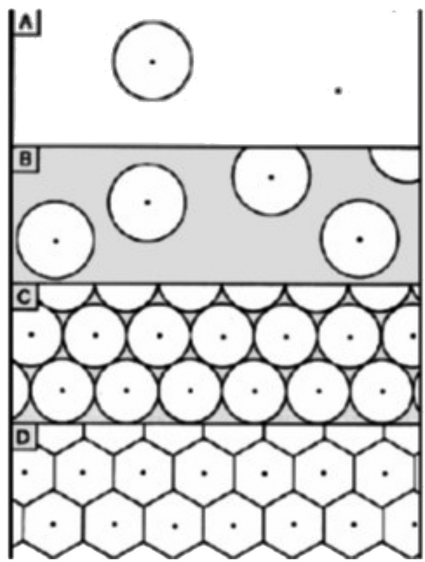


Figure 2.1 Christaller's Central Place Theory and Hierarchy of Settlements. Source: Christaller (1933), accessed 1/19/2021 from https://www.centroidpm.com/urban-management/central-place-theory/

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

theory are rarely going to be found in reality. When violations of the assumptions are considered, proponents find that the theory provides a reasonable estimation of settlement patterns. Simultaneously, no other theory has successfully explained the hierarchical nature of settlement—even as this is something that exists in a nearly universal way. Indeed, it is a concept that we embrace. Christaller extends the theory of the location of settlements, considered by Steuart, Smith, Cooley (1894), and A. Weber (1899). We incorporate the notion of hierarchy in our understanding of urban-rural systems, though our notion of resource horizons and coalescence diverges from Christaller's geometric pattern of adjacent settlements.

A short time later, there was an intriguing mathematical development offered to the hierarchical ranking of cities in Zipf's Law (1940, 1949). Zipf was a linguist who noted that a small number of words are most frequently used, while most words are only rarely used. Using statistical probability methods, Zipf created his "harmonious law," showing the phenomenon of organized distributions based on the principle of least effort. Zipf generalized this idea to other areas, eventually leading to the observation that city size follows this statistical pattern. The largest city is twice the size of the second largest city, three times the size of the third largest city, and so on. This pattern may be expressed by the following equation:

$$P_n = 1 / n * P_1$$

The population (P) for the nth city is roughly the inverse of the rank multiplied by the largest city population (P_1). This mathematical innovation complements the notion of hierarchy set forth by Christaller but remains relatively undeveloped as a theoretical innovation in urban-rural social science. In his review of Zipf's Law, Boulding (1951) expresses interest in the empirical support for the law and disappointment in the lack of theoretical understanding. Our conception of demographic change is tied to environmental demographic processes, though the math offered by Zipf is not something we necessarily refute—it is worthy of further study.

The Split of Urban and Rural Sociology and Rise of Mass Society

In 1937, urban and rural sociology would embark on separate and disparate trajectories when it was decided that the Rural Sociology Section of the *American Sociological Society* would break away and form its professional community, the *Rural Sociological Society*. Urban sociology continues to this day to exist as a section of the *American Sociology Association*. While urban scholarship continued down the path of the Chicago School with its cooler scientific

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

approach to the study of urban settlement patterns, rural sociologists would focus inductively on what was happening in the countryside as the result of the growing influence of the city—much of this showing up in the *Rural Life* series. In either field, the focus of the "other" drifted into the obscure background, and any hope for urban-rural integration was lost, as rural and urban scholars alike would become inwardly focused, carving out exclusive access to content space within sub-disciplinary boundaries. Moreover, the urban-rural continuum perspective ran into empirical problems. It became increasingly clear that the once vast differences in rural and urban cultures were diminishing due to greater contact and movement—entire societies and nations were becoming urban. Thus, future studies like that by Haer (1952) began to find that the extent to which one was rural or urban had little association with cultural traits such as political conservatism, once thought to be a predominantly rural characteristic. Interestingly, these changes may be explained by Galpin's notion of urbanization (1915), though we are aware of no such study.

Not all outcomes of the Chicago School were spatially oriented. In later years, both Hope Tisdale (1942) and Louis Wirth (1938) offered ideas about urbanization that borrowed, at least partly, from the typological tradition. Both were focused on demographic consequences, noting the changing heterogeneity of the urban population in contrast to more homogeneous small rural communities. To a large degree, by mid-century, the primary approach of the Human Ecologists would be overshadowed by the rise of Ivy League and east coast institutions that favored a structural-functionalist paradigm (Ritzer, 1996) that did not include a spatial component. As Ritzer (1996) notes, a major shift in the 1930s away from the Midwest style of sociology that was ecological and community-oriented to the east coast that was structural-functionalist with a macrosocial focus, shifting attention from the local and individual scale to the national and international scale. This shift has also been described as a shifting focus to "mass society" (Lyon & Driskell, 2012). This contribution offered little to elaborate on our theoretical understanding of urban-rural dynamics.

Summary

To summarize, here are the last significant contributions to urban-rural theory from classical theory (early to mid-twentieth century):

- Examination of the internal spatial organization of cities (Park & Burgess, Hoyt, Harris, and Ullman)
- Application of the evolutionary framework to internal urban change (Park & Burgess)
- More robust typological comparisons and definitions of urban and rural (Sorokin & Zimmerman)

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

- Heavier focus on the demographics of urbanization as population concentration (Wirth, Tisdale)
- Careful field research, documenting rural life (the Taylor research agenda)
- Elaborated ideas about the system and location of cities within hierarchies (Christaller, Zipf)

Chapter 3 will follow these various trajectories as they bifurcate into a disparate mesh of ideas that today inform urban-rural theory.

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

Chapter 3

Contemporary Urban-Rural Theory

Urbanization has remained a central concern throughout the development of the social sciences. Attention to urban-rural issues continues through the present by an increasingly fragmented and diverse array of academic fields. Urban-rural dynamics are noted in urban geography, economic geography, urban sociology, rural sociology, development sociology, social change sociology, environmental sociology, economics, environmental economics, history, demography, anthropology, archaeology, and political science, among others. We review many of these in a limited and selective way, intending to focus on major theoretical frameworks that have been used. The classic scholars reviewed in the last chapter maintained a focus on urban-rural dynamics in a comparative if not fully integrated framework and were less concerned with disciplinary boundaries than with holistic understandings of city-country or town-country relations. There was interest in explaining the rise of dense settlements; the basis of urbanization in trade, transportation, manufacturing, technology, and agriculture; the role of natural resources and concern with overshooting natural limits; the different forms of social interaction found in urban and rural contexts; the complex adaptive and evolutionary trajectory of urbanization; the relationship of the division of labor to urban development; the social-psychological impacts of urbanization and alienation of city life; identifying the inherent and fundamental meaning of urban and rural; the different levels of inequality found in urban and rural settings; the spatial hierarchy or network of cities and towns; and the internal spatial organization of urban and rural areas. These themes have subsequently received scant and scattered attention, with a great deal of emphasis on social inequality, social interaction, and social psychology, and a diminished focus on the remaining themes.

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

By mid-century, much of the excitement and activity fueling urban and rural research in the first part of the twentieth century began to wane. Martindale (1958), in his introduction to Weber's, *The City*, laments that "the contemporary American theory of the city is in crisis" (9). Lyon and Driskell (2012) suggest that scholars began to reimagine their research at the level of "mass society" rather than "community." This shift undermined the investigation of urban-rural dynamics taking place within and between communities. The social scientific imagination was now oriented to a national level that is the central focus of Parsonian theory.

EVOLUTIONARY, FUNCTIONALIST, AND MODERNIZATION THEORIES

Parsons (1937, 1951) offered an ambitious grand theory that sought to explain society in evolutionary terms, as a system driven by the process of differentiation to achieve solidarity, stability, and equilibrium. Spencerian, Comtian, and Durkheimian imagery greatly influenced his theory, as is evident in his adoption of the organic view of society: different institutions act as organs functioning within a larger body (society). He was also influenced by Max Weber's commitment to individualism, as Parsons sought to define social systems as the outcome of individual action. He identified social norms, social roles, socialization, and social control, as mechanisms connecting individuals to social systems. Adaptation was theorized as a cultural process whereby society would develop new roles, new normative rules enforced through sanctions, and passed down generationally through socialization. Internal tensions and conflicts were understood as essential drivers of social change. Much of the general language and theory in contemporary sociology and cultural anthropology continues to reveal the impressive impact of Parson's ideas.

For our purposes, we would point out that Parsons's entire body of theory neglects the meso-level settlement-based urban-rural dynamics that dominated prior scholarship. This neglect is surprising, as Parson's influences—Durkheim and Weber—were highly attuned to the meso-level, as discussed in chapter 2. Had Parsons applied the system model to the settlement level, he may have produced the first urban-rural dynamic theory. Instead, Parson's social systems perspective neglected the settlement along with spatial, geographic, and environmental processes associated with the Human Ecological tradition. Parsonian theory would come to dominate social science in the 1950s and early part of the 1960s, with substantial consequences. Parsons was a significant influence on what we now call Modernization theory. This theory had ecological roots but came to be heavily functionalist in explaining

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

national development and urbanization processes. Human Ecological theory was not entirely eclipsed in this period of Parsonian normal science. However, it adapted to produce a new kind of functionalist Ecological theory—best articulated by Amos Hawley (1951). Hawley conceptualized ecology as human populations adapting through culture to changing environmental conditions—settling in a state of equilibrium, and changing under conditions of disequilibrium. The Ecological perspective was hence subsumed under functionalism.

While Parsons developed a systems theory of society, incorporating evolutionary ideas such as adaptation, we would point out that his notion of equilibrium as the organizing principle of social systems is problematic. As we discuss later, Functionalist theory's major problem is not the result of systems thinking per se but underestimating the complexity in systems. We suggest that Complexity theory provides a more realistic set of ideas about how social systems operate. As we set forth, the urban-rural system idea does not start from the notion of equilibrium but of CAS (Complex Adaptive Systems), which does not specify a default state like equilibrium.

Parsonian theory was dominant in the field of sociology during the postwar era. Changes in the world itself also pushed sociology and most academic fields in a new direction. After the Empire of Japan surrendered to Allied forces in August 1945, the world began to engage in what McMichaels (1996) refers to as the "development project." There was an international effort to rebuild nations damaged by colonialism and the aftermath of two World Wars. The United Nations was formed, research and development funding was made available (e.g., the Ford Foundation, the World Bank), and efforts were set in motion to rebuild Europe and facilitate the transition of newly independent former colonies of Asia, Africa, and South America, into "modern" nations. During this time, the Green Revolution emerged as scientists like Norman Borlaug sought to develop scientific agriculture to help less developed nations avert Malthusian collapse by becoming food secure and economically viable.

Social scientists contributed to the development project by studying the sociocultural dynamics of modernization. Economists and demographers would refer to the entire modernization process as a transition—a seemingly inevitable process through which all societies pass as they grow to join the modern industrial world. Davis (1945), building on prior work by Adna Weber (1899) and Warren Thompson (1929), advanced Demographic Transition theory by explaining the process of urbanization and concomitant rural exodus as a central mechanism creating a reduction of both fertility and mortality rates, thereby stabilizing populations. Thompson's work was rooted in the ecological tradition, as evidenced by his interest in population from a Malthusian perspective, yet his ideas were entirely compatible with

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

the developing functionalist perspective. Davis's version of DTT would fully incorporate functionalist ideas.

Davis maintained that technological limitations hindered ancient city development in agriculture, transportation, and medicine (city life was deadly before medical advances). Davis claimed that the first cities enjoyed advantageous natural conditions and locations in fertile river valleys, but were still small by modern standards, both in size and population. He would suggest that culturally, traditional beliefs, values, and norms limited advances in science and technology while suppressing the process of urbanization. Economically, he would claim that the ancient cities were primarily focused on agricultural production and trade, with a small handicraft economy. Davis (1955) identifies the significant advance of Europe, pointing to the industrial revolution as the key driver that would complete the urban revolution:

> The transformation thus achieved in the nineteenth century was the true urban revolution, for it meant not only the rise of a few scattered towns and cities but the appearance of genuine urbanization, in the sense that a substantial portion of the population lived in towns and cities.
>
> We thus have today what can be called "urbanized societies," nations in which the great majority of inhabitants live in cities. The prospect is that, as time goes on, a greater and greater proportion of humanity will be members of such societies. (433–434)

Davis also adopted Adna Weber's understanding of why urbanization came to unfold. As such, his theory has a basis in the Political economy tradition going back to Sir James Steuart. Davis (1955) claims:

> The tremendous growth in world trade during this period has enabled the urban population to draw its sustenance from an ever wider area. Indeed, it can truly be said that the hinterland of today's cities is the entire world. (433)

This statement may be the first framing of the global urban-rural system, which is more or less synonymous with the "World-System," identified later by Wallerstein (1974, 1980) and Braudel (1977, 1982). In chapter 1, we discussed the world urban-rural system concept through the lens of CAS.

Influenced by Davis's ideas, social scientists have approached the process of urbanization as an inevitable and irreversible stage of development. For example, Reissman (1964, 154) claims that it is "deep," "irrevocable," and "irreversible once begun," adding further that during the process of modernization, "society gives way to urban institutions, urban values, and urban demands." Outside of demography, social scientists would echo the

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

view of urbanization as inevitable, emphasizing the importance of cultural transitions from old "primitive" rural values, steeped in tradition, to new modern urban industrial values, defined by their openness to change (Inkeles, 1969; McClelland, 1964; Bellah, 1957). Other scholars would examine through the Modernization lens, economic development (Rostow, 1964), the evolution of political democracy (Coleman, 1968; Lipset, 1963), and the increasing structural differentiation of society (Smelser, 1964). As aptly noted by So (1990), Modernization theory is predicated on the idea of unilinear staged evolution, whereby various societies and entire nation-states uniformly evolve from a simple primitive to a more complex or civilized form. This view echoes Spencerian and Durkheimian influences. As also noted by So, Modernization theory is functionalist, hinged on the Parsonian concept of social stability with equilibrium representing the normal state of affairs, and disruption interpreted as undesirable and temporary. In this case, the process of modernization is disruptive of traditional agrarian life's stability, but at the same time, the process is accepted as inevitable and unavoidable. The sooner society can maneuver its way through the predictable development stages, the better—eventually achieving urban equilibrium.

A related body of adoption and diffusion research was underway in rural sociology, based on a slightly different footing than Modernization theory, though it is highly compatible. A study by Ryan and Gross (1943) on the adoption of hybrid corn seed in an Iowa town became a model that would later be formalized into the diffusion of innovations theory by Everett Rogers (1962). The fields of rural sociology and agricultural economics devoted considerable work to adoption and diffusion in hopes that rural agricultural communities in crisis could be rescued by new discoveries in plant and animal sciences emerging primarily from research at land grant universities. The world development community shared this hope and applied it internationally. Thus began the equating of progress, modernization, adoption of technology, and development with the process of urbanization itself.

On this basis, the charge of development experts was to advise and lead traditional societies navigating through the stages of modernization by providing various forms of technical assistance. Practitioners went into the field enthusiastically advising "primitive" and "traditional" societies to embrace modernization, casting away old knowledge, values, beliefs, and practices—replacing them with faith in science and technology. As Modernization theory was taken to be universal, a set of best practices took shape that ignored the local context altogether. The result was a mixed bag of failures and successes. As we will discuss in Part II, the assumption that urbanization requires modern values is unfounded historically.

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

Functionalism and Modernization in Crisis

Perhaps of primary importance, rural farmers were told by development experts to forget what they knew about the local conditions and traditional farming methods that had been handed down over countless generations. In place of this, they were advised to adopt the aforementioned diffusion of technologies ushered in through the Green Revolution, including high-yield variety (HYV) cereal crops, the widespread use of synthetic fertilizers and pesticides, and modern methods of irrigation. Unfortunately, the adoption of these technologies was accompanied by a range of unintended consequences. As shown in the meta-analysis by Freebairn (1995), social inequality grew, and 80 percent of the case studies reported increased income inequality. Meanwhile, synthetic and toxic chemicals' introduction caused widespread ecological problems, damaging local flora and fauna and resulting in adverse health problems for humans coming into contact with agents such as DDT. Modern agriculture dictates a global market orientation and agricultural exports focus, which undermined the locally available food supply, creating food insecurity. Overall, however, it would be fair to claim that Green Revolution technologies helped avert catastrophic Malthusian population corrections in at least some locations, including the Asian giants, India, and China. Cereal production has always been crucial to sustaining large urban populations (Fulkerson & Thomas, 2021).

Against this backdrop of unintended negative consequences and setbacks, critics were quick to point out the deficiencies of Modernization theory and, therefore, all practices in the field informed by the paradigm. Many went as far as to critique not only the theory's parameters but also in the general optimism that there could even be a theory to guide our planning and development efforts. Bodenheimer (1970, in So, 1990), notes four problems or "epistemological sins" that were committed by adherents to the modernization paradigm: "(1) belief in the possibility of an objective social science free of ideology, (2) belief in the cumulative quality of knowledge, (3) belief in universal laws of social science, and (4) export of these three beliefs to Third World countries" (58). We return to these themes in this chapter's conclusion, but for now, we turn to the contemporary critique offered from the Marxian tradition.

THE POLITICAL ECONOMY RESURGENCE

A major theoretical shift took place in the 1960s: the resurgence of Marxian political economy, mostly dormant since the mid-nineteenth century. Indeed, academic discussions of Marx in the 1950s McCarthy era were so dangerous that even Talcott Parsons, the quintessential functionalist adversary of

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

Marxist scholars, was suspected by the FBI of harboring communist sympathizers at Harvard. This fear was rooted in the widespread adoption of communist ideology in the developing world as nations began to reject the capitalist development project's false promises. In this respect, much of the Marxian resurgence in social scientific thought occurred with the unfolding real-world crises resulting from the demise of the "development project." A new kind of development perspective charged that Modernization theory was being used to justify post-colonial forms of domination and conquest (Frank, 1966, 1969). By choosing to see conditions of the working class in the global South as merely occupying a temporary stage on the way to "take-off," rather than as persisting in a more permanent state of poverty, Modernization theorists endorsed the profit-seeking actions of Western corporations. These corporations ignored the social and environmental problems of the South while overlooking their exploitation for cheap resources and free labor. Replacing the befallen development project is what McMichael (2004) termed the "globalization project," defined by a new form of global colonialism organized by markets and multinational corporations. Against the failings of Modernization theory, scholars would first create Dependency theory, and this would later be subsumed into World-Systems analysis (Frank, 1969, 1998; Wallerstein, 1974, 1980, 1989; Braudel, 1993; Emmanuel, 1972).

Wallerstein's (1979) historical account of the world-system begins with ancient empires and continues through colonial powers with global reach, ending with the modern world-system. For scholars of the world-system, cities are nodes that facilitate the core country's intrusion into colonized nations. The peripheral colony becomes dependent on industrialization's products and finds itself locked in an unequal exchange (Amin, 1976). Subsequent scholars have become critical of the macro perspective that aggregates dependency processes to the level of nation-states, arguing that World City-Systems are a better way to think of world-systems (Sassen, 2001). For example, building on this work by Hymer (1972) and Friedmann (1986), Alderson and Beckfield (2004) develop a unique network analysis that focuses on multinational enterprises and their subsidiaries. They use this to map the hierarchy of cities across the world and test the idea that this hierarchy mirrors the division of labor within multinational enterprises. Their notion of the world city-system has become a modified and disaggregated version of World-Systems theory. Using network analytic block modeling techniques, they identify three measures of point centrality and apply them to 3,692 cities around the world. Alderson and Beckfield make the case that the world city-system structure is more complicated than a simple one-to-one, city to nation correspondence that is often implied in conventional World-Systems analysis. Ultimately, this research's implications serve to undermine the idea that we live in a world-system of nations by arguing that we live in

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

a world-system of cities. Although much of this work has focused on global cities (e.g., Sassen, 2001; Abrahamson, 2004), others have examined smaller cities within the context of world-systems approaches to urbanization (e.g., Markusen et al., 1999; Nash, 1989; Rabrenovic, 1996; Thomas, 2003).

Urban Bias: The Forgotten Development Theory

Contemporary understanding of development often neglects or overlooks the insightful contributions that emerged in the 1970s around Urban Bias theory, as first conceived in Lipton's works (1973, 1977, 1980). Like other political-economists, Lipton was concerned with the relationship between city and country. However, unlike his contemporaries in Dependency and World-Systems theory, he saw the city-country relationship as fundamentally important. Like other political-economists of the time, he was critical of Modernization theory's inherent normative views about the superiority of urbanization. Rather than viewing urbanization as the accidental result of capitalism, he maintained that urbanization was only possible through intentionally created state policies. These policies—perhaps created from Modernization theorists' advice—were established to force a rural nation to begin the urbanization process. The mechanisms used in this transition were based on the state's dual disinvestment in rural areas combined with the subsequent heavy investment in urban industries. This transfer was accomplished, according to Lipton, through the use of "price twists" that devalue rural production, allowing the state to buy agricultural goods at low prices. In turn, these goods would be sold internationally for much higher prices. Then, the profits would be invested directly in the development of urban industries. In other words, the exploitation of rural labor fueled the development of urbanization. By refusing to see this exploitation through the traditional Marxian lens of owners exploiting workers, Lipton offered an alternative (to Marxian) theory for understanding state-centered exploitation that privileged urban over rural class interests.

There were other significant contributors to Urban Bias theory. Wellisz (1971) observed cities' over-urbanization in less developed countries, suggesting that state policies had made conditions intolerable in the countryside, forcing mass rural-urban migration while creating a population of landless and easily exploited workers. Griffin et al. (2002) go further by pointing to another critical policy in the story of urban bias and migration—land confiscation. In this case, the state more aggressively disinvests in the countryside by assuming direct ownership and control of the land. When this happens, the subsequent massive rural displacement fuels over-urbanization. In sum, these insights remove urbanization from the exalted destination it holds in the Modernization perspective, which sees it as the end stage of social evolution.

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

Instead, it is cast as the product of intentional state action that forces urbanization on rural people's backs in a coercive and exploitative way.

Political Economy in Urban Sociology and Geography

While development scholars may have led the charge against functionalism and Modernization theory, they would be joined by a new generation of Marxian-influenced urban geographers and sociologists. These scholars, much like the classic political-economists (of the Marxian tradition) discussed earlier, emphasize settlement patterns formed through historical interactions under an exploitative capitalist system. Against this backdrop, the Human Ecology scholars—much like Modernization proponents—were viewed as espousing a conservative bias. Political-Economists would counter the naturalistic evolutionary claims of Human Ecology by stressing social processes shaped by the tensions between owners and workers. People are not plants and therefore operate on a different foundation.

Among this new generation of scholars were Henri Lefebvre (1974), James O'Connor (1973), Manuel Castells (1977), and David Harvey (1973). These political-economists emphasized human agency within the context of capitalism and its various forms of inequality and exploitation. Their ideas are in no small measure a reaction to critical historical shifts taking place with the end of the Vietnam war, crumbling cities facing fiscal crises, and evident class-based conflicts. For example, Harvey (1982) was a geographer and more concerned with the way capitalism interacted with the city's spatial arrangement, putting him closer to the central concerns of von Thünen—the classic economic geographer. Rather than assuming, as did the Human Ecologists, that there was a politically neutral basis of change in evolutionary competition, Harvey spells out that spatial contractions and expansions are manifestations of underlying cycles of capitalism. As an economic system, one of the contradictions of capitalism is its tendency to over-produce, creating a glut that drives down prices and slows or halts further production. Harvey's city is a space where one can observe the cycles of expansion and contraction. Focus shifts from the primary production circuits of factories to the secondary circuits of offices and warehouses.

The research fare of the Political economy school has often examined instances of development. For example, in his 1973 study of Baltimore, Harvey utilized Marxist analysis to examine developers, business leaders, and city officials in shaping the city. Followed by Castells (1977, 1985) and Mollenkopf (1983), the Political economy school focused far more on class conflict, elites' power, and actors' self-interest than the earlier Human Ecology school. Similar themes were established in studies about Houston (Feagin, 1988), Buffalo (Perry, 1987), and Los Angeles (Soja, 1987). Taking

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

the lead from the abovementioned World-Systems analysis proponents, these scholars examined cities as part of a more extensive network of capital flows and power differentials (Timberlake, 1985; Sassen, 2001).

Beyond Marxian-influenced conflict theories of urbanization are approaches that do not start from the orthodox class-based framework, alternatively emphasizing the organization of economic and political structures within urban areas. Perhaps the best example is the Growth Machine hypothesis of Logan and Molotch (1987). The basic premise of the Growth Machine ideology is a belief in the desirability of continual growth—both economically and demographically—in cities. Economic elites favor growth as they stand to benefit directly from increased revenue. The media endorses growth because it means more consumers of their products. Consumers support continual growth because they are constantly bombarded with media messages that tout the benefits of growth. However, as Logan and Molotch (1987) point out, the use-value of communities almost always gets sacrificed to exchange-values of elites, which leads over time to a lower quality of life. For example, the environment may be overwhelmed by massive streams of industrial and solid wastes. In this case, use-values pertain to the ability to experience and enjoy the environment, while exchange-values reduce the environment to its ability to support economic expansion. Therefore, although members of the public tend to go along with growth strategies, it is not in the public's best interest to join the growth consensus. The public suffers the most, particularly when those who benefit from economic expansion reside outside of the community, negatively impacted by growth.

Ecology Meets Political Economy: Environmental Sociology

Environmental sociology, as a subfield, grew out of the Human Ecology perspective. It was initially called "new human ecology" by its founders, Dunlap and Catton (1978, 1979), who maintained that the field of sociology was suffering from an inability to conceptualize how human society was both influencing and influenced by the natural environment. Their initial research focus was twofold: (1) overpopulation problems and "overshoot" (Catton, 1980), and (2) cultural biases in Western society that included human exceptionalism or exemptionalism—the notion that people are not subject to the same laws of nature as other non-human animals. They saw the need for a new ecological or environmental paradigm to increase cultural awareness of human-environmental interactions and interconnections. These pivotal advances are critical to our appreciation for the energy economy and the fundamental importance of environmental support for human settlement.

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

Apart from its ecological connections, environmental sociology developed a strong basis in the Political-Economic perspective. Schnaiberg's (1980) work was pioneering, and his ideas regarding the treadmill of production were seminal. Like other political-economists, Schnaiberg theorized that most environmental problems resulted from how we have structured our economy. In other words, the system of capitalism encouraged organizations to make choices between profit or environment while competing with other organizations making the same choices. The result was a race to the bottom, as organizations sought to continually run faster on the treadmill of production only to stand still in their competitiveness with other organizations. One of the key problems with the structure of the economy was that it encouraged adopting a range of harmful technologies that would devastate the environment while replacing workers with capital. Achieving profits requires cutting labor costs, and therefore, competitive organizations would eliminate jobs while increasing reliance on machinery and an immense range of new chemical compounds, particularly in agriculture. Thus, unlike the new human ecology of Dunlap and Catton, Schnaiberg's brand of environmental sociology would primarily shift focus from culture to the political-economic structure.

TURN OF THE MILLENNIUM DEVELOPMENTS

One of the defining features of social science in the 1990s was a renewed interest in the interactionist tradition and a restored focus on community. Many scholars credit Putnam (1993) for this revival, based on his usage of a new and exciting concept—social capital—that captured scholars' imagination across the social sciences. Putnam highlighted the important interactional dynamics of trust and reciprocity in helping collectivities achieve their shared goals. Putnam built on James Coleman's (1988) notion of social capital that focused on the role it played in explaining educational outcomes and human capital. Independently, and somewhat earlier, Bourdieu (1986 [1979]) developed the concepts of social, cultural, and symbolic capital as part of his explanation of social class reproduction. However, this work was more aligned with critical theory. Though not couched in terms of the capitals, other influential ideas emerged around the notion of social networks. They preceded the social capital craze by Granovetter (1973), who pointed to the importance of "weak ties" to advance individual interests. Further, Freudenberg (1986) introduced the density of acquaintanceships as a new way of thinking about multiple, overlapping networks in communities. These

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

seminal ideas underpin much of what now find in the integrated community capitals framework.

Network and Interaction Theory

Flora and Flora (2015) drew on and extended these scholars' work of "the capitals" to a more applied community development context. For instance, they extended Putnam's (2000) ideas of bridging and bonding social capital to offer the idea of ESI, entrepreneurial social infrastructure: the balancing of bridging and bonding social capital optimal for community action. They further explained the human capital—of interest to Coleman—and explained cultural capital from a community perspective.

Though relevant to Social Capital and Network theory, interactional theory has a somewhat different footing. It developed initially based on the field theory developed by Kaufman (1959) and elaborated by Wilkinson (1991), who attempted to understand community as a field of interaction that was dynamic, holistic, unbounded, and emergent. The community field was unique for Wilkinson in its generalized orientation. It could be differentiated from the specialized interest fields that emerge around particular groups—sports clubs, youth groups, churches, and so on—who all maintain separate fields with a particularistic view. From this perspective, interaction is a fundamentally human process, forming the basis of both community and individual identity. The interactional perspective's importance is that it advances classical theorists' ideas, such as Durkheim and Tönnies. It departs from the evolutionary framework and spatial concerns of ecology and leaves aside Political economy questions about where communities are located or supported. More recent developments of interaction theory address such issues as the relationship between urbanization and community attachment (Theodori & Luloff, 2000), the role of community agency (Luloff & Swanson, 1995; Luloff & Bridger, 2003), and direct participation in local development efforts (Swanson, 2001). According to Bridger et al. (2011), the main difference between the interactional approach and other approaches to the community is the focus on process over structure, accounting for the complexities of daily interactions and unpredictable characteristics unique to local places.

Spatial Inequality Theory

More recently, and of particular note, the political economy perspective incorporated the defining characteristics of Human Ecology to form the spatial inequality perspective (Lobao et al., 2007). The spatial inequality literature extends the Political economy perspective and, therefore, does not radically challenge many of this dominant paradigm's propositions. However, it is less

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

conventional insofar as it does not reduce social change to class struggles. It accords greater causal power to physical space itself—consistent with urban social scientists discussed earlier. Spatial inequality scholars have shown the challenges of living amid vast physical space as disruptive to the basic flows of social life that are easily realized in an urban spatial context. Pruitt (2007, 2008a, 2008b; Pruitt & Vanegas, 2005), for instance, notes that how laws are written and enforced assumes that people live in a spatially urban location—an assumption that makes life difficult for those living in the countryside. Her analysis of draconian abortion laws sheds light on the fact that the required visits to hospitals on multiple occasions is a task that is inconvenient for urban women but nearly unattainable for rural women. Of course, this assumption means that unwanted pregnancies of rural women are more likely to be carried to term, subjecting the newborn and mother to a world of harsh realities. This line of scholarship is adding more evidence to the need to reincorporate spatial, demographic, and political-economic components, as each works to shape urban-rural relations.

Ecological Modernization and Global Political Economy

In the 1990s and 2000s, Ecological Modernization theory emerged in environmental sociology, based mainly on scholars working from Germany and the Netherlands. The perspective was more or less codified in the 1990s by Arthur P. J. Mol (1995, 2001). The central notion of this perspective, in brief, is as cultures undergo a process of ecological enlightenment, consumers will begin to demand products made in environmentally responsible ways depending on green technology. Over time, this would lead to a decoupling of the economy from material goods production, mainly as unsustainable fossil fuel energy sources would replace renewable sources, such as solar and wind. Indeed, the cultural, political, and economic climate of Western Europe seems to be conducive to such changes taking place. However, critics note that this may be more of an exception than a rule and further suggest that capitalism's logic is inherently ecologically destructive (O'Connor, 1973, 1998; Foster, 1999).

As the 2000s unfolded, the focus in environmental sociology went largely toward Global Political economy and was greatly influenced by scholars from a world-systems perspective. The central aim builds on the political-economic critiques offered above. The work of scholars such as Jorgenson (2006) and Shandra, Shor, and London (2009) on Unequal Ecological Exchange exemplifies this perspective. In short, the central idea is that more developed and urbanized "core" nations (in the jargon of World-Systems theory) have the privilege of off-shoring most of the undesirable industrial practices associated with goods production, while the middle-income semi-peripheral nations inherit them. Meanwhile, most rural peripheral nations rely heavily on raw

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

agricultural and natural resource exports for their economic survival. These resources are purchased for a low price and converted into something more profitable by core countries that enjoy the privilege of being high in the world hierarchy. This perspective simultaneously incorporates development with ecological concerns along international lines. The world-systems critique of Ecological Modernization is that environmental improvements in the core result from externalizing production costs to peripheral nations—this refers to the "Netherlands Fallacy." We note a similar phenomenon with the reforestation of New York City's immediate hinterland in Part III.

Interestingly, the focus on the environment in the above theories rarely considered issues pertaining directly to urbanization. Even the more demographically focused environmental sociologists, who followed in the footsteps of new human ecology, were not primarily interested in urbanization but sheer population size and cultural values. Political-Economists have tended to view demographic processes as independent of political-economic structure. Therefore, in environmental sociology, urbanization has been treated as a background variable, coexisting with industrialization, capitalism, and population growth, but not itself something of primary importance. This treatment is difficult to believe given the interest that world-systems scholars have taken up with urbanization and the World City-System hypothesis (Friedmann, 1986) that has continued to receive attention and support. An apparent exception to this pattern is the work being conducted (Clement, 2010; Clement et al., 2017; Elliot & Clement, 2014; McKinney, 2016), which finds the process of urbanization highly relevant, carrying an array of detrimental outcomes for the environment. It remains to be seen if these ideas will become central to the environmental sociological subfield.

Political Economy in Urban Sociology

Urban scholars, influenced by World-Systems analysis, have reconsidered cities' place and the role of urbanization concerning the broader world-system. A great deal of recent attention has been given to Sassen's (2001) notion of the global city as a focal point for international flows of capital, finance, investment, and trade. For Sassen, the process of globalization expands the reach of the economy spatially. At the same time, it simultaneously consolidates central functions as well as more command and control with a few large global cities. Alderson and Beckfield (2004) are less concerned than Sassen with the practice of command and control and more concerned with mapping the actual structure of the world city hierarchy—elaborating some of Central Place theory's ideas.

As urban social scientists adopted Political economy in place of Human Ecological approaches, David Smith (1995), following earlier work by

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

Feagin (1988), outlined five basic assumptions made by political-economists that effectively summarize the perspective (see also Thomas, 2010):

1) Cities are situated in a hierarchical global system. Studies of global cities like London and New York have shown a high concentration of resources at the top of the system (Sassen, 2001). Studies of smaller cities, further down the urban hierarchy, have shown the extent to which they are managed by the elites in global cities (Nash, 1989; Thomas, 2003), extending down to even small towns (Thomas, 2005; Tauxe, 1993; Fitchen, 1991).
2) The world-system is one of competitive capitalism. Beyond stating the obvious, this observation meshed with the World-Systems theory scholars' arguments and was meant to counter the claims of "stages" as propounded by Modernization Theorists.
3) Capital is easily moved; cities are locationally fixed. Given the period in which the Political economy school developed—the 1960s and 70s—it not surprisingly became quite concerned about the impacts of deindustrialization in cities (Bluestone & Harrison, 1984).
4) Politics and government matter. This observation is not to say the Human Ecologists ignored such concerns, but political-economists grew very concerned about government policy impacts. The school grew during dramatic policy changes, from the extensive urban renewal policies of the 1960s and 1970s through the dismantling of such efforts during the 1980s.
5) People and circumstances differ according to time and place, and these differences matter. This assumption is central to the Political-Economic perspective generally and specifically aimed at countering Modernization theory's claims.

The impact of the Political economy school was such that a student trained in urban studies or planning during the 1980s would have had a very different education than one studying twenty years earlier or twenty years later. Nevertheless, the resurgent school assumed that the general patterns posited by the Human Ecologists were valid. As Sampson (2012) discussed in his defense, political-economists did not negate the earlier work but provide a more precise mechanism for how such patterns come to be. This advance entailed dropping the naturalistic metaphors in favor of actors' agency-induced decisions in a capitalist system.

New Directions in Ecological-Evolutionary Theory

Although urban social scientists decided to eschew ecological approaches, social change scholars would go on to draw our attention back to an

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

ecological-evolutionary perspective, as can be found in the works of Nolan and Lenski (2014), Chirot (2012), Massey (2013), and Thomas (2014). For these scholars, urbanization is a byproduct of more immense social changes taking place, rooted primarily in the evolving status of culture and technological innovation. Rather than basing theory on general abstractions, these scholars offer historically grounded accounts of human evolution, beginning with the foraging nomads, who would later learn to domesticate plants and animals, leading them to become farmers. Agrarian existence would eventually give way to the processes of industrialization and post-industrialization. Most of these scholars identify urbanization as the byproduct of industrialization. For example, Massey (2013) views urbanization as the unnatural outcome of cultural evolution divorced from natural evolution. Massey walks us through human history, beginning with the long foraging period of our hominid ancestors, continuing through agrarian urbanism, industrial urbanism, and finally, post-industrial urbanism, where we find ourselves to indeed be his "strangers in a strange land." A carefully reasoned understanding informs the narrative of biological evolution, which moves on a slow time scale and prepared humans for a communal existence in the company of between 150 and 200 people. It also entails a much more rapid cultural evolution that expands exponentially and has led to our current state of affairs, living in enormous cities with millions of people.

However, Thomas (2010) offers an alternative conceptualization that introduces his notions of urban and rural production. As discussed in chapter 1, Thomas defines rural production as beginning with natural processes, while urban production begins with rural products (Thomas, 2005). Using these concepts, Thomas can construct a more continuous and lengthier lineage of urban development. The first agricultural villages evolved into increasingly complex forms of urban production that took the form of industry, "ending" with what we now think of as post-industrial global cities (Sassen, 2001). This alternative conceptualization of urbanization renders it a much more fundamental social change process than the case in the ideas of the other social change scholars, who attribute the beginning of urbanization to the first city's rise. For Thomas, the first city does not arrive until roughly 5,000 years after the first agricultural village. Thus, after 5,000 years of urbanization as defined by an increasingly complex system of urban production. Therefore, urbanization led eventually to the rise of cities (Thomas, 2010, 2014).

Postmodernism's Critique and the LA School

The postmodern perspective developed mainly as a critique of urban theory with a strong foundation in the humanities. This critique places it on a radically different footing than the other perspectives discussed above. From

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

classic typology to the Chicago School and the Political economy of the Marxian, Non-Marxian, and Extra-Marxian traditions, the goal has always been to explain urbanization from a social scientific foundation involving propositions, assumptions, and testable hypotheses. As the scientific standard is not embraced in postmodernism—and most cases, it is flatly rejected—the goals are radically different.

The postmodern perspective points to Los Angeles as the "city of the future," based on its multiculturalism and deconcentrated settlement structure (see, for example, Dear, 2002, 2003; Jencks, 1993; Davis, 1990, 2007). This perspective is loosely conceived, offering a general critique of urban theory rather than a novel theory in itself—the implication being that an urban theory is impossible. Postmodernism is ultimately a cultural narrative of patterns observed in chaotic settings. What this perspective does offer that is lacking in the other perspectives is an appreciation for the power of culture and history in shaping urban landscapes (Kleniewski and Thomas, 2019; Zukin, 1991, 1995). The "LA School" views Los Angeles as a maze of "unreal realities" of *simulacra*: a landscape of theme parks and Hollywood unreality portraying itself, and taken as such, as reality. Lake et al. (1999) criticize the approach for an inability to present an ethnographic account of people shaping their reality. What is left is a picture of the city as fragmented and unreal, an endless array of architecture disconnected from life itself (see Soja, 1996). At times, the analysis borders on the gimmicky; for instance, Dear and Flusty (1998) describe Los Angeles as constituted by the following: Global Latifundia, Holsteinization, Praedatorianism, Flexism, New World Bipolar Disorder, Mimetic Contagion, Keno Capitalism, Citistat, Pollyanarchy, and the Disinformation Superhighway.

The postmodern critique's critical contribution is a concern with the varieties of disjunctures and discontinuities that emerge from living in an increasingly global and multicultural world. The cognitive maps of individuals negotiating the city are of primary interest, and they reveal a disordered and compartmentalized existence (Dear & Flusty, 1998; Garreau, 1992; Soja & Scott, 1996). This return to the micro-level brings urban sociological analysis full circle to its beginnings in the classic tradition to some degree. It has some interesting connections to Simmel's humanities-based approach in particular. An emphasis on individuals' cognitive maps can explain how real people experience the city in an age of expressways and high-speed travel. Consider an approach to Baltimore from the suburbs. One might start in a wealthy neighborhood along the Baltimore Beltway, entering a freeway and following Interstate 83 south through a city park nestled in a ravine and finally emerging near the Inner Harbor area of downtown. The traveler might picture their route as flowing from one prosperous area to another, conveniently unaware of miles of inner-city neglect and poverty in between. However, aside from a deeper understanding of individual experiences with

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

urbanization, postmodernism offers little to the project of building a general framework that seeks to understand how urbanization emerges, changes, or declines in relation to rural areas.

Critics of the perspective, mainly political-economists, tend to dismiss the Los Angeles school as overly concerned with promoting Los Angeles as indicative of future trends rather than adding a genuinely new perspective to urban sociology (Molotch, 2002; Beauregard, 2003; Sui, 1999). They claim that postmodernism is overly particularistic with its stubborn refusal to identify general patterns or embrace theory development.

CONCLUSION: STATUS OF URBAN-RURAL THEORY

The mid-century pivot away from fundamental classical urban-rural questions, eclipsed by nationalist concerns with Modernization and functionalism, created a discontinuity in Urban-Rural theory development. Parsonian theory's dominance contributed, as it did not focus on the meso-level settlement, by looking instead at the micro-individual and macro-societal levels. The development of Urban-Rural theory did not entirely cease during this time but was relegated to specialized sub-fields, such as the more applied field of development.

Development theory was dominated by Modernization theory, which had ecological roots that preceded Functionalist theory. However, it would come to incorporate functionalist ideas, as is evident in Davis's work on Demographic Transition theory, as well as the work of Hawley in changing the direction of Human Ecology. Reflecting on the Modernization scholars and practitioners' intentions, we note that much of what they were trying to address was the process not of modernization but of urbanization. This intention was explicitly observed by scholars working with Urban Bias theory. The theoretical focus of modernization and the general practices it informed was aimed at instructing the rural agrarian global South how to become more like the urban industrial global North. The same rural agrarian nations were being sold an ideology that would perpetuate the advantageous position of the urban industrialized North, trapping them in poverty. The underlying normative claim that urban life is superior to agrarian rural life was taken as axiomatic. What the cultural Modernization theorists called modern values, were, in fact, values that supported a new urban existence. Convincing people to adopt such values is unnecessary if we accept that it is entirely reasonable for a particular society or community to decide that rural or agrarian life is superior to urban life.

The resurgent Political-Economic perspective clapped back on Modernization and functionalist ideas for embracing the exploitative set of

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

trade relations between the periphery and core that characterize the world capitalist economy. For Political economy, urbanization is not central to the concerns of Dependency theory or World-Systems theory. The critique from Urban Bias theory made it central but did not gain the same traction, and, once again, the importance of developing Urban-Rural theory was set aside. Finally, the postmodern perspective was critical not only of theoretical ideas in extant theory but also of a theoretical project's entire premise.

We part ways with Bodenheimer's (1970) arguments regarding rejecting out of hand the possibility of a non-ideological Urban-Rural theory. He maintains that a social science approach must necessarily be normative, spelling out the endgame by making normative claims, supporting industrial capitalism, Marxist socialism, or a society of yeoman farmers as envisioned by Jefferson. While Modernization theory and, more generally, most evolution theories have no qualm with making such normative claims, we need not accept that as necessary. We propose a Social Science theory that attempts to explain the process of change from an environmental demographic perspective, as discussed in chapter 1 and previous work (Fulkerson & Thomas, 2019, 2021). Our environmental demographic approach is built on a foundation in CAS theory that is process-oriented, not outcome-oriented (e.g., a tendency toward equilibrium).

We also disagree with Bodenheimer concerning the possibility that knowledge can have a cumulative quality. The keyword is *can*. We can only increase knowledge about something if we are willing to learn from the past. As noted at the outset of this chapter, many of the classical theorists' critical ideas have faded from view, not because they are inaccurate or are unuseful, but because contemporary developments have neglected to incorporate or address them. In the case of Modernization theory, or functionalism writ large, though flawed, it is more convenient to throw the proverbial baby out with the bathwater than to learn from shortcomings and salvage some useful ideas. We endorse a pragmatic epistemology that attempts to adjust our theories to explain the best available data given the current state of knowledge, understanding that further theoretical revisions may need to follow. This approach means taking careful stock of theoretical developments and attempting to address them all.

The third issue raised by Bodenheimer, having to do with potential universal laws in social science, is also a point on which we wish to depart from Bodenheimer's critique. For instance, many scholars regard the economic law of supply and demand as universal. It exists at a high level of abstraction. It, therefore, provides a general framework for understanding the process of how price points can be set in any market under conditions of fair competition. The crucial step lies in articulating the scope conditions that outline the underlying assumptions of a theory. Ultimately, we would contend that scholars do not need to withdraw from view and cease providing expertise

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

informed by the rigors of social science. If social science is removed, then all that is left is an ideology without the benefit of rigorous and scrutinized social science research.

Review of Urban Theory

In a relatively recent theoretical review of urbanization theories (the most recent we could find), Orum (2004) identifies three prominent urban sociology perspectives. First is what he calls the "German Perspective," which contains classical ideas offered by both Simmel and Tönnies. Orum does not consider British political-economists, Steuart or Smith, although they offered essential ideas about the development and location of urban settlements, as discussed in chapter 2. Nor does he consider the French perspective of Durkheim. Their ideas surrounding the division of labor and mechanical and organic solidarity were equally important and influential in the development of Tönnies. Orum does not focus on the influential American contributions offered by DuBois's social inequality studies or the theories of transportation and city networks offered by Cooley and Adna Weber. More surprising is the omission of the pioneering work of Johann Heinrich von Thünen, who belongs in the German perspective, and who paved the way for spatial analysis of political-economic forces—130 years before David Harvey would take it up. Oddly, Marx is discussed in the review, but not as part of the German perspective.

The second perspective is what Orum refers to as the "Chicago School" that incorporates and extends classic ideas into a theory of human ecology, as built around Robert Park and his colleagues, who built upon Simmel's ideas in particular to highlight some of the consequences of urbanization. Orum observes that the human ecology approach is mainly concerned with spatial and demographic patterns of population settlement and neighborhood effects, rooted in a language of ecology that locates it closer to natural and biological theories writ large (Sampson, 2012). This perspective should be labeled more broadly as the Human Ecology Perspective. Its reach extends well beyond Chicago to include variations at the University of Michigan under Amos Hawley and Washington State University, where New Human Ecology emerged. Orum comments that the Chicago School was dominant until the 1970s when it fell on sharp criticism, such as that offered by Fischer (1975), who claimed that the lack of human agency in the highly structural and deterministic orientation of human ecology was unacceptable.

Orum does not find relevance in urban-rural or "rurban" sociological ideas offered by Galpin, Sorokin, Zimmerman, or Robert Redfield. Their goals of creating an integrative perspective are not widely known or appreciated, even though they were quite influential through the 1930s and 1940s. Perhaps

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

these scholars are now considered to be aligned with rural sociology more than urban, which explains their omission from Orum's review. Much of this work could be construed as the Minnesota School, and it could be viewed as a relevant counter-perspective to the Chicago School.

Additional criticism of Human Ecology arose from Orum's third perspective, the "Political Economic Perspective." Orum suggests that this perspective developed on the foundational work of the earlier mentioned French scholar, Henri Lefebvre (1974), who along with others, such as Manuel Castells (1977) and David Harvey (1973, 1982), maintained that urban social change could be better explained through a neo-Marxian lens. The Political-Economic perspective is perhaps best codified in the work of Logan and Molotch (1987), who offered a concept of cities as Growth Machines in their influential monograph, *Urban Fortunes*. Interestingly, as his theoretical review ends here, Orum (2004) leaves the impression that nothing of significance has emerged in the interim period spanning nearly four decades! The continuing relevance of *Urban Fortunes* is undeniable, as shown, for example, by a recent study by Cain (2014), which finds continued support for the propositions and hypotheses of the growth machine. We might be tempted to conclude at this point that urban social science has entered into a Kuhnian period of normal science, whereby the dominant paradigm continues to be accepted and reinforced uncritically, although this conclusion is premature.

Missing Pieces

Based on the discussion of classic and contemporary approaches to urban-rural dynamics in this and in chapter 14, we would note several missing pieces. The most crucial and critical problem with the state of theory is that it has lost sight of the original focus on an integrated urban-rural perspective, becoming fragmented and disjointed, compartmentalized into various disciplines and sub-disciplines. This organizational separation of urban and rural scholars leads their respective foci to be on urban and rural settings' internal dynamics. We believe that much more can be gained by all if there is a coherent and unifying perspective that treats the underlying interrelated connections between the urban and rural, noting how a change in one can have implications for the other. For example, environmental sociology made essential connections between the natural and social worlds that reflect a new ecological paradigm among scholars but did not couch these connections in the context of urban and rural relations. Development scholars have missed opportunities to theorize urban-rural dynamics adequately, focusing more heavily on political and economic exchanges that treat urbanization as an aside. However, Urban Bias theory is a clear exception. Urban sociology has either continued to embrace Political-Economic theory from the 1980s or

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

has moved away from theory altogether, adopting the postmodern critique. Rural sociology has tried to reassert concern for spatial dynamics as they are expressed as inequalities between urban and rural areas. However, far more work is needed to complete this project.

In Part II, we examine urban-rural systems' growth using an environmental demographic perspective, from their earliest emergence in Southwest Asia through the present. As will be evident, it is a logical starting point for our purposes. However, urban-rural systems in China and Mesoamerica developed with no particular help or connection with Southwest Asia. At various times, we build on the insights of those who have preceded us but strive to improve and test the model.

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

Part II

FROM THE NEAR EAST TO THE NORTHEAST

Any model designed to explain a phenomenon should be tested. The model presented in part I should apply to all human societies, anytime and anywhere. In fact, it should apply to any species in that it addresses not human society per se but rather the relationship of populations with a given environment (i.e., environmental demography). Given that a population constitutes a complex adaptive system, we expect to find certain aspects of complex adaptive systems playing out in the development of urban-rural systems that ultimately led to our own world-system. We can hypothesize:

1. *Humans are agents, and more agents in interaction involve more energy in terms of consumption and requirements*. Human communities are composed of humans, and each human is an agent interaction with other agents and with the system as a whole. An obvious application of this is the result of increases (or decreases) in human population, but the addition of new environmental agents (resources) or even ideas (such as technology) in a given culture can also increase overall system energy requirements.
2. *The pattern of settlements reflects the efficiencies as discussed with the "caloric well."* It is expected that as sedentary human settlements grew more numerous and populous, the deepening caloric wells created networks of ordered centers, i.e., a hierarchy of settlements. As social complexity grew, the urban dependency became regionalized—not only a center or group of centers but entire regions developed caloric wells.
3. *The system as a whole exhibits scaling and self-similarity. There is a tendency toward isomorphism of units within the system.* With increasing levels of economic and cultural integration, institutions and their physical manifestations in the built environment came to be found at each level of

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

the system but, under normal circumstances, at scales appropriate to the level of settlement. For example, in the modern United States, the Post Office is an important institution for the transport of mail and packages. Individual post offices are found in nearly every settlement in the nation, but at scales appropriate to the settlement. In the largest cities, there is the "main" post office, often a monumental structure in its own right, and a collection of more localized offices. In smaller cities, this pattern is frequently repeated, though the main post office may be less monumental in size and/or there are fewer localized offices. There may be only one post office in large towns but, often located downtown, built as a monumental building. In even smaller villages, the monumentality of the building is often based on an oft-repeated design. In the tiniest hamlets, the post office may be located in a mobile home or a nondescript storefront. The post office's existence at each level is a product of self-similarity, and the variability of design is a product of scale. We expect similar patterns in ancient cities in regard to temples, markets, and other institutions.

4. *Stability in the system parameters at a particular scale will result in stability at the said scale*. At the micro scale, continual activity occurring with similar conditions within each parameter results in the replication of the overall structure. As any human community is ultimately created through individual human agents' interaction, there is always a degree of change within the system. However, at higher scales of complexity, such as a corporation or a national government, the emergent properties resulting through interactions within the institution result in stability at the higher scale. This is a product of stability in the system parameters at the higher scale, and so long as political, economic, cultural, and environmental conditions remain stable, the system as a whole will continue to be stable.
5. *Changes in system parameters will result in changes in systems dynamics*. The system parameters—polity, economy, culture, and environment—evolve over time, and the dynamics that flow from that evolution reflect these changes. When such alterations result in more interactions among agents, the result is an accelerating dynamic over time; when it reduces the number of interactions, the result is decelerating dynamics. Such changes could come from the external environment in which the community exists, or *field*, but could also come about internally as changes in attitudes or practices at micro levels accumulate and result in what appears to be rapid change at the higher level. Depending on the change in system parameters, such as climatic conditions, the change can be a deceleration: a partial collapse of social complexity.
6. *Continual contact between adjoining systems results in the system coalescing into a new and higher order system*. When two urban-rural sys-

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

> tems meet, the interaction between the two will lead to a coalescence of the two systems into one urban-rural system. This will typically result in significant changes in both systems as people are exposed to new environmental conditions as, for example, their diseases. Similarly, cultural interchange can have dramatic results in other parameters: encountering a religion that does not offer sacrifice, for example, can undermine an economy that relies on such rituals of piety.

A central feature of all CAS is the non-linearity of the evolution over time. This aspect stresses the multivariate nature of how systems evolve. Consider, for example, how introducing one variable, the cultural resistance to change alters the assumed linearity in the relationship between supply and demand.

In examining pricing, standard economics posits that when the supply of a given good increases beyond demand, the price will fall, and when demand outstrips supply, the price will increase. The relationship is essentially linear, and in theory, supply and demand will reach an equilibrium where the two balance each other. Based on such assumptions, the features found in a modern downtown shopping district can be predicted based on the relative demand for certain classes of business. For example, if it is more profitable for businesses to sell basic provisions to the local community in a small-town shopping district, then community-oriented businesses will predominate. If, however, demand for community-oriented business falls or tourism-oriented businesses are more profitable, the composition of stores in the district should change in a linear fashion as store owners rationally alter their business models to adjust for the change. As we noted in chapter 1, however, the assumption of such rationality is, at best, naïve: humans are animals capable of system 2 rationality but more often fall back on the habits and/or instincts of system 1 decision making. As such, culture can potentially, but not conclusively, function as a constraint on rationality and, by extension, the composition of businesses. We can model this trivariate relationship mathematically by invoking the cusp catastrophe.

Originally developed by the French mathematician Rene Thom (1972), the Cusp Catastrophe is one of four features of what became known as Catastrophe Theory. Its major usefulness for the social sciences is its ability to describe how seemingly similar circumstances can be associated with very different outcomes. Tesser (1980) described the model as such:

> The model is three dimensional. The horizontal plane is called a *control surface* and is defined by the two control dimensions . . . . These are the independent variables. The vertical dimension is the *behavior* dimension . . . and the top with the fold *curve* in it is called the *behavior surface*. Assuming that the behavior surface is translucent, if one were to shine a light directly above the figure, there

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

would be a shadow cast on the control surface directly below and conforming to the shape of the fold curve (in two dimensions). The cusp shaped area of the shadow defines the *bifurcation set*. To make predictions from the model, find the point on the control surface defined by the particular levels of interest on the control dimensions. The level of the behavior surface directly above this point is the predicted behavior. Note that there are two behavior surfaces, i.e., the fold, above the bifurcation set. In this case, the behavior prediction is *bimodality*.

Tesser utilized the model to describe dating behavior. Ormerod (2001) has also used the model to describe both criminal and traditional economic behavior. We propose that it is useful in understanding the composition of a business district.

We propose that, in line with insights from political economy, the relationship between supply and demand is mitigated by a resistance to change ultimately rooted in cultural factors, including social power. Such resistance to change is found in the psychocultural intentions of those who control the real estate market. Certain types of economic activities, regardless of the level of demand, are considered inappropriate to specific property controllers. The most immediate examples might be the market in recreational substances and pornographic materials. More subtle examples come to mind as well, such as the debates over "big box" development in some communities and the multitude of laws that govern restaurants, bars, and other businesses. Thus, a landlord who seeks to rent a storefront may be quite open to certain types of businesses, such as an art gallery or a clothing store, but resistant to others, such as a sex shop. In such a case, the landlord may immediately rent to the former but may hold out for a better tenant when approached by the latter. Over the scope of an entire business district, differentials of demand can thus translate into considerable stability or dramatic shifts in the types of businesses found in the area. The relationship among these three variables—supply, demand, and resistance to change—can be expressed through the Cusp Catastrophe (see figure II.1).

The model attempts to understand the relationship between the interactions of two variables—resistance to change (A) and demand (B). Resistance to change limits the overall supply of storefronts and is thus inversely related to supply. Demand is, of course, based on the density of consumers willing to buy (but not necessarily seeking out) particular types of items. These two variables affect the dependent variable, expressed by the behavior surface, which is the number of businesses in the area (supply).

In Cooperstown, New York, we see these forces in play (see figure II.2). Between 1979 and 2015, there was growing pressure on downtown merchants as "big box" stores opened in the suburbs of Utica and Oneonta, both about 25 miles away. During this same period, tourism—particularly at the Baseball

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

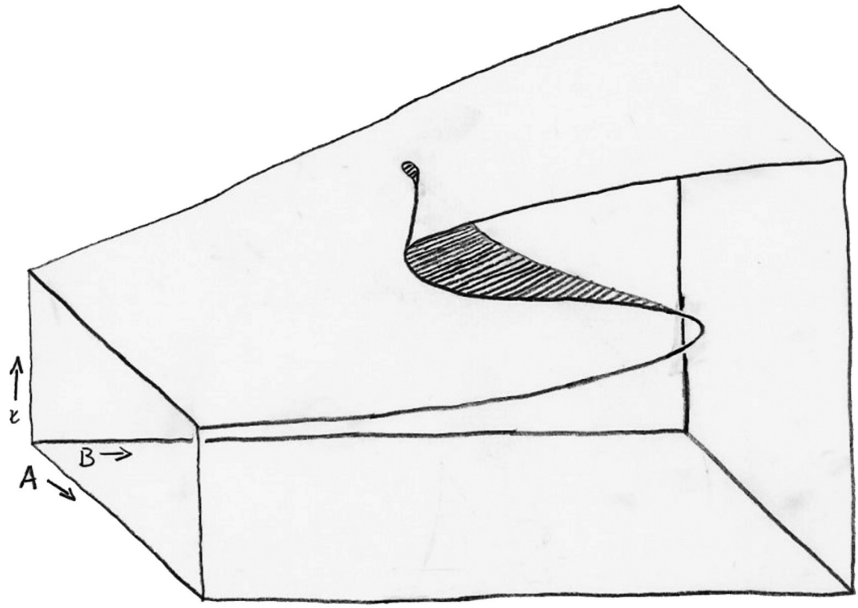


Figure II.1 The Cusp Catastrophe. Created by author.

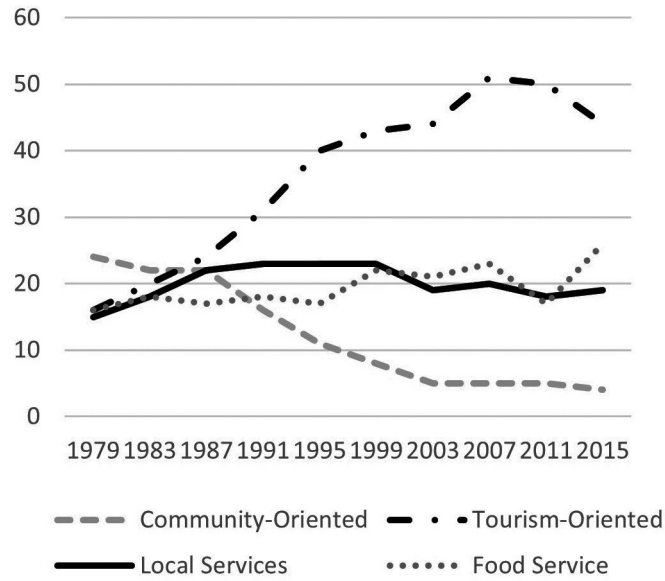


Figure II.2 Downtown Cooperstown Retail Composition, 1979-2015. Created by author.

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

Hall of Fame and a nearby youth baseball camp—was increasing, and in the national economy, such services as finance, insurance, and real estate were also growing. Based on such trends, it might be expected that local services grew in tandem with national growth, and the balance of community-oriented and tourism-oriented retail would skew toward tourism in relation to attendance at the Hall of Fame. Instead, community-oriented retail was stable between 1979 and 1987, but then was dramatically cut in half between 1987 and 1995 before finally stabilizing at around five establishments. Tourism-oriented establishments similarly stayed reasonably consistent, but then grew 50 percent between 1979 and 1987 and 67 percent between 1987 and 1995. In contrast, the number of local services and food service establishments grew slightly during most of the period. In terms of tourism, local services, and food, the standard economic approach of supply and demand seems adequate to predict the number of storefronts dedicated to each, but the staying power of community-oriented business followed by a sudden collapse is indicative of the power of cultural resistance to such changes—and the need to take it into account even when standard approaches are seemingly predictive. Due to cultural resistance to change, the composition of downtown retail remained stable in the face of changing demand as business owners attempted to maintain their business model, "flashed over" in a period of eight years, and achieved a new "equilibrium" after 1995 even as new storefronts that were given over to tourism-oriented retail and food service. The influence of cultural resistance was borne out in interviews with store owners (Thomas, 2003). The influence of resistance to change is not new, and we will see other examples as we work through the archaeological record.

FROM THE NEAR EAST TO THE NORTHEAST

In this section, we trace the evolution of the modern world-system from its earliest progenitors in the ancient Near East to its establishment in the northeastern United States. This example is utilized due to the abundance of data available from Southwest Asia and the Mediterranean. This earliest urbanization established the dynamics that lead to the colonization of the Americas and the establishment of New York as a global city. It is not the only trajectory, however. Separate trajectories were found in the Americas and Southeast Asia. There were any number of less long-lived trajectories that fizzled out or were absorbed by larger systems over time.

We review the evolution of the earliest urban-rural systems from deep in the Paleolithic. We trace the initial introduction of these systems as they became increasingly complex, leading inexorably to the first cities and

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

broader urban-rural systems reflecting a regionalized urban dependency. We see the earliest states arising from regionalized urban dependency, and once they evolve, there was continued (though turbulent) development into higher orders of complexity. By 1800, our own modern world-system was the result, composed of the innumerable urban-rural systems that compose it. Indeed, the world-system is an urban-rural system writ large.

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

Chapter 4

In the Beginning

Whether we discuss evolutionary biology or the development of cities, Complex Adaptive Systems (CAS) evolve over time. Although the Big Bang—the ultimate CAS—is hardly an appropriate analytical starting point for every writing that employs time as a variable, it makes sense to choose a narrative beginning closer to the events in which we are interested. For our present purposes, the complex dynamics of environmental demographic systems that led to our current urban societies "begin" with the convergence of two major events: the advance and retreat of ice sheets of the last glacial period (Ice Age) between 110,000 and 11,700 years ago, and the social evolution of our subspecies *Homo sapiens sapiens* during the same period (Mithen, 2004; Dartnell, 2019).

OLD STONE AGE: THE PALEOLITHIC

The last glacial period dates to 110,000 BP and is marked by the advance of ice sheets over much of the polar through now temperate regions. It affected the climates of landscapes submerged under miles of glacial ice and conditions around the world. In Europe, the glaciation functioned to keep populations of Neanderthals relatively low. Neanderthals had been evolving in Europe for about 600,000 years and were well adapted to hunting big game amid frigid temperatures. Nevertheless, as the last Ice Age developed, their population was reduced through habitat loss. In contrast, modern humans during the same time were spreading out from the equatorial regions of Africa, where environmental conditions were considerably more favorable. Initial population pressures in Africa prompted migration into Southwest Asia. Humans with a mixture of archaic and modern features were found at Skhul

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

(ca. 100,000 BP) and Qafzeh (ca. 90,000 BP) in Israel, and fully modern humans arrive in Europe after 45,000 BP. Neanderthals ominously disappeared from their last outpost in Gibraltar by 28,000 BP (Niewoehner, 2001).

Like their ancestors, early modern humans could control fire and worked an array of stone tools. At Qafzeh, the population worked the same Mousterian tool assemblage as Neanderthals. However, by the arrival of fully modern humans, the toolset and materials classified as Aurignation stretched along the Mediterranean coast from Spain to modern Israel and Lebanon—a region known as the Levant. In addition to tools, these humans created works of art including cave paintings and human figurines. The period between 50,000 and 10,000 years ago is classified as the Upper Paleolithic (Old Stone Age), marked by cultural developments in which technology in tools evolved and diversified, compared to earlier humans such as Neanderthals and *Homo erectus,* rapidly.

Humans living during the Paleolithic lived very much within the confines of the natural environment. They engaged in nomadic foraging or hunting and gathering. Cultural artifacts reflect naturalistic themes that appear to modern eyes as relatively similar. For example, Venus figurines—sculptures of women at times interpreted variously as *mother goddesses*—were based on the female form and thus fairly regular from place to place. These should not be construed to mean a common cultural meaning as all anatomically modern women share this basic form. An examination of two European figurines—the Venus of Willendorf and the Venus of Lespugne—both dating to between 25,000 and 20,000 years ago, feature obese women with their arms resting upon the top of each breast and anatomically lifelike genitalia. In a hunting-and-gathering economy, the overweight woman could be a marker of old age, high status, or both. In an animistic belief system, she might represent a revered ancestor or ancestors and, possibly, could be a focus for spiritual devotion or "prayer" for fertility. As will be evident in chapter 5, however, there is no basis for assuming supernatural powers implied by the term "deity" as these are not in evidence even at the beginning of the textual record 20,000 years later.

In contrast to the European examples, figurines in the Fertile Crescent exhibit more variation in body image and, particularly in later periods, feature a "pubic triangle" in the genital region. There is considerable continuity with later representations of southwest Asian goddesses, the pubic triangle and often (but not always) a cupping of the breasts from the arms and hands below. The figurines also date to differing periods, the southwest Asian examples dating from the Neolithic period (after 12,000 years ago) and later. It is likely that the Neolithic examples carried similar cultural meanings, but as these are so closely related to natural processes, the similarities are not particularly surprising. The Southwest Asian artifacts

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

also reflect a cultural dynamic lacking in the European versions: the evolutionary sequence from the earliest phases of the Neolithic to the urban historical period after 5,000 years ago (3000 BCE) as an evolution of belief from an animistic religion similar perhaps to those who carved the Venus of Willendorf to the polytheistic pantheons of Mesopotamia and Greece. This evolution of belief is mirrored in the diversification of features: pubic triangles and cupped breasts are found on Venus figurines in the form of birds, reptiles, various human body types, and blends of various kinds, such as Asherah figurines from Iron Age Israel that feature the base of a tree. The enhanced supernatural representations reflect significant powers attributed to these characters in religious myths.

Cultural evolution is often associated with economic changes, but we argue that all parameters of social evolution are essential. Cultural changes cannot be understood as merely the result of a causal relationship between two variables, but often the public thinks of "progress" as the result of economic change and "collapse," a bogeyman of environmental catastrophe. Again, as will be evident in later chapters, cultures can be quite resistant to economic change and often adapt due to environmental or political considerations. The limitation of a bivariate (linear) approach is evident with a modern example.

Malthus Redeemed

At its core, an economy is about regularly providing enough calories to a population to avoid starvation. As noted in chapter 1, with low population density and an adequate caloric environment, basic needs can be met with relatively little movement. However, for the same population with a less abundant natural environment, some transhumance (nomadism) is necessary. If a population is successful, then the population increases. In an environment with little population, population increases can be accommodated by simply "spinning off" new population groups that forage in adjoining territories. Such disparate groups may come together regularly to reaffirm allegiances and to socialize. When population density in a region achieves a high enough threshold, territories for each group cannot grow, and each population must intensify the use of its own territory or face starvation. It is this basic dynamic that Malthus (2008 [1798]) described in the eighteenth century.

In his classic *Stone Age Economics*, Marshall Sahlins (2004 [1972]) argued that Paleolithic hunter-gatherers enjoyed an "affluence without abundance." This notion of abundance is dramatically different from that of urban societies as it views health, social activity, and time as the chief benefits of affluence, not the accumulation of belongings. Although it is possible to find cases of hunter-gatherers who are not so affluent (see Kaplan, 2000), it is worth noting that the conditions of low population density and a high caloric

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

environment can result in the circumstances he describes. Intensification of an existing environment requires additional cognitive resources as broadening the number of prey animals requires learning new species-specific behaviors and the techniques to hunt them successfully. Similarly, intensifying plant resources requires knowledge of each plant, including times to harvest them and technologies to process them (Smith, 2010). Given the extra knowledge and energy expenditure, it is not surprising that hunter-gatherers were reluctant to so innovate in the absence of environmental pressures. Indeed, even something so simple to modern sensibilities—sedentism, the act of living in one location throughout the year—was not so apparent to members of our own species until late in the Paleolithic.

During this last phase of the Paleolithic, hunter-gatherers began to exploit an expanding array of food resources, a phenomenon known as the *broad-spectrum revolution*. As originally theorized by Lewis Binford (1969) and Kent Flannery (1969), it resulted from population pressures during and after the last glacial maximum, a specific mechanism that has found mixed evidence (e.g, Stiner, 2001; Zeder, 2012; Earle, 1980; Redding, 1988). Flannery himself expanded the notion, with other Optimal Foraging Strategy theories, to include goals of reduction of risk, increases in the predictability of resource availability, and amelioration of environmental extremes (Flannery, 1986). As Zeder (2012) noted about the broad-spectrum revolution, such innovations did not occur when food was limited but rather "within a context of environmental opportunity where people were able to use their singular knowledge of the environment and their ingenuity in manipulating that environment to their benefit" (259). If we consider such a cultural and economic innovation as rooted in individual practices and scaled up, then we can consider a modern human looking into a refrigerator and seeing products that will run low in the near future. Often, the response is to shop before the food runs out in order to maintain the continuity of supply. The perception of a potential food shortage, not the shortage itself, inspires the individual to shop and replenish supplies (Smith, 2010). In the context of the Paleolithic, we should expect similar behavioral patterns as community members seek to maintain a stable food system before the onset of famine. Population pressure is not a root cause of increasing diversity of resource exploitation but rather occurs in a dialectical fashion as populations seek greater stability. In turn, such stability creates the conditions that may result in the perceived threat of such environmental pressure.

The earliest evidence of sedentism in the archaeological record is at the site of Ohalo II (Kislev et al., 2002). Located on the shore of the Sea of Galilee in Israel, the settlement was a collection of at least six oval dwellings. These huts, ranging in diameter from 10 to 17 feet long and sunken in the ground with waddle-and-daub domes, were found near external hearths,

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

and in one hut the site's only internal hearth was found (Nadel et al., 2004a). The broad-spectrum revolution was in evidence at the site as those living there had an abundance of food options, including local fish (Zohar, 2002), a variety of mammals (Rabinovich, 1998), and over 90,000 seeds and other remains of various plants, including wild wheat and barley (Kislev et al., 1992). Villagers had access to the nearby mountains and the lakeshore to hunt and collect animal and plant resources, and they further utilized the lake for fishing (Zohar, 2002).

The expansion of economic activity and innovation in the community's relationship with the natural environment (i.e., sedentism versus nomadism) necessitated further innovations in technology and unintended consequences. A variety of manufactured items have been found, including various items of wood (Nadel et al., 2006), a basalt grinding stone for processing cereals (Nadel et al., 2004a), and sinkers for fishing nets (Nadel & Zaidner, 2002). There is also evidence for the possible bread baking (Piperno et al., 2004). The year-round settlement experimented in early cultivation of cereals, inviting not only the earliest "weeds" (Snir et al., 2015) but also the earliest mice and rats (Nadel et al., 2004b). While we can note their environmental conditions (a densely nucleated settlement living amid comparative plenty) and economic conditions (a hunter-gatherer society experimenting with the cultivation of cereals), we know little of their social organization (polity). Besides their technology and a rudimentary burial of a man nearby that implies some spiritual life (Hershkovitz et al., 1995), we similarly know little of their cultural beliefs. Ohalo II was burned and abandoned over 23,000 years ago, and the Paleolithic stretched for another 13,000 years, building dynamically on earlier innovations.

Ohalo II represents an early lithic tradition known as the Kebaran, a culture that gradually evolved into the Geometric Kebaran in modern Lebanon and northern Israel (Henry, 1989). The spread of this culture was associated with a general warming trend that also witnessed the introduction of a new lithic technology complex—the Mushabian—in southern Israel and the Sinai Peninsula during the same time period before 14,500 years ago. The populations that created each technology coexisted for about 1,000 years before the Geometric Kebaran sites disappeared (Henry, 1989). Belfer-Cohen (1991) suggests that population pressures during this continual warming period lead to increased competition between the two populations that forced the Geometric Kebaran populations north to the Jordan Valley, where the Natufian lithic complex subsequently developed. Such changes in lithic culture were subtle by modern standards of cultural change: both Geometric Kebaran and Natufian tools were compound (made with multiple materials, such as a wood or bone handle and stone axehead), but the earlier tools were designed with geometric shapes and the Natufian tools adopted a more

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

comprehensive array of shapes. The Natufians also created more advanced grinding equipment (e.g., mortars and pestles) and sickles for harvesting wild cereals (Cauvin, 2000). With the Natufian culture, we find the last gasp of the Paleolithic.

Natufian Culture

The Natufian culture witnessed continual warming between 14,500 (12,500 BCE) and 13,000 (11,000 BCE) years ago before the onset of the Younger Dryas, the last steep cooling before the last Ice Age finally came to an end. While the environment was warming, there were more sedentary villages similar to that at Ohalo II interspersed with transhumant hunter-gatherers, but sedentism declined as the environment cooled and choice locations for sedentary villages became less lush. The increase in population at the beginning of the period "within small territories led to a corresponding increase in the size of Natufian base camps and a decrease in mobility" (Belfer-Cohen, 1991, 182). The broad spectrum was, not surprisingly, still broad: there is evidence of wild barley and wheat, a variety of legumes such as peas and lentils, as well as acorns (Olszewski, 1993; Cauvin, 2000). In particular, the processing of acorns is a lengthy process necessary to remove tannins and would have been greatly aided by a sedentary lifestyle (Fagan, 2004). The range of animals hunted was considerable, with deer, cattle, and boar found near the Mediterranean coast and gazelle and ibex more common inland (Bar Yosef, 1998). Hunting was aided by impressive structures known as *desert kites*: funnel-like structures of stone into which prey animals would be driven until they found themselves penned at the end where the hunters could spear them at will (Cauvin, 2000). However, the Natufians were not simply a partially sedentary and partially transhumant society: they were arguably the society that set the stage for the Neolithic communities that evolved from them.

NEW STONE AGE: THE NEOLITHIC

As the Paleolithic drew to a close, the Natufian culture was marked by a primarily transhumant or nomadic foraging population with the occasional sedentary village of generally less than twenty, and even ten, oval huts. Increasing population densities and small sedentary populations were resulting in higher levels of social complexity. Cultures are changed by such complexity, as is evident in portable art objects, including carved stone animal figurines as well as a variety of exotic materials such as shells that indicate not only the time to devote to such activities but likely were also used as gifts for nearby bands (Bar Yosef, 1998). As population increased, the necessity

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

of peaceful relations with neighbors grew in importance as both a means of decreasing conflict and strengthening alliances that could minimize the threat of local environmental downturns. This would have intensified the importance of the region's gift economy.

Gift Economies

Gift economies involve the exchange of gifts as a mechanism for sharing affection and maintaining positive social relations. In this sense, it continues in modern times and underlies much of the retail economy. Gifts are given in a variety of ways. At times they are direct grants based on friendship as a symbol of social bonds, and at other times they are effectively "loans" with an expectation that an item will be returned or that a system of reciprocal trade of a given item will bond individuals or groups together (Graeber, 2011). The gift is meaningful because it comes tethered (whether acknowledged or not) with an expectation of reciprocity. It can even at times be used as a means of coercion when the receiver cannot possibly repay a particularly "generous" gift and thus remains indebted to the giver—what Bourdieu (1972) refers to as "symbolic violence." In any case, such an economy, as evidenced by portable luxury items (e.g., Anatolian obsidian in the Dead Sea area), would have conferred higher prestige upon a gift farther from its source. As humans become sedentary, this trade and the network of social bonds it creates and reinforces become increasingly important as sedentary communities do not simply move to necessary resources (by definition). During the Natufian and likely into the Neolithic that followed, much of this trade was "down the line" as opposed to the result of an organized trading network.

We can refer to the gift economy intended to reinforce cross-community bonds and secure alliances as the luxury economy, distinguishable from the economy oriented toward subsistence as the basic economy (Thomas, 2010; Frangipane, 2010). Today, the luxury economy undergirds the capitalist system as much of what is today produced and traded is not directly oriented toward the population's subsistence. Indeed, much of the capitalist economy is directed toward the distribution of resources with profit serving as the underlying impetus for economic activity. There is a relationship between the luxury economy and the basic economy: gift-giving remains an essential driver of economic activity. Nevertheless, the first task of an economy is to provide basic resources to the population, and as the technology and knowledge associated with doing so expands, so too does the contours of the basic economy. During the Natufian, the basic economy could be defined as the subsistence economy and the luxury economy as the gift economy, but as societies became more socially complex, the basic economy grew to include additional features. For example, by 5000 BCE, agricultural production

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

required the administrative functions of the temple establishment, and by 1 CE, the Romans found good roads to be a necessity. Today, of course, the necessary level of knowledge requires a comprehensive educational system.

Religious Practices and Early Cultivation

While it is tempting to understand social evolution in economic terms, such evolution occurs within a set of system-wide parameters of which the economy is only one aspect. In terms of culture, the archaeological record contains considerable continuity in the evolution of religious concepts and ideas. This cultural evolution has roots deep in the Paleolithic Era, but for our purposes, the ideas that became prevalent since the Natufian Period (12,500 BCE through 9,500 BCE) present a logical starting point (Aurenche et al., 2001). This is not only because the archaeological data is richer for the time period since 12,500 BC, but also because the symbolism utilized in Near Eastern religious practice is most easily traced to the Natufian and not to an earlier period (Bar Yosef & Valla, 1990; Belfer-Cohen, 1991).

At the cave of Hilazon Tachtit around 10,000 BCE, a shaman was buried with a variety of high-status grave goods, including parts of at least fifty tortoises (Grosman et al., 2008). The burial site is home to twenty-eight individual humans, but this particular burial shows evidence of a heightened social status consistent with a religious figure of this type. The shaman would have been responsible for interceding with the spiritual realm, and as such, it is understandable that she was the first burial in a complex where others would eventually be buried near this powerful individual. There is also evidence of feasting at the site, including enough turtles to feed at least thirty-five individuals and the remains of three large aurochs (predecessor of domesticated cattle); the aurochs would be significant in later religious practice and symbolism (Munro & Grosman, 2010). Similarly, there is evidence that this was a primary burial and that certain body parts were removed for ritual purposes later (Grosman et al., 2008).

Religious experience is not an innovation of the Natufian, but rather the material practices related to religion are notable. Burial practices throughout the region changed during this time period: it was the first time that humans were buried in or near their settlements (Grosman et al., 2008). Grave goods were found with most burials, although not on the order of those associated with the shaman of Hilazon Tachtit (Byrd & Monahan, 1995). In one case, a pet dog was buried with its presumed master, perhaps a victim of animal sacrifice (Tchernov & Valla, 1997).

Cultural and religious shifts occur in conjunction with other social changes in the region, including the earliest evidence of cultivation of crops other than grains. Jacques Cauvin (2000) argues convincingly that it was

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

innovation in religion that brought about the rise of the agricultural village. At Abu Hureyra, cultivation appears to have led to rye domestication as early as 10,700 BCE, only to disappear from the archaeological record for a thousand years (Moore et al., 2000). The next evidence for a domesticated plant—the fig—dates to 9400 BCE and has the advantage of not disappearing (Kislev et al., 2006). The northern arc of the Fertile Crescent in modern Turkey and Syria was home to all three forms of grains (wheat, barley, and rye) initially domesticated, and as such, this region was critical in plant domestication and the spread of agriculture (Lev-Yadun et al., 2000). However, given that domestication of plants appears throughout the western Fertile Crescent, it seems more likely that this key economic innovation was preceded by cultural knowledge that resulted in multiple domestication events.

At the dawn of the Neolithic around 9500 BCE, the Natufian culture's religious structure included an animistic worldview in which women could hold key positions of spiritual authority. Natufians feasted, investing considerable time and resources in their preparation. For instance, the collection of seventy-two tortoises—a solitary animal—likely took considerable time and effort (Munro & Grosman, 2010). Similarly, the hunting of aurochs, a large and ferocious animal if their domesticated kin are an indication (bullfighting is still sport in some parts of the world), would have inspired a sense of awe and pride. From this base, cultural evolution would take place.

Also, we should note that the Natufian shaman's burial is also indicative of status differentiation but not, seemingly, class distinction. Status differentiation is the elevation of an individual in terms of social status. The individual may be recognized as a particularly potent hunter or warrior, or as a gifted spiritualist and healer in the case of the shaman. The group may recognize such individuals as leaders in certain circumstances: the high-status hunter will lead the hunt, for example, but not commune with the ancestors. Status differentiation is thus marked by *episodic leadership*, and such leadership is often based on skill. Though there are differentials of status, high-status individuals do not have significantly more resources than other members of the society. For instance, Natufian sites do not present larger or smaller huts associated with high- or low-status families. It is likely that particular objects, such as gifts from neighboring communities, would be in possession of higher-status individuals, but possession of such objects did not necessarily affect one's life chances or the ability to have a home and enough food to eat. Indeed, the high-status individual could possess such an object on behalf of the entire community in principle. Nevertheless, from such a relatively egalitarian beginning, Neolithic societies' growing complexity would eventually evolve into the highly class-stratified societies of urban civilization (Iamoni, 2016; Frangipane, 2007).

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

By 10,000 BCE, the last centuries of the Natufian culture, sometimes also referred to as the Khiamian culture, awaited the dawn of the Neolithic after 9500 BCE. Economically, the Khiamian featured the same mix of nomadic and sedentary hunter-gatherers engaged in down-the-line trade as part of a gift economy intended to secure alliances with other communities. Politically these communities were relatively egalitarian, based on status differentiation and episodic leadership. Culturally, these were animistic societies who perceived the supernatural all around them and likely held the ancestors in some reverence. This period was marked by some cultural innovation in the appearance of thin arrow points, or Khiam points, and some of the oldest "goddess figurines" found in Southwest Asia (Henry, 1989). As noted in chapter 1, these goddesses differed from those of Europe, but the artistic themes found in them would be found thousands of years later in Persian and Roman art.

Emergence of Agrarian Villages

At the dawn of the Neolithic around 9500 BCE, the principal region for the action was in the western arm of the Fertile Crescent, an area known as the *Levantine Corridor* (Bellwood, 2005). The corridor extends from the Dead Sea in the south, north through the Jordan and Orontes Valleys, to the Euphrates Valley in modern Syria. As the Neolithic dawned, it was home to two environmental demographic systems of nomadic foragers and sedentary agrarian villages. This pattern intensified as the end of the Younger Dryas cooling event after 10,000 BCE gave way to a warmer climate and lush environment. As populations increased, the perceived threat of recurring shortfalls encouraged cultivation as a mechanism for stabilizing food resources.

Cereals had been utilized by humans for thousands of years, both through the harvest of wild stands and through cultivation. As noted earlier, there is evidence for the cultivation of cereals at Ohalo II 12,000 years earlier. The Natufian toolkit included compound sickles for harvest as well as mortars and pestles for processing them. Smith (2010) notes that cereals can be processed in one of three ways: as a broth or soup, baking, and fermentation. The complex foodways involved with the harvest and processing of cereals necessarily included complex planning even without cultivation, and even more with cultivation. There were likely many domestication events prior to the dawn of the Neolithic as cereal use became more and more central to the food system. However, domestication itself does not imply agriculture per se as the morphology of grains is rapidly altered through human intervention; in a sense, cereals are equal partners with humans in their own domestication.

Cereals, such as wheat, barley, and rye, are grasses with ears that contain seeds, or grains (Murphy, 2007). In wild varieties, seeds break from the ear early in the reproductive cycle and fall directly to the ground. Certain

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

varieties, such as emmer wheat, have rachis surrounding the seed that act as spears that pierce the ground, and when humidity is appropriate, drop the seed directly in the ground. In domesticated cereals, the grains stay attached to the ear for a longer duration, allowing humans to harvest the plants with a sickle and through threshing (a physical shaking or beating on a floor or stone) to dislodge the seeds at a location of their choosing. The occasional appearance of domesticated cereals at various points in the archaeological record is due to the fact that the act of harvest on the part of humans selects for the tougher rachis characteristic of domestication even without humans consciously trying to select such characteristics (Cauvin, 2000; Hillman & Davies, 1990; Salamini et al., 2002). As a result, although domesticated varieties are found in isolated contexts earlier, it is at the beginning of the Neolithic in the arc of the Fertile Crescent where domestication occurred and evolved the agricultural village (see Mithen, 2004; Lev-Yadun et al., 2000).

What is perhaps different during the tenth millennium BCE is not only that domestication "stuck," but that other domesticated plants proliferated. The increasing use of such crops, such as the fig by 9400 BCE at the Israeli site of Gilgal (Kislev et al., 2006a, 2006b), marks the Neolithic as a very different scale of cultivation—one that involved an increasing degree of dependency on agriculture for survival. The popular imagination at times perceives this transition in human history—to a fully agrarian economy as it was developing after 9500 BCE—as a major advance, but the fact is that this knowledge was found at earlier sites which at times utilized it and at other times did not, as at Abu Hureyra (Moore et al., 2000). This suggests that the turn to agriculture was not so much an advance as an adaptation intended to stabilize food availability. The reluctant villagers were increasingly "hedging their bets" as population densities grew.

The PPNA

The 1,000 years between 9500 BCE and 8500 BCE is known as the Pre-Pottery Neolithic A (PPNA) and represents the earliest agricultural economy in human history, albeit one in which the dog was the only domesticated animal. It represents an increasing trend toward sedentary villages and plant cultivation, but in other respects is entirely continuous with the Natufian. Most meat was hunted, and desert kites constructed perhaps thousands of years earlier remained in use. Like those at Ohalo II, housing was oval huts recessed a meter or more in the ground and domed with a thatched or waddle-and-daub superstructure. There was "down-the-line" trade set within a gift economy, often in luxury items but at times with seeds as well, and there is little evidence for status differentiation leading to differential access to essential resources (i.e., social stratification). The changes in evidence during the

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

PPNA are best understood as coevolving structures guided by the parameters of social evolution. The necessary technology (culture) of an agricultural economy had existed for thousands of years before demographic trends in a sparse environment, aided by a favorable climatic change, forced their adoption en masse in a way evident in the archaeological record. These changes were accompanied by cultural shifts in spirituality (see Cauvin, 2000), but as these economic and cultural changes could be accomplished given the social structures that then existed (polity), these societies continued to be relatively egalitarian (Munro & Grosman, 2010).

The PPNA was not a monolithic phenomenon, however, and can even be seen as transitional between the Natufian and the PPNB that followed. There were regional variations in the Levantine corridor, with the Mureybetian culture dominant in the north and a Sultanian culture in the south, with some mixing of characteristics in between (Thomas, 2010). As discussed later, Mureybetian cultural practices would expand broadly over the region and become known as the PPNB, but it is the type site of Tell es-Sultan, better known as Jericho, that is sometimes credited as the world's first city (Kenyon, 1954). Jericho during the PPNA was home to a sedentary population of around 800, and at one end of the village had a plaza and tower likely used for ceremonies. It was the tower that excited Kathleen Kenyon to decree Jericho as the first city, believing it to be defensive, an idea later discredited (see Bar Yosef, 1986).

During the PPNA, goddess symbolism was found primarily in the southern reaches, an area and culture called the Sultanian (after Tell es-Sultan). As one moved north, the goddess figurines were found as far north as the Syrian site of Mureybet on the Euphrates River, after which the Mureybetian culture is named. Unlike the Sultanian, where the use of zoomorphic designs had declined by the PPNA, at Mureybet the goddess figurines are joined by such animal symbolism. North of Mureybet, as one approaches southern Turkey, the goddess is not found, but the animal figures are dominant. This gradient of differing religious symbolism was likely accompanied by variations in religious narratives and beliefs as well. By the PPNB (8500–6500 BCE), goddess symbolism had diffused throughout the region (Cauvin, 2000).

On the Plains of Harran in southern Turkey, at the pivot of the Fertile Crescent, a number of sites featuring "T-shaped" stone megaliths carved with a number of animals are found, such as Nevali Cori, Karahan Tepe, and the largest and oldest such compound, Gobekli Tepe (Celik, 2011). The site of Gobekli Tepe was almost certainly religious in character as it is reminiscent of the religious architecture of other forager societies around the world (Flannery & Marcus, 2012). The T-shaped stone pillars feature carvings of various animals, including snakes, raptors, and aurochs—animals that would have been uniquely difficult or dangerous to hunt (Bachenheimer, 2018).

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

Along the walls were carved benches, and the circular structures were covered by a roof (Scham, 2008). The symbolism is what one would expect of an animistic culture dependent upon hunting for meat. The complex itself was obviously the site of large social gatherings, although the nature of these gatherings is uncertain. They could have been for various clans within the region, or they could have been primarily for hunting parties that met at the site and traded. The distance from which people would travel to Gobekli Tepe is also uncertain. As time went on, the population of the northern Fertile Crescent became more sedentary and dependent upon agriculture, but animal symbolism remained consistent themes of religious art.

Gobekli Tepe dates to the PPNA, around 9000 BCE, and continued in use into the PPNB. The transition of the population from a complex foraging economy to one increasingly dominated by sedentary agricultural villages was the result of population pressure in the region, and sites such as Gobekli Tepe, with their ceremonial functions, likely eased tensions among competing groups. Later additions, such as nearby Karahan Tepe dating to the early PPNB, share certain architectural affinities and symbolism (Celik, 2011). By the PPNB, beginning around 8500 BCE, the Goddess imagery had spread from the Dead Sea region near Jericho, and many of the features of the northern Mureybetian culture during the PPNA had spread to the south as well. Such cultural diffusion indicates at least some level of contact throughout the Western Fertile Crescent during the PPNA, along with the *idea* of domestication, whether of figs around 9400 BCE in the south (Kislev et al., 2006a, 2006b) or of cereals about the same in the north (Lev-Yadun et al., 2000, 2006).

A further elaboration in religious practice, the skull cult, is evident in the treatment of the dead. Skulls were potentially objects of veneration or utilized to terrorize intruders at Gobekli Tepe, indicating the spiritual importance of them region-wide (Gresky et al., 2017). However, it was in the south that the burial practices of what is commonly known as the skull cult took form. During the Natufian the body would be buried with certain body parts removed at a later time. The body was often defleshed through a process known as excarnation: the body would be left in an exposed area and cleaned by scavenging birds. As the PPNA progressed, the head would often be removed, with the remainder of the body buried under the home in a sedentary village. The number of bodies found beneath the floor of homes suggests that not everyone was treated thus, and only important individuals were interred beneath the floor. The skull was frequently removed, coated with plaster or bitumen, treated to hair of straw and eyes of seashells, and thus "reanimated." This is evident at Jericho as early as 9500 BCE, and at this site the "skull cult" resulted in the filling of a tower built during the PPNA with hundreds of skulls during the PPNB 1,000 years later. Throughout the tenth

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

and ninth millennia, the skull cult expanded throughout the entire Fertile Crescent and remained a fixture of Neolithic sites for thousands of years (Cauvin, 2000; Hodder, 2006).

The skull cult answered a particular issue related to the increasingly widespread pattern of sedentary communities, particularly in a region still home to transhumant foragers. The presence of the bodies beneath the floor of the home created not only a spiritual claim on the home by the people descended from them, but also a warning of sorts to those not descended from the ancestors. As for many today, the presence of the dead potentially hostile to a takeover by non-relatives could be a powerful deterrent, the animated skulls an ever-present reminder of who dwelled beneath the floor. The skull cult also created a claim of "citizenship" in the community, addressing the free rider issue. A household would contribute labor based on the number of people who could work but extract resources based on the number of people who needed them. The presence of households in the village over many generations served as a claim to equal resources from a harvest even when the household could not offer equal effort. In effect, the multigenerational presence was an indication that a household "not pulling its weight" in the present circumstances, often due to an abundance of elderly or juvenile members, had in the past and would again in the future be in the "donor" position and supporting another household with fewer workers. Also, the skulls beneath the floor would represent a commitment to remain in the household for generations.

The PPNB

At Mureybet during the PPNB, a time period during which the world's first rectilinear homes were constructed in stable agricultural villages, walls coated in plaster and painted with elaborate art featured a new decoration: the bucrania of aurochs. The ancient cattle species, aurochs, was utilized in feasting, and Mureybetian homes featured their horns protruding from, and often embedded within, the walls. The bucrania likely served a function as "hunting trophies," but the fact that many were embedded out of sight in the wall suggests a spiritual function as well. In writing about the PPNB and Mureybet, Jacques Cauvin (2000) suggests that the bucrania, and their associated animal, the aurochs, specifically the bull of the species, took on a symbolic function associated with men and their hunting activities. Cauvin was inspired by the earlier work of James Mellaart at Catalhoyuk. Mellaart (1967) argued that the goddess and the bull represented female and male deities at the center of religious life. Although Catalhoyuk was inhabited from 1,000 to 3,000 years later than Mureybet, the symbolism at each locale does strongly overlap. However, as the current excavator of Catalhoyuk, Ian Hodder, has

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

pointed out, there is little evidence in the archaeological record to suggest that either the goddess or the bull represented deities as we understand them today nor that the symbols were used any more than those of other animals, such as the raptor and the snake (Hodder, 2006; see also Balter, 2006). Nevertheless, both the goddess figurines and the symbol of the bull are associated with powerful deities as the historic period opens in the early third millennium, but that is nearly 3,000 years after Catalhoyuk was abandoned (ca. 5500 BCE) and over 5,000 years after the dawn of the PPNB! While it is certainly possible that the symbolism of these animals maintained some level of continuity over this timespan, the narrative associated with them that informed the religious symbolism almost certainly underwent dramatic fluctuation. And, of course, we have no way of knowing how these symbols were interpreted. As such, it seems possible that the goddess and the bull were important symbols, but they were not the only religious symbols, and this relative status is reflected in the mythologies as we have received them from the early Mesopotamians and Canaanites.

It was the PPNA Mureybetian culture that seems most dominant as the transition to the PPNB occurred after 8500 BCE. Rectilinear homes took the place of oval huts, there was a growing repertoire of domesticated plants, and as the period progressed, growing use of domesticated animals as well. The gradual nature of the shift toward fully agricultural villages was evident at Tell Aswad:

> The cultivated products were a modest contribution to a diet primarily based on wild plants and animals until ca. 8300 BC, when the people at Tell Aswad also began to grow barley, field peas, and lentils. In addition, they may have practiced an informal herding of goats, although the identified animals are still morphologically wild. (Akkermanns & Schwartz, 2003, 72)

The proliferation of goats and later sheep, a considerably more rapid event than the turn to domesticated plants, was particularly significant.

The earliest evidence for domesticated goats comes from the site of Ganj Derah in the Zagros Mountains. Similar to dogs, the first domesticated animals, goats are highly social in the wild and tend to follow leaders, making them a good candidate for domestication (Zeder & Hesse, 2000; see also Bellwood, 2005). They are useful for meat and skins, as well as for dairy products. The use of dairy products necessitated a genetic shift in humans that allowed for the processing of lactose into adulthood. DNA extracted from a woman who lived at the site showed that she was lactose intolerant, and as such it is possible that goats were not used for dairy at this early date or that the population was still in a state of transitioning the use of dairy (Gallego-Llorente et al., 2016). Goats spread quickly, and by 7600 BCE were found

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

at Abu Hureyra on the Euphrates (Moore et al., 2000) and throughout the Levantine Corridor. By 6500 BCE at Catalhoyuk in Turkey, they were joined by sheep, although these too date to earlier periods in the Zagros (Hiendleder et al., 2002).

As the PPNB continued, there was an acceleration of social evolutionary processes, each building on past practices and reinforcing the other. Also noticeable during the PPNB were a number of foundational practices and technologies developed over the ensuing millennia to give form to recognizably urban societies (Fuensanta & Martin, 2018).

From the Natufian through the PPNB there was a long-term tendency toward privacy in housing; Byrd (1994) demonstrated the shift at the Jordan Valley village of Beidha. During the Natufian, huts were open to all members of the family, but the rectilinear houses of the PPNB also were internally subdivided into several rooms. There was also less public storage and communal preparation of food. Indeed, from about 6500 BCE to 5500 BCE a similar trend was evident at the Turkish site of Catalhoyuk (Hodder, 2006). Catalhoyuk contained between 5,000 and 8,000 people at its peak, in contrast to Beidha's 3,000, but had neither streets nor significant public architecture. Residents would cross rooftops in this densely settled village, accessing houses and sporadic courtyards via ladders. There were areas for food preparation within each home, and goddess figurines have been found in such areas. The bucrania of bulls have been found embedded in walls in separate areas, implying a gendered division of labor but not necessarily dramatic differentials of power. The walls were coated with lime plaster and often painted with scenes of hunting and funerary rites. As might be expected during the Neolithic, funerary pictures involved birds feeding during excarnation, and as at other sites, decapitated bodies were buried under the floor in the home. The plastered skulls were found in the home. Thus, even religious ritual, so public at PPNA sites such as Jericho, took place within the household open to (likely) kin from other houses. A number of homes were particularly elaborately decorated, likely the homes of high-status family members—the Neolithic equivalent of traveling to the grandparents for Thanksgiving dinner. The original excavator of Catalhoyuk, James Mellaart (1967), thought of such homes as sanctuaries, but more recent excavations have shown otherwise (Hodder, 2006). Given the high population of Catalhoyuk, one of the largest settlements of its time, the various "sanctuary homes" indicate that the clans living and associated with the site had not developed a sense of Catalhoyuk as a *community* as well as a *settlement*.

The use of craft technology is particularly apparent. Stone, bone, and wood had, of course, been utilized for tens of thousands of years, and lime plaster for several thousand as well. Nevertheless, the PPNB witnessed rapid change in the use of these technologies. The use of lime plaster and bitumen was

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

not new during the PPNB, but their uses did multiply. In the Jordan Valley, statues of human figures up to a meter tall and 10 cm. thick were formed by wrapping lime plaster around reed forms (Schmandt-Besserat, 1998). The best preserved statues were excavated at ‘Ain Ghazal, near Amman, Jordan, where fifteen were discovered in two pits. The statues have unsophisticated bodies but considerable detail on the face. They were likely displayed or possibly used in ceremonial processions (Rollefson et al., 1992). Their eventual deposition beneath house floors implies a connection with the skull cult. Kathleen Kenyon (1957), upon discovering such statues at Jericho, believed them to be representations of ancestors, although Schmandt-Besserat (1998) leaves open the possibility of deities. Thomas (2010) suggests a “middle ground” by seeing the figures as transitional between ancestor worship and all-powerful gods:

> The term “deity” or “god” at this early date seems too strong a concept. More likely is a highly mythologized ancestor or mythical ancestral family similar to the later form of the mythical Gilgamesh as compared to the actual Uruk King Gilgamesh. This would be consistent with later conceptualizations of the Mesopotamian creator gods (such as Anu) as both ancestral to the inhabitants of the region and as supernatural (and quite imaginative) entities. The fact that the statues are in human form may point to an intermediate form between “ancestor” and “god,” and as such may be better termed “proto-deities.” (91)

In essence, cultural conceptions of distant ancestors could have attributed “god-like” supernatural powers that functioned to integrate a larger and more complex society composed of multiple kinship networks.

If the statues of ‘Ain Ghazal were an adaptation of increasing social complexity spanning disparate clans, they were not alone. Trade networks had become increasingly complex by this period, both in terms of quantity of goods and how it took place. Accounting for such trade items as animals and manufactured goods required a system of counting that could be managed over distances. Schmandt-Besserat (1996) has shown that a system of clay tokens performed this function, both for counting units of goods (e.g., sheep) and communicating to trade partners what was sent. As early as the PPNB:

> The tokens were part of a chain of breakthroughs in communication. The first stage was the creation of the earliest known code, made possible by a conceptual leap: the creation of a set of tokens with specific shapes and the endowment of each shape with a unique, discrete meaning. The symbols were modeled in striking, distinct geometric shapes that were easy to recognize. The forms were simple and easy to duplicate, and the counters were systematically repeated,

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

> always carrying the same meaning. Later, with the development of a repertory of markings, the code grew to hundreds of concept signs. The system made it possible to deal concurrently with multiple kinds of data, thus allowing the processing and communication of a volume and complexity of information never reached previously. (124–125)

Tokens would be deposited in clay pouches (today called *envelopes*) and sent with trade goods to their destination. The recipient of the goods could open the envelope to verify what was sent by the sender. In time, stamp seals were created using unique designs designating the sender that was impressed into the wet clay, leaving an impression (Wengrew, 1998). In order for the recipient (or anyone else) to open the envelope, they also needed to break the seal.

In addition to an increasing concern with the honesty of trade partners, the increasing use of clay is also significant. Clay was also formed into balls that could be heated and then used to heat bowls, similar to the use of charcoal today (Akkermanns & Schwartz, 2003).

The PPNC

The PPNB ended in very different ways depending on where one lived. In the north of the Fertile Crescent, a continuation of past trends evolved into the Pottery Neolithic. In the south, however, there was a dramatic change of fortune.

A collapse is "a rapid, significant loss of an established level of social complexity" (Tainter, 1988, 4). As a society is a complex adaptive system, a change in any of the parameters of evolution can result in a full or partial collapse. It is tempting to look for a primary culprit in collapse. For example, Tainter looked to the inability to support a society's infrastructure—primarily an economic "cause." In contrast, Kennedy (1989) posited "imperial overstretch" as an imperial power stretched its political and military influence so far from the core of its society that it could no longer support the system as a whole, in effect corroding from the inside out. Diamond (2004) looked to environmental desiccation as the primary culprit. In describing collapse as a multivariate event rooted in the sheer complexity of the system itself—changes in each parameter leading to a downward spiral, not unlike the acceleration as society becomes more complex—Yoffee (2005) has given us the more useful analogy.

It is worth noting that "collapse" is relative. For the Fertile Crescent as a whole, the collapse was confined to the Jordan and Orontes Valleys (southern Levantine corridor) and thus partial; for the Jordan Valley region, the collapse was total. In this region, the period after 6500 BCE is known as the PPNC, a period marked by fewer but larger agricultural villages, the growth of pastoral nomads, and the world's first human-induced environmental desiccation.

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

Domesticated goats and sheep had arrived in the southern Levant by 7500 BCE but did not immediately replace "wild" forms of meat (Rollefson et al., 1992). About half of faunal remains at sites in the south included fish, birds, deer, gazelle, and smaller mammals such as rabbits. By the end of the PPNB around 6500 BCE, the proportion of domesticated faunal remains increased to about 70 percent at Jericho, Beidha, 'Ain Ghazal, and Basta (Rollefson & Kohler-Rollefson, 1993). As the PPNC began, the high numbers of domesticated animals not native to the Levant's desert environment depleted native plant life and threatened crops.

In part, the environmental desiccation of the PPNC has an environmental cause: the region was drying and thus losing its abundance of food resources. As wild animals became scarcer, there would have been a necessary shift to domesticated animals. Similarly, this may also have led to increased dairy consumption. Although climate change was a contributor, it was not necessarily the only cause. The introduction of domesticated animals also provided a way of quantifying wealth between households or villages. At the very least, a higher number of animals would have provided a sense of comfort and food security. Faced with environmental problems, households could have sought other subsistence strategies, but they chose instead to send detachments of nomads into the countryside with the animals as others stayed in the villages to work the fields and produce manufactured goods. As the PPNC continued, a system developed in which agricultural villages produced food and goods for trade with pastoral nomads for meat and goods from other villages or regions. As Zarins (1990) noted of 'Ain Ghazal, where architecture included smaller homes than in the PPNB and more storage facilities:

> a "fluctuating" population at "Ain Ghazal, with some families leaving the town with their herds of sheep/goat for the steppe and desert at the start of the rains, staying away until after the grain harvest. When they returned home they exchanged sheep/goat products for the grains and pulses that had been harvested and stored for them in the corridor buildings." (Maisels, 1999, 118)

This expansion of the agricultural system into the more distant hinterland set the stage for later urban-rural systems based on the exchange of urban goods for rural products. Ultimately, such adaptations did not stave off environmental catastrophe. At such sites as Jericho, Beidha, and 'Ain Ghazal, the villages dropped in population from around 2,000 to 3,000 at the beginning of the period to temporary stops for nomads or outright abandonment a 1,000 years later.

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

THE STONE AGES IN CONTEXT

As the Neolithic transitioned to the Chalcolithic (Copper Age), tens of thousands of years of social evolution were converging on ever higher levels of social complexity that continues to characterize life today. The changes evident during the late Paleolithic and Neolithic were significant, even if not "revolutionary" in terms of timescale.

It is tempting to begin such a story with economic change, but it is more accurate to begin with a species of primates living a traditional primate lifestyle of nomadic foraging. For tens of thousands of years, our ancestors practiced this environmental demographic system, even as cognition allowed for artistic expression and communication through language. Surviving in environments where the carrying capacity was greater than the population humans could reproduce at whim, moving on or starving when carrying capacity fell or populations increased too rapidly. Given favorable environmental conditions, occasional settlements such as Ohalo II could develop, only to be abandoned years later. It would not be surprising if, in the future, another such settlement dating to even earlier is eventually found. But shifting environmental conditions interact with the other parameters of social evolution. For example, the broad-spectrum revolution is an adaptation of populations that involves cultural change (technology) increasing available resources (economy). The resulting population growth likely spurred more complex tribal politics. Similarly, the increasing utilization of novel agricultural techniques (culture/technology and economy) was an adaptation to population pressure, as was the migration of populations out of the Fertile Crescent into adjacent regions in southeastern Europe and the Caucasus Region (Bellwood, 2013; Anthony, 2007). These adaptations built on earlier social (cultural, economic, and political) structures in order to meet an environmental challenge. As they were successful, we today tend to think of them as positive and inevitable, but they were neither.

To call such changes positive employs a value judgment that the course of human social evolution is *good*, although there are likely any number of species (if they could be asked) who would beg to differ. Such changes were not inevitable, either, as the thousands of years of pre-history that doubtless also presented our ancestors such challenges did not lead to such innovations. Such changes were possible only after multiple and overlapping conditions were set in place. The climate cooled at the beginning of the Last Glacial Maximum, for example, but the full array of cultural adaptations of *Homo sapiens sapiens* had not yet developed. Thus, environmental desiccation led to death rather than domestication. With the climatic variation at the end of the last Ice Age humans had better cultural abilities to face challenges, allowing for the various adaptations within the nomadic foraging strategy.

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

The interdependency of the parameters of social evolution is an important point for the reverse as well: collapse. As the southern Levant dried at the beginning of the PPNC, the loss of social complexity was not merely environmental desiccation. The economic system relied on domesticated plants that were also needed to support livestock, and both were likely conceptualized as a form of wealth. It was attempts by humans to maintain a healthy surplus of food that initiated the broad-spectrum revolution and the adoption of cultivation (and now, prompts to go to the store when the refrigerator seems bare). These economic and cultural changes helped spurred further desiccation, making adaptation less likely.

The major environmental demographic shift was from nomadic foraging to agrarianism, but this shift was gradual, non-linear, and characterized by hybrid forms of each. Foraging populations did establish settlements, but these did not persist long due to environmental changes and population pressures. The adoption of agriculture enabled greater population growth, and this would increase pressure for sedentary agrarian villages. This dynamic was enhanced over time. The Late Paleolithic likely had a low level of cultivation of grains, thus explaining the multiple domestication events. By the PPNA, domesticated plants became increasingly important. By the PPNB, they were central to the economy, while domesticated caprids—a medium-sized member of the bovine family—had been introduced as well. Where the environment was capable of supporting this pattern, primarily in northern Syria and Turkey, it continued. In the Levant, where environmental desiccation loomed over the PPNC, villages dispersed into bands of nomadic foragers while keeping a remnant of the earlier agrarian system and not fully reverting to an earlier state of existence. It was a hybrid foraging/agrarian environmental demographic system.

Another significant shift was the increasing importance of trade in luxury goods in a "down the line" gift economy. Exotic items, such as Mediterranean seashells in the Galilee and Turkish obsidian in Israel, functioned as esteemed gifts from one leader to another, and hereby from one village to another. Such gift-giving aided the peaceful coexistence of various populations and extended a network of reciprocity across the region. This served as a hedge against misfortune, as past gifts could be "redeemed" through access to a neighbor's hunting grounds, for instance. The carving of luxury items that could be traded, such as stone animal figurines, similarly signaled value to the receiver of a gift as such artistic renderings took considerable time and effort.

Changes in local cultures facilitated changes in the economy. There was variation across the region, particularly during the PPNA, that became more uniform (at least in material culture) as time went on. Certain technologies, such as the mortar and pestle for grinding and compound sickles with stone blades for harvesting, were developed during the Natufian period as cereals

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

became essential components of the local diet even without purposeful cultivation. Similar shifts in technology, such as rectilinear silos and eventually housing, were also developed to support economic activities. Such shifts in technology were accompanied by changes in how knowledge was accumulated and interpreted, that is, religion. Over time, the regional cultures of the PPNA became more uniform during the PPNB. The spread of goddess figurines from the Levant throughout the region, as well as the skull cult mortuary practices, would have been accompanied by narratives and symbols that are no longer evident to us today—it would take the advent of writing thousands of years in the future before a fuller glimpse of the religious lives would be possible.

We know very little of their political structures except that they seem more resilient over time. The Natufian offers a peek of a society where status differentiation and episodic leadership were common. Such leadership had little impact on one's ability to secure food to eat or access a superior home in which to live. Community leaders likely amassed gifts from neighboring populations, but house sizes and material conditions were consistent across households. This structure seems to have changed relatively little throughout the Neolithic; the significant change was related to the use of domesticated caprids as wealth during the second half of the PPNB. It is noteworthy that even through the present day, high consumption of animal protein serves as an indication of affluence.

The Neolithic eventually turned to the Chalcolithic, the period during which we see the emergence of urban-rural systems. The first cities would emerge thousands of years later, built on the foundations of the Neolithic, yet adapting to new challenges.

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

Chapter 5

Emerging Urban-Rural Systems

As we saw in chapter 4, there were substantial changes in environmental demographic arrangements during the Late Paleolithic and early Neolithic periods, including complex non-linear adaptations that led from nomadic foraging to agrarian settlement and various hybrids of these systems along the way. Environmental changes and population demands triggered innovation that would feedback into alterations of environmental energy supplies. New technologies emerged, including sickles as early as the Paleolithic for harvesting cereals, mortars, and pestles for processing them, and increased cultivation for stabilizing supply. The major religious innovation of the Neolithic, the skull cult, reflects a cultural transition that supported sedentism. Amid these changes was continuity.

Polity, the decision-making parameter, remained fairly egalitarian throughout this time (Frangipane, 2007). To be sure, there is evidence of status differentiation, such as the Natufian shaman burial with evidence of funerary feasting. Overall, however, grave goods reflect limited differentials of status and power: hunters and gatherers buried with tools of their trade, for example, but not reflective of vast differentials of wealth (Cauvin, 2000). Housing reflects a move toward increasing privacy but does not reflect a similar move toward differentials of wealth (Byrd, 1994). Leadership may have shifted from being episodic to more formalized around a chief and elders, and there may have been some effect of kinship on one's life chances, but compared to the highly classed societies of later times, these societies were mostly egalitarian. This general trend was likely true of gender relations as well: status and role differentiation likely influenced by tradition and circumstance. Although the first stirrings of patriarchy are found in the Neolithic, it would be many millennia before anything resembling the gendered oppression so common in the (later) ancient world (Peterson, 2010).

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

Certain religious symbols present in different areas of the house imply a household division of labor. At Çatalhöyük and other sites, for instance, goddess figurines were associated with domestic contexts, whereas bull bucrania are associated with hunting scenes (Hodder, 2006; Cauvin, 2000). The implication is a gendered division of labor and status differentiation. Based on grave goods and forensic studies, however, it does not appear that such differentiation translated into substantial differences in material awards for either men or women (Flannery & Marcus, 2012). In contrast to Gimbutas (1982), who argued that goddess figurines were evidence of a foundational "goddess" religion based on matriarchy, the goddess figurines were more likely, just as the PPNB statues, ancestors of a given family or clan. Such figurines would have had significance for fertility and hence were gendered. The rise of the agrarian village did, however, begin a process of increased gender inequality. Gender roles appear to have become more rigid, the increasing association of men with hunting and inter-group violence laying the foundation to patriarchal relations that grew more oppressive over time. This appears to have been the case in other agrarian societies as well (Hanson et al., 2015; Cintas-Pena & Sanjuan, 2019).

As the spiral of cultural evolution grew more complex, however, the complications brought about through economic diversification and technological innovation would require a broadening division of labor and administrative functions to go along with it. Under such pressures, the relatively egalitarian order could not hold.

While the southern end of the Levantine Corridor was enduring the environmental desiccation of the PPNC, conditions were considerably better in the north. Confronted with more environmentally friendly conditions, the PPNB evolved in a different direction. The principal innovation was the use of a tempering agent in clay that transformed the fired product into genuine pottery, and hence the period known as the Pottery Neolithic (PN) (Akkermans & Schwartz, 2003).

THE POTTERY WINDOW INTO CULTURE

The creation of pottery is likely of more excitement to archaeologists than it was to people living over eight millennia ago. The early pottery was used to make plates, bowls, cups, and storage vessels—all products found of stone thousands of years earlier. For artisans of the time it was perhaps easier to work with clay, but the modern enthusiasm among scientists is the ability to spot culturally-specific artisan styles that allow us to track wares, identify cultural zones, and study the evolution of styles across time and, in principle, the societies that created them.

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

As pottery spread, within a short time there was found "not only a much greater abundance of ceramics, but a significantly greater variety of ceramic fabric, shape, size, and decoration" (Akkermans & Schwartz, 2003, 133). By 5900 BCE, the beginning of the Halaf culture, about 80 percent of pottery was decorated. The various styles and decorations allow for the classification of cultures over time and space. There was considerable overlap in styles, but by 5500 BCE the largest cultural regions included the Halaf, ranging from the Khabur Basin in northern Syria and Iraq to the Mediterranean, and the Samarra culture, ranging to the southeast of the Halaf with considerable overlap in northern Iraq. These cultures, identified by their pottery, evolved from a series of forerunners, including the Pre-Proto-Hassuna (Nishiaki & Mière, 2005), the Proto-Hassuna, and the Hassuna (Tsuneki & Miyake, 1996; Nieuwenhuyse et al., 2010). The Pre-Proto-Hassuna dates to the mid-PPNB (ca. 7500 BCE) and the spread of the technology likely started then and expanded over the following 2,000 years (Nishiaki & Mière, 2005).

By the sixth millennium BCE, pottery was widespread for use in cooking, storage, and increasingly found as grave goods in burials. The designs were not mere technological conventions. Akkermans and Schwartz (2003, 134) note that:

> Pottery may have had an even wider significance. . . . Ceramics produced according to distinct stylistic conventions could have symbolized group membership and the participation of the many small and dispersed late Neolithic communities in a wider cultural framework.

Hence, although pottery should not be considered identical to a culture, it was undoubtedly influenced by the culture that produced it.

Halaf villages were, similar to the shrinking number in the southern Levant, characterized by the full agricultural regime, including farming and domesticated animals, as well as a population of pastoral nomads that would reside in the villages at certain times of year (Thomas, 2010). The largest villages could swell to as many as 8,000 residents when the nomads returned. Prominent buildings in larger settlements were utilized for storage and collective gatherings (Akkermans & Schwartz, 2003). Storage was an essential function of such spaces as many houses were vacant at various times of the year, and the return of the nomadic population was likely met with feasting and trade in the gathering space.

Smaller Halaf villages had similar lifestyles despite the smaller scale. At Umm Qseir in Syria, some villagers tended crops and other village functions while others lived the life of the pastoral nomad, returning home at certain times of year. There were storage structures at the site and an intriguing hint of what was to come. Umm Qseir was at the periphery of the desert, an

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

environment that limited population but, as populations had grown throughout the region, was at least open for a new settlement at its founding. Living in the periphery, residents adapted to the local conditions by importing some necessary items from other villages—likely a function of the nomads trading while they were away—as well as broad-spectrum foraging. Zeder (1994) summarized:

> Spring was the most bountiful season at Umm Qseir—a time when crops of emmer, barley, and pulses were harvested, and when wild game (at least the gazelle) feeding on lush spring growth of the steppe were easy prey. During the hotter summer months and into the unproductive winter season, when game was more likely dispersed across the steppe, Umm Qseirians could rely on stored grain, fall fruiting wild shrubs and trees, and their domestic stock of sheep, goats, and pigs. (111)

Residents also imported ceramics, obsidian, and bitumen (McCorriston, 1992).

The ability of the residents of Umm Qseir to trade was the result of an extensive network that had been developing for thousands of years, stretching from Mosul, Iraq in the east to the Mediterranean in the west, as indicated by the distribution of Halaf pottery (Akkermans & Schwartz, 2003; Fuensanta & Martin, 2018). Of course, the distribution of Halaf pottery does not indicate that all of these villages were part of the same society any more than the distribution of iPhones today indicates an iPhone society, but it does speak to similar cultural patterns that spread across the region. Curiously, despite the extensive trade, "there are no indications of a Halafian social hierarchy, and the nature of the exchange process is too dispersed and reciprocal for it to be a matter of traders and purchasers" (Maisels, 1990, 146).

There was considerable overlap in the styles of pottery found in northern Iraq in 5500 BCE. Maisels (1990) argued that Hassuna pottery, descended from pre-Proto-Hassuna and Proto-Hassuna styles, predated and gave rise to both Halaf and Samarra pottery. By 5500 BCE, all three could be found in northern Mesopotamia, indicative of overlapping cultural traditions and trade among them—including the trade for pottery itself. This trade network that allowed the residents of Halafian Umm Qseir to live in a marginal environment would prove even more critical to the Samarra culture.

In what is today Syria and northern Iraq, rain-fed agriculture is possible, but as one moves south, the region becomes (and became) increasingly arid. For the Samarrans, bounded on the north, east, and west by other populations, the valleys along the Tigris and Euphrates Rivers provided the "escape valve" for a growing population. As in other villages of the time, in Halaf, Hassuna, and PPNC regions, the largest communities' populations could reach 5,000 or

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

more, but most were generally much lower. At Tell es-Sawwan, for example, the densely nucleated village was home to a 1,000 residents. The sixth millennium BCE experienced population growth and as such a village of this size was more common than earlier in the Neolithic (Iamoni, 2016).

Samarra villages demonstrate a shift in how older technologies were adapted to new circumstances. For example, some villages had walls. These were not new, of course, as PPNA Jericho had a wall as protection against flooding (Bar Yosef, 1986), and the residents of Tel Hreiz on the Mediterranean constructed a seawall to protect against rising sea levels around 5500 BCE (Galili et al., 2019). Similarly, Halafian villages sometimes featured walls intended to keep livestock in and predators out. In Samarra villages, however, walls were higher and featured "L-" shaped gates—these were defensive structures, and the wall at Choga Mami also had a watchtower. Evidence for conquest during this period is scant, however, and it is more likely that the walls defended against raids by nomads or neighboring villages. These early defensive walls would in time evolve into the elaborate systems found in cities thousands of years in the future.

Similarly, Samarra villages introduce the "T-shape" house characteristic of the early Mesopotamian cities. In contrast to the trend toward privacy for individual "nuclear" families at PPNB Beidha (Byrd, 1994), the T-shape house was home to multiple such units under one roof—an "extended" family (Maisels, 1990). Extended families were certainly found in earlier villages as well, so the novelty is in them living in one sizable home. Although populations were increasing, buildable space available in villages was abundant and so did not provide a suitable explanation. Later Mesopotamian cities organized economically around syndicates, or "houses," and it is possible that individual "houses" worked specific fields. Numerous separate fields marked agriculture in the later Ubaid period, and so it is entirely plausible at this earlier date. As at Çatalhöyük, some buildings were given over to sanctuaries, although there is no evidence that these were also homes at Samarra sites. While the shift toward these houses indicates a step toward later forms of economic organization, this was an earlier stage and is not accompanied by evidence of material inequality. Similarly, there is no evidence of a subset of the population relieved of subsistence activities (Maisels, 1990).

The Samarra culture did, through the necessity of living in ever-more-marginal environments, innovate. At Choga Mami, an irrigation channel was dug as early as 6000 BCE (Oates, 1969; Helbaek, 1972). By 5500 BCE, armed with irrigation technology, the Samarra culture pushed south along the rivers onto the alluvial plains of southern Mesopotamia. A hostile desert, devoid of the north's resources, could be inhabited due to a trade network that brought northern resources and irrigation technology that enabled the villages to support themselves (McCorriston, 1992). As the sixth millennium continued, the

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

Samarra pushed south, adapted, and evolved into the Ubaid culture (Maisels, 1990). In turn, Ubaid cultural practices subsequently spread throughout the entire system.

COMPLEX SOCIETY AND EMERGING URBAN-RURAL SYSTEMS

Social complexity had been increasing since the end of the Paleolithic, but it was during the Ubaid period (5500–4000 BCE) that its full fruition was in view. The complexity of urban life still lay in the future, but the egalitarian order of the Neolithic village was now a thing of the past.

The Ubaid developed from the Samarra as it worked south, and its "core" was in the marshes and plains just north of the Persian Gulf in the region one day to be known as Sumer. From this locus the Ubaid would spread back to the north as its advanced administrative mechanisms and technologies proved better adapted to the higher populations of the fifth millennium BCE (Scott, 2017). The localized versions of the Ubaid adopted new techniques and adapted them to local conditions, and so there was regional variation throughout Mesopotamia. For example, in the swamps near the Gulf and the heavily irrigated plains of Sumer, faunal remains are primarily cattle and pigs—both animals more suited to the local environment. In the mountains of Iran and northern Mesopotamia, sheep and goat herding was more common. Some Ubaid towns grew to several thousand residents—roughly the size of the largest Samarra predecessors—but also had satellite hamlets in some locations, indicating a two-tiered hierarchy of villages (Maisels, 1999). The trade network was extensive, and Ubaid sites often feature not only their own pottery but also obsidian from Turkey, shells from the Mediterranean coast, and lapis-lazuli from Afghanistan (Oates, 1993). Ubaid pottery has been found at Persian Gulf pearl-diving centers along the Arabian coast.

If there is a clear change in the Ubaid, it is the transformation of the social structure in response to, and alteration of, environmental constraints. As the Samarra pushed southward, the environment was ever more arid, demanding ever more elaborate irrigation systems. Upon reaching the southern marshes, the challenge was in draining suitable farmland while utilizing the water. Such challenges are not the province of nuclear or even extended families—they required far more complex administration to be successful (Nissen, 2001).

To build and maintain an Ubaid settlement, a knowledge of architecture, agriculture, and animals was only the beginning. The irrigation systems required basic knowledge of hydrology and the timing of spring floods, which required greater precision in understanding the natural world and planning for the future. Certain times of year were better for planting or

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

routine maintenance of irrigation canals, and so a village needed to move quickly on such tasks. This required an enhanced degree of administration over a sizable working population. The social mechanism for achieving such dedicated knowledge accumulation and administration was the temple. Built on earlier religious foundations, the temple was unique in comparison to earlier sanctuaries in that personnel were released of subsistence duties to carry out temple duties on a full-time basis. Assuming that later Mesopotamian temples operated in a similar manner, important members of the family "houses," or *oikoi*, around which production was organized, held offices in the temple and were responsible for particular ritual duties (Van de Mieroop, 1999). The priests and likely priestesses constituted a professional caste dedicated to knowledge and administration. Part of that administration involved coordinating the village's various *oikoi* to achieve village-wide goals.

Ubaid communities could be found within settlement hierarchies and thus exhibited the dynamics of urban-rural systems, and these required a heightened level of organization. Simply stated, irrigation agriculture required many workers and a system to collect the produce of the fields and later distribution to the populace. Neolithic villagers had developed the rites and ideology of the skull cult, but Ubaid towns were too complex, and this complexity allowed for the elite, through the mechanism of the temple, to accumulate significant power:

> [T]ributes and labor corvee were used to produce goods that were then redistributed, bringing prestige and generating power. The acquired power guaranteed increasing flows of goods which further shored up that power, making it possible to demand even more in terms of surpluses and labour. In this case it is obvious that the production of surpluses was not designed as a means of storing the goods produced, which, being food, could not be preserved, but in order to create and consolidate the unequal social relations, enhancing the prestige of elites through the redistribution (and hence supply) of food at celebrations and on ceremonial occasions, further increasing social inequalities which increasingly become economic inequalities, too. (Frangipane, 2010b, 12)

Once economic inequality and class differences were established, the social dynamics favored class relations' dynamic enhancement: power begot resources, resources begot power.

Most scholars have portrayed the Ubaid social structure as a chiefdom. As discussed by Earle (1993):

> A chiefdom was rather loosely defined as a polity that organizes centrally a regional population in the thousands (Carneiro, 1981; Earle, 1987). Some

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

degree of heritable social ranking and economic stratification is characteristically associated. (1)

Expanding Division of Labor and Gender Stratification

Earlier scholars had seen this structure as a forerunner to state organization as a set of evolutionary stages, although universality is a problematic assertion (see Pauketat, 2007; Yoffee, 2005). What is clear is that while the full complexity of urban social stratification is not yet apparent, the division of labor had bifurcated with a broadened level of skills and knowledge. For example, in addition to the administrative and hydrologic skills necessary for the irrigation systems, the architecture required knowledge of mathematics and standard measurements. Ubaid architects and builders had knowledge of numerous triangles and a standardized "Ubaid cubit" of 72 centimeters. Kubba (1990) noted, "It is also intriguing that mathematics, particularly geometry, appears to have preceded the advent of writing. . . . It may even have been a catalyst in its eventual appearance" (46). Indeed, the token system allowed for basic arithmetic (Schmandt-Besserat, 1996). Yet, stratification seems to have been balanced by a continuing egalitarian cultural ethic as much wealth was diverted to the communal (e.g., the temple) rather than the personal (the "chief)." Indeed, the uniformity and relatively narrow range of artistic styles on Ubaid pottery indicate a communal ethic. Indeed, the village and its satellites were conceptualized as a family, composed in turn by *oikoi*.

In addition to a class-based stratification, the Ubaid witnessed an increase in gender stratification (Zegarell, 1986). Such stratification does not appear to have been linked to differential private resources but rather in access to public resources and opportunities. Ubaid wealth was not a private affair but rather was tied to the public realm, particularly the temple. Although in principle a community institution, only members of the higher class—a priesthood—had access to the more opulent features or the power to distribute resources. Evidence of gender-based status differentiation within the household dates to the PPNA but does not appear to be tied to differential access to resources, although by the PPNB such gender stratification was beginning (Peterson, 2010). As religious life became more community-wide, however, such social roles increasingly relegated men and women to differing levels of access. A nascent patriarchy was in evidence that would evolve to impact the life chances of men and women alike.

The impact of gender roles on inequality is most apparent in trade. Since the Neolithic men had more commonly been involved in activities outside the household, with women likely having more power within (Zegarell, 1986). As relations external to the family began to bring more resources, the power of men increased. Over generations, a shift from a more balanced or

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

even matriarchal social structure to a patriarchy occurred simply by continuing social patterns dating to the early Neolithic but in a far more complex and public-oriented society. Simply put, earlier cultural assumptions of men interacting in public as women remained more powerful in the household would have shifted power to men as interaction with other oikoi and the temple grew more important. In a sense, patriarchy itself emerged alongside urbanization.

The extensive trade system heightened social stratification. As early as the PPNB, the use of decorated seals impressed into clay, stamp seals, provided a mechanism for identifying ownership and accounting. Combined with clay tokens, these allowed for trade over distance. As the Ubaid continued, the number of stamp seals decreased compared to the Samarra period, indicating a closing of trade opportunities for the general population in favor of an elite. Seals were increasingly found in or near temples with larger towns (Pollock, 1999). At the same time, the distribution of individual seals was widespread: the seal of a deer, for example, was found at Tell Zeidan and 185 miles away at Mosul, Iraq, indicating trade between the two sites (Stein, 2010). It appears that most trade was medium-range in nature, with long-range expeditions between, for instance, Turkey and southern Iraq, comparatively rare (Stein & Ozbal, 2007).

Even if most expeditions were of medium-range, the network itself could be quite extensive as goods worked their way across southwest and central Asia. Major towns operated as transit points in the network, collecting products from varying sources and "shipping" them down the line, resulting in long-range networks constructed of medium-range connections. At Ubaid sites in southern Mesopotamia, one could find shells from the Mediterranean, lapis-lazuli from Afghanistan, obsidian from Turkey, and pearls from the Persian Gulf (Oates, 1993). Such trade also introduced a diversity of cultural influences both on Ubaid towns and on their trade partners. At As-Sabiyah, a small village on the Persian Gulf in Kuwait:

> The artifacts point to a mixed culture, incorporating characteristics of both the Stone Age of the Arabian Peninsula (known as the Arabian Neolithic), and the early village communities of southern Mesopotamia (known as Ubaid). The background and way of life of each of the two communities were very different, and the potential for a fertile exchange of goods and ideas was high. (BAEK, 2012)

As-Sabiyah was a pearl-diving site, yielding both the oldest sea-faring boat on the Persian Gulf and the earliest pearl jewelry (Carter & Crawford, 2003). In exchange for such luxury items, Ubaid towns traded manufactured goods:

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

> As part of this network, in exchange for pearls, Mesopotamian merchants may have traded a type of pottery. . . . Colorful Ubaid pottery is found at sites dotted along the Arabian shores of the Gulf, including As-Sabiyah. It may have been a novelty itself to Arabians, who are not known to have made pots before that time. (Lawler, 2012, 50)

The widespread nature of trade limited primarily to elites lead to another feature of the Ubaid: social isomorphism.

Isomorphism and Cultural Diffusion

In a modern context, institutional isomorphism occurs when institutions (e.g., a business or a college) in the same organizational field (e.g., the software industry or higher education) become more similar over time. This is due to a variety of factors, including technological standardization to and in trade (e.g., tokens and stamp seals), universal styles meant to facilitate entry to trade (e.g., similar pottery styles), and the adoption of "best practices" from similar organizations. We argue that a similar process of social isomorphism took place as elites in Ubaid towns adopted the ideologies and technologies of other communities in the Ubaid network. This explains the similarity and relatively narrow spectrum of Ubaid pottery and the transmission of Ubaid cultural factors through cultural diffusion (see Stein & Ozbal, 2007 for a discussion).

Religious practices are particularly illustrative. The "proto-deities" of the Samarra, ancestors with perhaps enhanced abilities, assumed a role of integrating extra-familial groups into a community during the Ubaid. This, of course, was the province of the temple. As elites worked with elites in other communities, however, stories of these proto-deities spread as well as the symbolism to denote them. Ritual practices followed suit and the religious structure became familiar over large stretches of terrain. This cultural phenomenon was translated into the built environment: each Ubaid town demonstrated self-similarity in terms of having a temple and associated elites, the specific local manifestation being the primary mechanism of individual community identity. In time individual communities likely competed for the most splendid temples—a feature that existed due to cultural self-similarity that had spread throughout the region (Bettancourt, 2013).

As will be discussed later, the root of the Mesopotamian pantheon is found during the Ubaid. Indeed, even during the Samarra, a trend toward some goddess figurines and cult paraphernalia (e.g., altars, pottery, and the temples themselves) demonstrate continuity with later variants. Beyond the integrative function of spanning the entire community, religious practices also made a claim to power and knowledge for elites. Such claims relied on knowledge of

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

the environment: a ritual designed to bring the sun into the sky required knowledge, and the success of the ritual, in turn, validated the authorities' claims. The rituals themselves became occasions to legitimate the tributary economy. Food would be redistributed to the community at feasts, and requiring a "sacrifice" of animals before butchering not only provided meat for feasts but guaranteed elites a portion of the meat. Indeed, elites likely claimed a "first fruits" as tribute for plants as well. Ubaid temples had altars for burnt offerings. The centrality of the temple was worked into the environment. For example:

> Surrounding Eridu's Ubaid 1 temple were the houses of the wealthy elite. Beyond them were the houses of craftsmen and then the houses of farmers and herders. This settlement pattern suggests that in early Ubaid times, the temple had already become the center of economic and social activity that it would clearly be by the end of the era. (Stiebing, Jr. 2008, 24)

By the end of the Ubaid around 4000 BCE, a two-tiered settlement pattern had developed with larger centers such as Ur and Eridu effectively "controlling" the more numerous smaller settlements. As the period transitioned to the subsequent Uruk period, the region became more arid due to climatic changes. Areas of dry agriculture in northern Mesopotamia entered a period of decline, whereas the south—reliant on irrigation—experienced growth in major centers yet a decline in the number of villages (Adams, 1981; see also Hooper et al., 2018). The Ubaid brought about the first hierarchical urban-rural system, but it was the Uruk period of the fourth millennium BCE that grew the first cities.

URUK AND THE FIRST CITIES

The beginning of the Uruk period in the fourth millennium BCE was a transition from the evolving Ubaid culture. Compared to northern Mesopotamia:

> The fertility of the soil in southern Mesopotamia most certainly favored a steady, and presumably even steep, increase in population, leading eventually to increased competition for limited resources in a limited area. The massive mud-brick walls surrounding the settlements points to the dangers of flooding as well as to growing internecine tensions and institutionalized war. It certainly did foreshadow the periods to come when, after the end of the Ubaid period around 4000 BCE, the Uruk phase witnessed the birth of urbanism with its devastating wars, human sacrifices, slavery, and vertically institutionalized religions and absolutism supported by the next most influential invention, writing. (Issar & Zohar, 2004, 88)

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

And so, as Ubaid towns were growing into Uruk period cities, the full fluorescence of the world's first urban society was already known. As with agriculture itself, the changes were adopted out of need and were at times even resisted (Scott, 2017).

As the fourth millennium BCE unfolded, the basic social patterns of the Ubaid accelerated in a dramatic way (Wright, 2018). Temples, social stratification, agriculture, and trade with both pastoral nomads and other settlements, even across great distances, had all been present during the preceding fifth millennium, but the Uruk period witnessed a dynamically enhanced social evolution whereupon a change in one parameter—the human population in the environment, for instance—led to rapid changes in the other parameters to account for the change, such as complex administrative institutions (polity) to facilitate the maintenance of canals and agricultural production (economy) and the religious beliefs and rituals to sustain them (culture). Their success led to greater population pressures and, during the Uruk, complex evolutionary trajectories came together to become the first societies dominated by urban institutions set amid (for the time) large cities. An urban revolution? In the expanse of geologic time, sure, but we see social changes occurring over hundreds of years as accelerating social change rather than revolutionary compared to such events as the American or French Revolutions.

After 4000 BCE, southern Mesopotamia's climate grew drier as the human population had grown accustomed to irrigation amid wetter conditions. Hole (1994) summarizes about the climate in the millennia leading up to the world's first cities:

> During the two thousand years leading to the foundations of the early cities, southern Mesopotamia underwent a series of environmental changes, punctuated by catastrophic shocks that disrupted the continuity of life, led to massive demographic realignments, and ultimately encouraged the emergence of collective activities that attempted to mitigate these vicissitudes. By the mid-fourth millennium BC, the environment had stabilized and had become more amenable to intensive agriculture, but warfare, raiding, and an influx of displaced persons added new uncertainties and reinforced the urgency for secure nucleated towns. (122–123)

In essence, the Ubaid brought with it social dynamics that grew population by more effectively exploiting the environment, and when the environment dried the affected communities had grown too complex to revert to a nomadic lifestyle as the Jordan Valley villages had done during the PPNC desiccation. Instead, Ubaid communities tried desperately to continue an "urban" lifestyle that resulted in fewer but larger villages as refugees sought out larger defensible towns. As such towns as Eridu and Ur swelled into the world's first

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

cities, the level of administration and production necessary to maintain such centers increased dramatically (Sabloff & Sabloff, 2018).

The Uruk period is thus a continuation and elaboration of processes that had been developing during the Ubaid period, and the "revolutionary" aspect of the period is that the full culmination of those processes is evident (e.g., Childe, 1950). The care and administration of such a large population—Uruk was home to approximately 50,000 residents in 3500 BCE—was met with a highly developed agricultural regime and trade network. These, in turn, required highly complex systems of administration that shuffled the population across necessary tasks much as modern bureaucracies do today (Smith, 2003). Social stratification was complex and there existed inequality between classes of people, from a tiny number of elites to vast masses of peasants and slaves. For the first time in world history, it resembled the societies in which most people live today. The presence of such social structures so long ago reveals a great truth about capitalism, colonialism, and inequality: underlying such modern edifices, urbanization itself is the deep structure upon which they were all erected.

Spatial Organization and the Built Environment

If conditions that culminated in the Uruk period innovations were rooted in the environment, the Uruk period itself wrote the new structures into the environment as well. This was, of course, true in other periods as well. Neolithic societies left a mark on the environment in their domestication of plants and animals and the fields they inhabited; this was most dramatically apparent during the PPNC desiccation. The Samarra irrigation channels, the structure of the villages, and even the pattern of plants in and near the villages, encoded something of the human society in the natural environment. By the Ubaid, the social structure itself was encoded in the landscape with the center of social life, the temple, at the center of the village, surrounded by the elites who ruled over the lower classes. Concentric zones emanated around the center of town. The Uruk brought such encoding to a regional level, with great canals utilized for irrigation and transport, connecting one city to another (Adams, 1981). The totality of southern Mesopotamia was brought into cultivation to feed a population pushing the limits of the region's carrying capacity. Such regional changes affected individuals at the micro level:

> The impact of the Uruk Phenomenon on regional and local economic systems and social organization is perhaps best exemplified in the change of diet among non-elite households at (the site of) Kenan. As increased centralization of resources, such as sheep/goats and their products, was becoming commonplace throughout greater Mesopotamia, households at Kenan seem to have been

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

> reorganizing their production and consumption pattern to accommodate and possibly subvert changing socioeconomic relations, underscoring a continued sense of independence that households were striving to maintain. (Foster, 2012, 465–466)

Perhaps the most obvious social structures written into the built environment were the city walls that towered over the city and hinterlands—symbol of power and the city itself.

The social structure of Uruk cities was hierarchical, and these hierarchies were encoded in the landscape. In contrast to the temple at the center of the city's administration and its agricultural regime, we see for the first-time evidence for separate military, merchant, and sage castes (see Priestland, 2014 for a discussion). The caste structure cross-stratified the class structure, establishing differing social worlds necessary for the administration and safety of the population.

Further Elaboration of the Division of Labor

We noted earlier the rise of the temple as an institution, and with it, a class of people who were in whole or part liberated from the toil of the fields. By the Uruk period, this elite had begun to bifurcate: a dedicated temple establishment (the sages) separated from those concerned more with matters of war (soldiers) and those dedicated to trade (merchants). In practice, just as in modern societies, there was a network of interlocking directorships: the palace, a sanctuary of the military caste, was dependent upon the trade and income of the merchants while similarly dependent on temple sages for ideological legitimacy. Thus, the Mesopotamian calendar revolved around an agricultural cycle with the priests and kings participating in rites, and merchants could find themselves a temple functionary for a single day or a particular festival (Bottero, 2004).

The merchants and the sages were both dependent upon the soldier caste to protect the city and create new trade opportunities, often by force. Whereas the Ubaid featured medium-distance trade spread across an enormous network, the Uruk period witnessed direct long-term trade backed up by military force (Stein & Ozbal, 2007). As a caste, the military would have included a hierarchy of authority leading from the king to the low-status infantry. The earliest written evidence of warfare dates to the conflict between Umma and Lagash in the mid-third millennium BCE, but it had been a feature of Mesopotamian society for at least a 1,000 years before the struggle. At the Syrian site of Hamoukar, the earliest archaeological evidence of war of conquest is evident by an older layer of Late Local Chalcolithic pottery, a destruction layer marked by sling balls, arrowheads,

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

and ash, and the presence of Uruk pottery immediately above (Ur, 2011). While the presence of defensive walls as early as the Samarra period is indicative of raids, the actual destruction of a settlement and the replacement of its population with an Uruk "colony" is new to the archaeological record. The purpose of such conquest was rooted in the nature of Mesopotamian urbanism itself:

> The absence of key raw materials such as timber, stone, and (later on) metal resulted in the emergence of an Uruk-controlled trade network that by 3500 BC controlled key trade routes within northern Syria, southern Anatolia, and western Iran throughout numerous colonies, of which some showed a distinctively urban character. (Reichel, 2011, 4)

As arable land was consumed and the growing population required more such resources, not just individual cities but the entire region was dependent upon the resources found in adjacent regions. In effect, as urban dependency took hold in larger villages during the late Ubaid and early Uruk, they of necessity looked to nearby communities. As the region urbanized, a higher scale of urban dependency necessitated a regional scope. This is known as the Uruk Expansion, and it was marked by longer distance trade and increased warfare (Stein & Ozbal, 2007; Algaze, 1993). Although war was known to earlier societies (Keeley, 1996), urban dependency added a new sense of urgency and scale.

THE WORLD-SYSTEM AS URBAN-RURAL SYSTEM

The subtitle of Frank and Gills's (1996) *The World System* aptly captures the essence of a prominent debate in world-systems research: the age, and consequently the character, of the world-system. We propose that today's world-system and that of 5,000 years ago are connected through the logical evolution of urban-rural systems that originated prior to the Uruk period (Fuensata & Martin, 2018; Thomas, 2014a). In other words, we see the world-system as a complex adaptive system rooted in evolutionary trajectories initiated toward the end of the Paleolithic. So rooted in evolutionary time, it is not surprising that debate over the origins and/or inclusion of variations on such systems have developed. It is a classic debate between lumpers and splitters.

In terms of classification, a "lumper" creates relatively large categories and assigns such cases to a category as seem appropriate; a splitter, in contrast, creates small, exclusive categories that result in a more extensive array of distinct categories (the classic discussion is that of Simpson, 1945, 22–24). A lumper will categorize a reasonably diverse set of cases with each other. In

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

contrast, a splitter will insist upon less variation between cases and, consequently, more categories to account for the diversity.

A splitter in world-systems research treats the evolving system as too broad a unit of analysis. Structural similarities between various systems, such as the current world-system and that of the Uruk period, are interesting and obviously related, but the current system is nonetheless treated as distinct. In the seminal *The Capitalist World Economy*, Wallerstein (1974, 1980, 1989) begins the analysis in the sixteenth century and links its existence and evolution with the capitalist economy. With regard to earlier trade systems, the position of Amin (1996) makes clear a need to distinguish "the modern Capitalist overall structure from protocapitalist elements which indeed appeared in anterior societies, sometimes since quite ancient times" (247; see also Amin, 1976).

Those who have argued for an earlier and diverse range of world-systems may be characterized as lumpers. Chase-Dunn and Hall (1997) have argued that various world-systems have been in evolution worldwide, with some dying out as the current system absorbed others. Simlarly, Frank and Gills (1996) argued that the current system has been in continuous evolution since the Bronze Age began around 3000 BCE—a time period also stressed by Chew (2001). This allows for numerous other world-systems outside and/or prior to the current system characterized by capitalism (e.g., Abu-Lughod, 1991; Algaze, 1993; Braudel, 1977; Chase-Dunn & Mann, 1998; Kasdulias, 1996).

Our purpose here is not to take a position in the debate, though we are more closely in line with most lumpers' long historical view. A world-system is based on the same dynamics as urban-rural systems. In fact, we see the world-system as a large-scale urban-rural system (or more accurately, an interconnected collection of such systems). Structural differences are the product of emergent characteristics at higher scales of organizational complexity. They are based on an objective need imposed by the energy economy to provide basic resources to a population, which grows increasingly urban dependent over time. A Neolithic agrarian town that reached its local environment's carrying capacity by necessity began to trade for resources. The economic creation of a trade network (along with the cultural innovation of irrigation) allowed the Samarra culture to proceed south into the alluvial plains. As regional populations grew, Ubaid towns of up to several thousand acted as transit points for trade servicing more numerous farming hamlets of less than a hundred residents, trading both objects from the wider network as well as manufactured (urban production) goods. By the Uruk period, this dynamic intensified as the entire southern Mesopotamian region grew urban dependent—it *needed* products from other regions to sustain its population. Smaller hamlets grew less numerous as the population migrated into more

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

easily defensible cities. The land was more intensively farmed and the region became yet more urban dependent on resources from other regions. The Uruk world-system developed the morphology of urban-rural systems. At higher scales, emergent characteristics would develop, but the system's basic morphology, including dependency on rural resources from outside, remains a defining feature. This is equally true of the global world-system today. The arrangement of population parameters has changed, but always with an eye toward creating balance in the energy economy.

Energy Economy and Urban Dependency

Trade for luxury goods and raw materials with which such goods could be produced expanded during the fourth millennium BCE. The population demands of southern Mesopotamia for food, water, clothing, and shelter were immense. There was a need to reconcile the energy economy—balancing population demands with environmental resources. Whereas such ends could be met in the past within the local region, the Uruk period witnessed great effort but, ultimately, an inability to remain local. Agricultural fields in rural areas intensified production by turning to "long" furrows that could be more efficiently planted and harvested than shorter, "family-based" plots more typical of self-reliant agrarian settlements. Long furrows required greater administration. The temple and other *oikoi* took control and distributed the proceeds with beveled-rim ration bowls (Liverani, 2006). Similarly, beer was distributed during this time. Perhaps its development was intended to distribute rations to a population now "selling" its labor for rations of grains, legumes, meat, beer, and possibly pre-baked bread. The production regime extended beyond the fields to infrastructure projects, including corvee labor, such as maintenance of canals used for both transportation and irrigation, and city walls. The canal system was extensive, cross-crossing, and connecting the alluvial plains between both rivers and the marshes near the Persian Gulf (Pollock, 1999).

Increasing populations required a shift in how the environment was utilized. During the Ubaid, for instance, cattle were sustained for food and dairy products. They could be maintained near canals, and their high water demands and copious waste was not a threat to local human populations. By the Uruk, however, there is a turn to sheep. Sheep had been present during the Ubaid as well, and their prominence during the Uruk suggests that (1) cattle in local waterways— in particular their water consumption—was becoming more problematic, and (2) the increase in sheep reflected intensified trade between alluvial cities and mountain shepherds. In earlier time periods, such as the PPNC in the Jordan Valley, this trade was for food stored in silos. Like Ubaid towns, the burgeoning cities of the fourth millennium

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

BCE, by necessity, traded manufactured (urban) products: pottery, crafts, textiles, and luxury items. The ability to bring various raw materials from abroad and manufacture in a single collecting point is, of course, the essence of urban production. In order to compete against the manufactured goods of other cities, more elaborate designs and exotic materials were used. Whereas the "beveled rim bowl" for rations was ubiquitous, Uruk-style religious art, jewelry, and other items were shipped as far as Egypt and the Indus Valley (Pollock, 1999; Nissen, 2001).

For Mesopotamian elites, the world's luxury goods were found in the centers of such cities as Uruk and Eridu. However, for the artisan and rural agricultural classes, life was dominated by the city's need to maximize resources. As late as the Ubaid, flax had been grown to produce linen, a suitable fabric for a climate where temperatures regularly top 100° F (38° C). By the Uruk, linen became a fabric of temple and palace elites, as agricultural fields were needed to produce food (Pollock, 1999). For the masses, clothing was of wool—rather warm and "scratchy" for the climate. As Thomas (2010) noted: that "southern Mesopotamians and their descendants would forego linen for wool without sufficient economic cause is inconceivable" (127).

Expansion of Urban-Rural Trade

As the urban-rural system was regionalizing, the locus of activity was pulled above the level of individual cities. At some time during system development, the carrying capacity of the region and the population were brought into energy balance, and the region was capable of providing food and other resources for the population even as individual cities and their rural hinterlands in the trade network could not meet their own demands. Trade routes distributed rural resources from territories with surplus to those without, often trading for manufactured (urban) products. Individual cities functioned as transit points within the system, switching goods from one area to transit points serving others. Goods from one area of the system would thus enter at one transit point and, through the segmenting of loads and distribution to other transit points, quickly spread system-wide.

Goods were not the only items of trade, but they were tangible. Culture was traded as well, whether in terms of technology, artistic styles, scientific knowledge, and ideological formations. There is evidence of this cultural trade during the Ubaid as well. Similar to goods, culture could spread rapidly throughout the system, an innovation from one area entering at a transit point and distributed to and from others in adjoining rural areas.

As noted, however, the Uruk period was marked not only by the urban dependency of individual cities within the region but by the region as a whole. The Uruk Expansion can be explained by traders from the alluvium

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

looking to secure trade, ever more critical than in the past, in adjoining regions. The rise of kingship and the military caste likely furthered this goal, but the example of Hamoukar notwithstanding, such activities were more likely between urban-dependent cities seeking advantage over neighbors closer to home.

Much of the expansion appears to be the domain of the merchant caste. In important transit points between the alluvium and more distant locales, particularly in northern Mesopotamia and Susiana in Western Iran, local cities became host to Uruk culture neighborhoods. Such quarters were likely centers for acquisition from local rulers and traders from more distant regions. The scale of the trade attracted the labor to perform critical economic functions, such as potters and metal workers, growing the populations of such centers to urban proportions. In effect, varied economic activity grew population, which in turn spurred more economic activity. World-System theory predicts that trade would have been asymmetrical, and many scholars of the period assumed as much in their analysis. With their manufactured goods and advanced technology, not to mention a high population, Uruk merchants could have commanded favorable terms (see Algaze, 1989, 1993). The extent to which such trade was in actuality asymmetrical has nevertheless been hotly debated (see Rothman, 2001). Stein (1998) has proposed that the distance parity model determines the level of symetry in trade relations. In sum:

> The degree of core dominance, the extent of core control over the exchange system, and the effect of interregional exchange on the structure of peripheral polities are all highly variable. Under conditions of technological/demographic superiority or ease of access between two areas of differential social complexity, asymmetric core-periphery system can develop along exactly the lines specified by Wallerstein in the world-system model. Thus, empires as generally defined (see, e.g., Sinopoli, 1994) often have modes of interregional interaction that correspond to Wallerstein's "world empire" type of world-system. However, when these conditions do *not* obtain, then we would expect to see increasing parity with distance in core-periphery relations. (230)

Explicitly written about the Uruk period, the model seemingly applies to later urban-rural systems as well.

Scribes and Sages

The temple and its sages had been at the center of administrative life since the Ubaid. As the Uruk came to a close, temple scribes developed the technology that would change the world: writing. The development of writing was not a singular invention but rather was the culmination of cultural

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

dynamics dating back thousands of years. As noted in chapter 4, clay tokens for recording debts or small transactions were spread from Afghanistan to the Mediterranean as early as the PPNB (Schmandt-Besserat, 1996). Tokens were used for accounting, with "simple tokens" being found well into the Ubaid period. Simple tokens took the form of circular disks, spheres, cones, cylinders, pyramids, eggs, and rectangles, each representing a particular item. For example, a cylinder stood for a domesticated animal, whereas a cone represented a unit of grain. Only late during the Ubaid period would annotations to designate the specific types of animal or grain be added.

Late in the Ubaid, after 4400 BCE, "complex tokens" became prevalent. Complex tokens conveyed additional information. A cone, for example, would receive a marking denoting barley as opposed to rye. As in earlier practice, the size of a token represented a greater or lesser quantity, and this practice grew more complicated as well. The concentration of tokens in certain Ubaid houses and temples indicate increasing use for trade and, over time, a concentration of such activities in the hands of fewer people and institutions.

By the Uruk period, tokens were used for long-distance trade by sealing them in clay "envelopes" and impressed with a stamp seal denoting the sender. As the volume of trade was increasing, this system was becoming more challenging to manage. By the late fourth millennium BCE, scribes would draw the tokens on the outside of the clay envelopes. At the end of the fourth millennium, during the transitional Jemdet Nasr period (3100–2900 BCE), the pictographs were on clay tablets and had become more abstract. The writing, today called cuneiform, developed out of this accounting system rooted in the older token system. For example, the beveled-rim bowl was used for distributing rations, and appropriately enough, the earliest pictograph for "ration" was a drawing of a beveled-rim bowl. The cuneiform symbol for "ration" was, in turn, an abstraction of the pictogram. As the third millennium took hold, the writing of accounting lists evolved into short poems and finally into fully developed narrative (Finkel, 2014). History had dawned.

SUMMARY AND CONCLUSION

It is often assumed that the growth of the city was the beginning of the modern world. As any point in history often is, however, the birth of the city is the culmination of older dynamics that lead to its fruition. It is also tempting to think of the city as a demographic phenomenon. Instead, we should consider the city to be a social phenomenon structured by the evolutionary parameters exerting a demographic response that, in turn, dynamically built on itself. In

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

other words, cities are important transit points in social networks, and population responds to that structure, not the other way around.

Unlike during the Pre-Pottery Neolithic, the human relationship with the environment featured arrows of causation firmly pointed in both directions during this period. General climatic conditions, for example, do appear influential during the early fourth millennium BCE concentration of formerly rural populations in growing cities, but the fact that this was the response was itself the result of human societal evolution before the fourth millennium. Indeed, the fact that the Mesopotamian alluvium was so populated was the result of (overly) successful adaptation to the fertile yet desert environment. This required developments in how the economy operated, how it was administered, and the culture that supported it.

The Neolithic had resulted in much of the region's population living in agrarian villages connected by pastoral nomads trading meat and wool for stored food and possibly manufactured goods. This economic regime proved fatal in the Jordan Valley during the sixth millennium (PPNC), but northern Mesopotamia and Anatolia thrived under it. Populations spread in all directions, pushing into southwestern Europe and south on the Mesopotamian alluvial plains (Anthony, 2007; Reich, 2019; McCorriston, 1992). As the people of the Samarra culture pushed into increasingly hot and dry territory, they utilized the existing trade network to import resources not locally available. As they did, they also began irrigating crops for the first time in human history (Helbaek, 1972).

The city's rise can thus be understood as the culmination of network effects coupled with increasing population. The social system evolved over time to feed a growing population, adapting to new challenges based on structures already in place in a path-dependent manner. During the Neolithic, trade in luxury goods that had been in place since the late Paleolithic gift economy expanded across territory and population. The trade system enabled the Samarra culture to move south across the alluvium and "become" the Ubaid. As humans progressed south, they became increasingly dependent upon the built environment—that is, the irrigation canals and city walls—as well as the trade network itself. Much of the local production was for food rather than luxury items. As such, Ubaid artisans increasingly produced goods for trade to bring other required resources, such as timber and wool, to their home villages. By the Uruk period, the trade system relied on resources from farther afield, necessitating increasingly complex military and ideological controls both within the alluvium and abroad. The system thus evolved from agrarian villages in the Pre-Pottery Neolithic to simple urban-rural systems during the Samarra and (early) Ubaid periods that brought rural resources from within the local alluvial plains, to more complex systems in which trade intensified in southern Mesopotamia for urban and rural goods. Some villages were

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

simply unable to survive without external resources. The regional urban-rural system of the Uruk period, in which the entirety of the alluvial plains of southern Mesopotamia was urban dependent, of necessity pushed their influence into adjoining regions (e.g., northern Mesopotamia and Susiana).

The economics of food production and trade during the growth of the first urban society was met with changes in polity that enabled such activities to take place. Over time, complex temple and palace institutions evolved to exert greater control over human labor. Algaze (2001) summarizes that, "early Near Eastern villagers domesticated plants and animals…(but) Uruk urban institutions, in turn, domesticated humans" (212). This evolved over extended time periods and likely was barely noticeable to the average person while it was taking place.

During the Neolithic, the Samarra and Halaf cultures continued in the traditions of relatively egalitarian polities that nevertheless exhibited some degree of status differentiation. Leadership was primarily episodic in nature, although a degree of role differentiation and inequality by gender was likely as well. As the Samarra culture required a higher degree of administration due to the irrigation and trade required to support agriculture in the harsh environment, religious authorities' role eventually changed to involve a greater degree of autonomy. By the Ubaid, it led to an actual detachment from direct labor in the fields. The Ubaid temple establishment involved the first clear evidence of social stratification that resulted in wide differentials of wealth between the religio-administrative caste and the remainder of the population. By the end of the Ubaid period, this also involved a skilled artisan caste laboring for the temple establishment and other *oikoi,* as evidenced by the T-shape house. Ubaid communities' social structure was "written" in the environment: the temple at the center of town, to be built and rebuilt many times throughout the Ubaid and Uruk periods, surrounded by the homes of the wealthy within defensive walls, surrounded in turn by the artisan class. Skilled artisans were segregated into areas by the type (and smell) of the work they did as such undesirable activities as tanning and smelting were placed downwind of the elite and temple. In numerous small hamlets at a distance from the Ubaid towns, agricultural laborers were closer to the fields. As the region approached its carrying capacity toward the end of the Ubaid, and in particular during the early Uruk period, a climactic change encouraged those in smaller hamlets to move into walled cities as increased raiding and outright warfare within the alluvial plains made earlier settlement patterns untenable. The environmental demography of the Uruk period, in turn, required even greater administration and, as warfare became increasingly common, a dedicated military caste joined the temple sages in the elite classes. As urban dependency regionalized, dedicated merchants willing to coordinate long-distance trade also developed.

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

Whereas a temple-based "sage" caste can be discerned early in the Ubaid period, by the Uruk period the sages of the temple had been joined a military "soldier" caste and a trade-based "merchant" caste. Each caste was arranged in *oikoi*, or "houses," with the language of family evident as the central organizing principle as stamp seals and the earliest writing make clear toward the end of the Uruk period and through the transitional Jemdet Nasr period (3100–2900 BCE) (Gelb, 1991). Among the elites of each caste actual kinship may have been tracked, but further down, the class system kinship was more likely fictive. We will discuss the social structure of early Mesopotamian cities in more depth in chapter 6.

Much of what we know about the culture of the time period is based on their technology. Pottery became prevalent after 6000 BCE and allows us to discern the trade networks based on stylistic variations. Each style, whether earlier pre-proto-Hassuna or later Ubaid, reflects not so much an individual culture but rather a stylistic and artistic convention shared across the regions in which they are found. Similarly, other artistic items, such as religious paraphernalia in temples and for trade, also express elements of the culture. We can discern, for instance, a level of continuity in religious expression between the Ubaid period, through the Uruk, and into the subsequent Bronze Age, but we have not the specific beliefs and mythologies that inform them. It is evident that by the Uruk, if not Ubaid periods, the "proto-deities" of the Neolithic were understood as real supernatural beings with powers that exceeded mere mortals. It seems likely that the temple itself operated as a rudimentary observatory that enabled temple priests to track movements of the stars and construct mythologies to explain their relationship to more earthly matters. As will be evident in chapter 6, this is consistent with the Bronze Age mythologies, complete with a polytheistic pantheon populated by gods and goddesses portrayed in a manner similar to earlier (pre-literate) periods. Of course, it is the technology of writing that enables a fuller discussion of ancient cultures, and during the Bronze Age it would develop into far more than an accounting system.

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

Chapter 6

History Begins

As history dawned—marked by the arrival of written text, as noted in chapter 5—humans were already living in complex societies filled with urban-dependent cities, trading with the rural hinterland, and hosting elites prone to sacking their neighbors in order to gain more resources that would feed urban populations. The Uruk period had witnessed an acceleration of this dynamic. The linkages of an expanding urban-rural system network grew more sophisticated and complex. Culturally, it was a time of innovation as a variety of social and environmental challenges were overcome. The hierarchical structures of political control and economic production grew more intricate. The distance and circuitry between elite officials and the peasantry—increasingly populated by slaves caught in increasingly ever-present war—was broader than at any point in pre-history. Tokens had evolved into writing to manage the increasing complexity, and one suspects the invention of wheeled vehicles in the Late Uruk period was similarly oriented toward improved bulk transport. In effect, the evolution from our nomadic foraging roots to agrarian settlements, and finally, stratified urban-rural systems had already occurred before the Bronze Age dawned around 2900 BCE.

THE "SYSTEM" ALREADY EXISTED!

It is worth noting at this point that many scholars who adopt the long view of world-systems history begin the analysis here. For us, this is chapter 6. For example, in their book *The World System: 500 Years or 5,000*, Frank and Gills (1996) begin 5,000 years ago—3000 BCE or the Bronze Age. In his seminal *World Ecological Destruction*, Sing Chew (2001) similarly begins at the same point. The reason is quite valid: the wealth of historical data

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

available after the dawn of the Bronze Age is orders of magnitude above that available for the pre-historic period. Even debate about the nature of the Uruk world-system (e.g., Algaze, 1993; Stein, 1999; and the readings in Rothman, 2001) deals with a period of only a few hundred years before the beginning of the third millennium. The fact, discussed in chapter 5, is that the Mesopotamian world-system was already in existence for some time by the third millennium. Thus, many social scientists trace the world-system origin to a period when it already existed in roughly the same contours as today.

To a genuine extent, the evolution of cities was dependent upon the prior evolution of the agricultural economy and subsequent development of the trade network (Smith et al., 2014; Fuensanta & Martin, 2018). Thomas (2012) notes that

> A world-systems approach to the growth of cities would see the evolution of the world-system as a prerequisite for the growth of cities, and we can term this process "urbanization." Viewed as a network of social and cultural exchange, with cities as major nodes in that network, such an approach explains the coevolution of cities with their associated phenomena such as social stratification, and more importantly explains the rise of certain "urban" phenomena before the growth of cities themselves. (228)

We would amend this statement by suggesting that it is not "world-systems" that were evolving, but rather "urban-rural" systems that had evolved during the preceding eight millennia. However, even this distinction is rather semantic: human societies are complex adaptive systems that evolve over time, and in Southwest Asia, the complex systems evolved—due to environmental pressures, economic innovations, and so on—from nomadic foraging societies to agrarian villages, and finally, urban-rural systems. The slow adoption of settled agriculture allowed for greater population densities, which in turn induced pressure for domesticated meat sources. (Dogs had been domesticated thousands of years earlier.) The need to pasture livestock at a distance was a hybrid form of agrarianism as it continued to rely on interdependencies between villagers trading crops and finished goods with pastoral nomads for meat, wool, and likely goods from other villages. This basic system was in place by the end of the PPNB and evolved more complexity through subsequent periods (Fuensanta & Martin, 2018). As Mesopotamia supported ever higher numbers of villagers dependent upon irrigation and settled agriculture, the highly successful economic regime of local food production and augmentation from pastoral nomads was akin to a social opiate: populations were too dependent upon the regime to return to a hunter-gatherer lifestyle, and even had they the knowledge and ambition to do so their environment could not support them.

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

The system intensified, villages grew more urban-dependent—reliant on trade with evolving agrarian and eventual rural villages. Agrarianism is characterized by self-sufficient agriculture, while rural villages rely on the export of agricultural and other rural products in exchange for finished urban products. By the fourth millennium, there were networks of urban villages—the first market towns—in the core that were growing dependent upon imported rural resources from the periphery. Eventually, conflicts over scarce resources grew more violent, and villagers migrated to larger walled settlements.

By 3500 BCE, cities clamored with each other and increasingly turned to neighboring regions as the southern Mesopotamia "core" was urban dependent—the Uruk Expansion was borne of environmental demographic necessity. Populations' energy demands must exist in balance with the supply of energy that exists in nature. If the local environment is exhausted, then the periphery must widen to include lands further afield.

CITIES AND URBANIZATION

The term "urbanization" is often used in a very broad way to refer to the spread of cities—a problematic practice as "city" is just as imprecisely defined (see Thomas, 2012, 212–218). We contend that urbanization should not be understood as the spread of cities but rather as the development of urban-rural trade networks. As we previously offered (Thomas & Fulkerson, 2019), the first urban market towns arose about 6000 BCE in the Ubaid. Though relatively small by today's standards for a city, they existed within the first urban-rural trade networks. Market towns imported rural products from miles around and then processed the rural products into goods traded back to rural areas in exchange for more rural products (natural resources). Though the earliest market towns were reliant on producing some of their own food, they existed in difficult environments that necessitated importing food. Most could more accurately be described as adopting a hybrid form of agrarianism supplemented by urban-rural trade. Significantly, this kind of urbanization long precedes anything that might be called a city. The ability to sustain a large population in a settlement—several million by today's standards—that has no participation in the energy economy would have been inconceivable.

Urbanization involves a logic involving multicentered points of urban and rural production connected through the transit of products to provide energy for the population. This complexity was unnecessary even in the most complex foraging societies. Nor was it needed for the earliest agrarian villages that relied on themselves for survival, sometimes supplementing by engaging in trade with pastoral nomads. Eventually, these agrarian settlements would

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

begin trading more than their surpluses, thus starting on the trajectory toward becoming rural settlements—dependent on trade with urban populations. Unlike their urban counterparts, rural settlements could always revert to agrarian self-sufficiency if the trade relations floundered.

Even in pastoral foraging systems we find the seeds of urbanization, as budding agrarian settlements often maintained dependence upon nomads as trading partners. The circuitry of trade became more complex over time, necessitating the use of a token system for accounting that itself grew more complex. By the middle of the fourth millennium, the earliest cities grew at key transit points in the wider system. As such, cities do not cause urbanization but rather are products of urbanization, growing at nodes in the network by virtue of their control over regional rural hinterlands. As cities are urban-dependent, they must expand their spheres of influence to gain the resources to feed their populations, often incurring additional costs in terms of energy expenditure and growing more dependent upon raw materials utilized for manufacturing finished goods for trade. The logic of urbanization grows more complex over time, and thus more urban-dependent over time, in turn requiring further expansion. Each expansion incurs a greater population that the system must feed and otherwise resource. Not surprisingly, it was during the Uruk Expansion that aggressive war was documented at Hamoukar, and likely genocide, as the Uruk conquerors sought additional resources without the burden of adding more population.

Urban-rural systems, by virtue of their higher populations and enhanced need to trade manufactured goods for basic resources, developed the first forms of mass production by the beginning of the Bronze Age. Rural producers shifted from short to long furrows in agriculture, during the Uruk Period, as an attempt to efficiently produce more food for the large urban population. As the Temple establishment grew more critical to the organization of production during the Ubaid and Uruk periods, it is perhaps not surprising that much of this managerial work was oriented toward controlling workers. By the Uruk period, standardized ration bowls known to archaeologists as "beveled rim bowls" were crudely mass-produced pottery and are ubiquitous at Mesopotamian sites; as cuneiform writing spread, the symbol of "ration" was a pictograph of the bowl. As cities grew and the trade in finished goods became more critical to Mesopotamian cities during the Bronze Age, manufacturing activities were often conducted in neighborhoods dedicated to such activities, such as pottery districts or tanning districts (Laneri, 2015; see also Emberling, 2010). Thomas (2012) noted:

> While not all such activities necessarily involved mass production in a modern sense, the clustering of such activities suggests knowledge of city planning; for instance, certain activities, such as leather tanning, were relegated to outside of

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

> the city wall and downwind of the city itself (van de Mieroop, 1999). Specific neighborhoods involved in such activities as tanning, pottery production, and metallurgy may also have been home to specific ethnic groups involved in their manufacture (Sjoberg, 1955, 1960). Even lacking Fordist modes of production, such manufacturing neighborhoods would have benefitted from the economies of scale and agglomeration that characterize similar neighborhoods in modern contexts. (222)

To the extent that different ethnic groups were associated with specific economic crafts, an increasingly distinct possibility during the third millennium, Mesopotamian cities were also segregated (Emberling, 1997).

The edifice of the political-economic system was justified through a complex and evolving system of cultural hegemony (Pollock, 1999; Jacobsen, 1978; Leick, 2003). Early in the historical period, there is already evidence of a mythology that perceived both cities and their rulers as given by the gods, and one does not question the intent of the gods. As will be discussed in greater detail later, the core ideology of kingship, the primacy of the city-state and then nation-state, and the divine origin of the social order was a constant throughout the ancient world even as ideologies evolved to account for new situations. For example, the Babylonian creation myth *Enuma Elish* can be traced to when Babylon first became dominant over southern Mesopotamia, and the theme is how their chief deity, Marduk, and the Babylonian king on his behalf, was granted such powers by the other gods.

And of course, as mentioned already, urban-dependent systems must expand their control of rural trade or run the risk of failing to feed their burgeoning populations. The political history of the ancient world is marked by urban-dependent states in continual conflict with others, and through this conflict we can begin to tell the story of the ancient world.

CITY-STATES AND EMPIRES

In 2550 BCE, the rulers of two cities 18 miles apart, Umma and Lagash, concluded a treaty by dividing the fields of Guedin (Barton, 1995). By the mid-third millennium, nearly all of southern Iraq, known as Sumer, was under cultivation or urbanized (Adams, 1981). The fields of Guedin were thus crucial for both cities in terms of supporting their respective populations. The ruler of the city of Kish acted as an arbiter between the two cities, and at the conclusion of negotiations, set up a stele (standing stone) marking the boundary. The treaty held for twenty-five years, when Ush, "ruler of Umma, formed a plan to seize it. That stele he broke into pieces, into the plain of Lagash he advanced" (Barton, 1995, 61). He was met by Eannatum, the king of Lagash,

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

who defeated him and reestablished the border. So went the first recorded instance of war—a 1,000 years later than the first archaeological evidence at Hamoukar—and unsurprisingly, the conflict was over productive land. This was a collision of two city-states seeking to establish effective urban-rural systems by laying claim to rural hinterland resources.

Early Bronze Age Mesopotamia was the culmination of the social evolution, with all its progress and setbacks, which had been in motion since the Neolithic. The urban economy had become more complex, particularly in terms of trade and the production of manufactured goods, but most of the population remained in a rural agricultural economy. As the Bronze Age evolved over the next 3,000 years, much of the social evolution involved the other parameters of polity and culture within an environment increasingly marked by the presence of other people as by the mountains and water bodies our minds habitually envision when we hear the word. The environmental demographic requirement of maintaining energy balance with the environment became more challenging as urban populations grew, necessitating expanded control of larger expanses of rural lands and peoples.

From the beginning of the Bronze Age in 2900 BCE through the height of the Roman Empire, at the beginning of the Common Era, the emerging regional world-system of the Mediterranean was characterized by intensifying urban-rural system dynamics that—such as wind, moisture, and temperature combining to form a blizzard—expanded over time. However, this expansion should hardly be understood as a continuous evolution, or one with any clear endpoint or predictable progress. During various periods, the parameters of polity, economy, culture, and environment came together in ways that promoted the fortunes of one region and its population over others. City-States grew and collapsed, new populations were brought into the regional world-system, and as trade normalized an urban-dependent core grew ever more dependent upon the resources of distant peoples. The economy grew ever more complex. Goods were manufactured that required highly complex circuitries of trade to secure raw materials, and populations separated by thousands of miles found themselves, often unknowingly, dependent upon one another. Simply stated, the system *relied* on the movement of resources from agrarian or rural regions with a surplus to deficient urban centers, a central feature of urban-rural systems in antiquity and today. The ability to acquire exotic goods afforded political leaders more power and obscured the central feature of the entire system: food and energy provision. As city-states became linked through regional trade, the circuitry of trade and production grew more complex. Empires arose that re-oriented the polity of city-states to a regional power, such as Rome, yet the cities and their hinterlands remained engaged economically.

The political economy of early city-states was organized as *oikoi* associated with varying economic functions. The earliest of these was the temple

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

oikoi found as early as the Ubaid period. As the division of labor expanded, some temple functions bifurcated into three castes: the sages occupied with administration and the creation of knowledge to aid that pursuit; the military, concerned as it was with defense as well as conquest; and the merchants dedicated to trade (Priestland, 2014). Each caste operated its own *oikoi*, and the city-state itself was conceptualized as an overarching *oikos*. Each *oikos* held its own lands for food production on which most of the population lived or, during periods when the rural population was comparatively low due to threat of war, to which they commuted. Most of the population—over 90 percent—toiled to provide agricultural products to support the *oikos*, both directly or through tribute to the palace and the temple (van de Mieroop, 2004; Maisels, 1990). Some rural laborers were semi-free peasants and serfs, but others were slaves captured in various wars. In between the elites of an *oikos* and the agricultural masses were the craftspeople—skilled labor "free hands," detached from the fields to master their craft and produce for the *oikos*: potters, metallurgists, and other artisans. *Oikoi* were further cross-stratified by gender and became more ethnically diverse because of migration and conquest.

There was a degree of cross-fertilization, so to speak, among *oikoi*: they were highly interdependent. For example, scribes of the sage caste were necessary for the palace and merchants, and it was common for elites of various merchant *oikoi* to hold positions in the temple (van de Mieroop, 1999). Indeed, the king frequently had many ritual functions, relying on the temple establishment's support for their ideological support.

The city-state, with this complex system of social stratification, was the natural result of an urban-rural system: an urban dependent core surrounded by an affiliated (and dominated) hinterland from which resources could be extracted. Suppose energy balance between population demands and the natural environment could be maintained. In that case, such a system could function indefinitely, but success ultimately leads to bigger populations which, in turn, results in pushing the resource horizon even further afield and igniting conflict with or absorbing other city-states into a regional empire. At this juncture, it is good to remember Stein's (1998) observation that the symmetry of trade relations is more equal when military force is more readily challenged. Within city-states, the military threat—the threat of coercive power against the population—is highest, but such power declines at the periphery. As city-states grew more powerful, the military imbalance led this dynamic to be scaled upward to larger regional territories, becoming empires.

The nature of a Complex Adaptive System is such that a change in one parameter (e.g., environment) will result in changes to the others. Indeed, environmental concerns have been cited as a cause of "collapse" for many complex societies (e.g., Diamond, 2011). The collapse of agrarian village life, evident during the PPNC in the Jordan Valley, indicates a more complex

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

answer: changes in one parameter leads to a sharp reduction in social complexity when reinforced by changes in other parameters. In other words, the PPNC event was precipitated by economic changes that led to goats and/or sheep being viewed as property (economy, culture), which in turn led over time to desertification (environment) and a restructuring of the political economy to include more pastoral nomadism. Rather than "collapse," it was the system responding to new challenges. The Uruk Expansion similarly was rooted in economic and political concerns that spread southern Mesopotamian culture throughout the region and became part of the social environment to which people needed to adapt even at great distances from the Uruk core (Stein, 1999; Liverani, 2006). Early in the third millennium, the watercourse of the Euphrates altered so that Uruk's power became more limited, thus paving the way for the cities of Umma and Lagash to become more powerful.

The "core" of the Bronze Age world-system was arguably an expanded version of the Uruk urban-rural system. It is also very different from our own time, and so we tread carefully in this discussion. Many historians consider Sargon the Great and the Akkadian Empire's rise as the first territorial empire, but there were similar though smaller polities before Sargon, including Uruk and Lagash (Pollock, 1999). However, as the first to conquer all of the realms between the Persian Gulf (the lower sea) and the Mediterranean (the upper sea), the success of the Akkadian Empire is perhaps in "upping the ante" for what future kings would aim to accomplish—regional empires. Nevertheless, after initial gains under Sargon, later kings would have difficulty maintaining such an empire. This was because of the distances involved, though later empires would maintain larger territories with similar technologies. At issue was the composition of such polities from individual city-states, or urban-rural systems. Sargon's chief innovation was the replacement of local kings with governors loyal to Akkad. Even with this practice, local populations continued to have loyalties primarily to their home cities rather than the empire. Through several cycles of empire building and collapse, some semblance of regional identity did grow over time—southern Mesopotamia became "Babylonia" and the north "Assyria." In later millennia other territories would transition from populations loyal to their respective cities (e.g., Athens) or regional polities (e.g., Rome). Hence, what is possible in terms of political structure is reliant upon and influences the social and cultural construction of such polities.

After the final fall of Akkad as an empire in 2154 BCE, the Gutians ruled a reduced territory for roughly fifty years before falling to former subjects from the southern city of Ur—the so-called "Third Dynasty of Ur" had begun. The kings of Ur are notable for the state-run textile industry that grew and processed (i.e., mass-produced) woolen and linen fabric with prolific cultural production. By the end of the third millennium, the Ur III dynasty

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

also collapsed, and the ups and downs of regimes began to coalesce around specific cities and regimes. The rise of Babylon around 1830 BCE is notable for such cultural artifacts as the *Code of Hammurabi* and the *Enuma Elish*. These were both written to legitimate the rulers of the ascendant polity, but like the others before, Babylon too would decline. One significant difference between the second versus the third-millennium polities is that the third-millennium leaders typically enriched their home cities, as was the case in Lagash, Akkad, and Ur. In the second millennium, rulers of armies sought to take over a powerful city (i.e., Babylon or Assur in Assyria) and rule the conquered polity. This continued into the Iron Age of the first millennium, as the Neo-Babylonian Empire of Nabopolassar was the product of Chaldeans from the marshes near the Persian Gulf conquering the city and expelling the ruling Assyrians.

It is accurate to say that the Mesopotamian world-system expanded during this period, but such expansion was not of "civilization" spreading unimpeded. Instead, adjacent populations and regions influenced one another over centuries, becoming more integrated over time. As Stein (1998) discusses, during the Uruk Expansion, there were varying ways that the "core" of southern Mesopotamia integrated with the periphery. Although the domination predicted by World-Systems theory is certainly evident at Hamoukar, Stein also notes the importance of "trade diasporas" for core-periphery relations: specific quarters in periphery cities where southern Mesopotamians conducted business but by and large remained segregated from the local population. His distance-parity model (noted earlier) posits that the character of interaction varies with the distribution of resources, technology, and military strength of the peripheral population. The size and political organization of the local population combine to guide the structure of core-periphery relations. We would add that such variables are highly dynamic, and so, for example, a core with advanced military technology may dominate its periphery until such time that the technology is ubiquitous, in which case the system integrates the core and peripheral populations so well that a recentering becomes possible.

Thus, the emerging regional world-system contained an expanding core that had itself constituent urban-rural systems that each, by definition, had their own core and peripheries. As a regional system, a hierarchy of cities emerged, with the core of the empire sitting at the top level and other cities varying in their levels of importance and centrality in the empire. As populations in the periphery or even outside the system have their own trajectories, we thus see varying populations interacting and then integrating into an expanded world-system in unique path-dependent contexts. This was the case with the Hittites, for example, who evolved at a great distance from Mesopotamia—they were in northern and Western Turkey—but this expansion brought them into enhanced contact with the core of the Fertile

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

Crescent as they conquered territories in what is today Syria, Lebanon, and Northern Israel (Pollock, 1999). The expansion of a regional world-system through interaction and eventual integration with neighbors is perhaps best documented in the case of Egypt.

EGYPTIAN EMERGENCE AND EXPANSION

Throughout the course of events discussed above were people living in the Nile Valley—nomadic foraging societies subsisting along the river's shores and lush delta. Settlers of Jericho built the PPNA religious center, the PPNB Mureybet built the world's first rectilinear buildings, and the PPNC Jordan Valley experienced a loss of social complexity in the aftermath of human-induced environmental desiccation. Just as Neolithic technologies and lifestyles spread south in Mesopotamia and north into Southern and Eastern Europe during the sixth-millennium BCE Europe (Cavali-Svarza & Cavalli-Svarza, 1996; Anthony, 2007), the push extended to Egypt as well.

As the Samarra culture spread south through Mesopotamia during the sixth millennium, the Nile Delta was home to a population utilizing similar agricultural practices. van de Mieroop (2011) notes:

> The technology of farming was clearly an import into Egypt as it involved plants and animals not available in the wild there: the primary domesticated animals were sheep and goats and the first cereals cultivated were emmer wheat and barley, foreign to Egypt and imported from the Near East. The domestication of cattle may have been inspired by practices farther west in Africa. (21–22)

Neolithic life was firmly planted in the delta by 5400 BCE. During the sixth millennium, Upper Egypt was home primarily to pastoral nomads, who had trade with agrarian Arabia and the PPNC Ghasulian culture of the Jordan Valley (Zarins, 1992). It is conceivable that some settlements in the delta were populated by migrants from the southern Levant looking for more suitable agricultural lands.

It is helpful to conceptualize the spread of cultural ideas and technology as a wave emanating from its core. Whether by cultural interchange or through the spread of population, the "waves" pass seemingly unadulterated through unsuitable territory but take root in environments amenable to the cultural complex. It is not surprising that agriculture took root in the delta, but pastoralism predominated another 1,500 years further upstream—the same ideas emanating from the same core adopted suitable territories for each activity. The cultural wave does not exist in isolation and so must adapt to each new environment encountered. If populated, new environments have cultures of their

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

own that must also be adapted to and eventually integrated. As the Neolithic proceeded through the Tigris and Euphrates valleys, it encountered territory sparsely settled and quite arid, and so the Samarra culture "became" the Ubaid that in turn spread north again (Maisels, 1990). In Egypt, the sparsely settled delta, with ample water and fertile soils, encouraged agrarian populations to settle, creating significant differences between the culture of the delta and upstream that remained pastoral. As populations climbed, however, between 5000 and 3000 BCE, agriculturalists pushed south along the river into more arid environs much as the Samarra culture had done during the sixth millennium, resulting in agrarian villages throughout Upper Egypt by 4000 BCE. As in Mesopotamia, population pressures resulted in increased social complexity and stratification during the fourth millennium—the Naqada Period.

The evolving complexity of the social structure is most evident in burial customs. During the Naqada I period (3800–3550 BCE), the dead were placed in shallow graves facing west with minimal grave goods, and there is little variation from burial to burial in terms of treatment. This indicates a level of "equality" across the population similar to that of earlier Neolithic societies in the Levant. By the Naqada II period (3550–3200 BCE), rudimentary tombs were constructed for a minority accompanied by body wrapping and a wider variety of grave goods indicative of a higher level of complexity and social stratification. This sequence was found in arid Upper Egypt. In the delta, the Ma'adi Culture continued to practice burials similar to those found during Naqada I, and was finally overtaken by the Naqada III culture after 3200 BCE.

Between 3200 and 2600 BCE, a rapid acceleration of social complexity was evident. The Naqada III culture had spread throughout what would become "Egypt," and as in Mesopotamia, the cultural zone was home to numerous polities. The region had a multitiered settlement hierarchy. As van de Mieroop (2011) notes:

> Various centers of power coexisted within a network of villages that spread across the country. The three centers that seem to have been the most prominent were all located in a 125-mile (200-kilometer) stretch in the southern half of Egypt: Hierakonpolis, Naqada, and Abydos. Especially the cemeteries of these sites show that the processes of social stratification that had started centuries earlier had fully developed. Set apart from the great cemetery at Naqada a small number of brick-lined tombs became large in size and contained numerous grave goods, while at Hierakonpolis a richer set of large rock-cut tombs appeared. (31)

By 3000 BCE, the concept of a unified Egypt under the rule of a single pharaoh had taken hold, even if the reality was not yet evident. Warfare was

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

endemic to the region, and the earliest account of Upper and Lower Egypt's unification into one state was of King Narmer violently conquering the delta. There is skepticism that the unification of the country occurred as written in the Narmer Palette, but what is evident is that between 3000 and 2600 BCE was the full fluorescence of urban civilization, including high levels of stratification, kingship, temples, and writing emerged rapidly and culminated in the Old Kingdom in 2686 BCE (Van de Mieroop, 2001; Mertz, 2007).

The Egyptian Old Kingdom is remarkable for the rapidity with which it arose to unite all of Egypt: despite an arguably later start, the pharaohs accomplished such a state over 300 years before Sargon's Akkadian Empire. And unlike the Akkadian, which struggled to remain united throughout its 200-year history, the Old Kingdom not only lasted 500 years but remained an ideological goal of rulers for thousands more. This created a sense of "nationhood," even when the regional empire was divided.

The Old Kingdom is perhaps best known for its burial structures. Building on the practices of the Naqada III elite erecting standing stones and increasingly elaborate above-ground structures called *mastabas*, the pharaohs built successively larger tombs. In 2648 BCE, Pharoah Djoser was interred at the famous "Step Pyramid" at Saqqara. Sneferu, the first Pharoah of the fourth dynasty, first built what most people today consider a proper Egyptian pyramid, but not without some mistakes. His first attempt was a step pyramid at Meidum, which was later converted into a true pyramid by filling in the steps to form a smooth surface. When some stones did not adhere, however, they collapsed around the main structure in a heap. An attempt at another tomb at Dahshur was designed as a pyramid from the beginning. Built at a 55-degree angle, it became evident that it would not be stable, and so the angle was changed to 43 degrees midway up—the so-called "bent pyramid." A third attempt 2 kilometers away was constructed at 43 degrees, and so was the first recognizable pyramid: Senferu's "red pyramid." It was his successor, Khufu, who built the Great Pyramid of Giza around 2550 BCE—the largest ever to be built. As impressive as they are as architecture, the social scientist stands in awe of the considerable resources required, the social organization involved, and the sheer power of what at the time was likely the most populous and geographically spacious state on Earth.

Like the Akkadian Empire, but 300 years earlier, the Old Kingdom utilized nomarchs (governors) to govern nomes or provinces. This bureaucratic organization allowed for the efficient rule of a large territorial empire. It established a hierarchy in which lower-tier rulers sought to enhance their status and power. In Akkad, this led to the empire surviving only 200 years, and much of that time requiring significant effort as provinces rebelled for independence. In Egypt, in part because of significant public works projects drawing from the entire country and thus building solidarity, but also from the fact

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

that the Nile was the only major avenue for trade and war, the Old Kingdom maintained central control for 500 years. Toward the end, the nomarchs exerted greater control over their regions, evidenced by subtle clues in the inscriptions found and the shift away from governors being buried near the regional center of Memphis and toward their own provincial capitals instead. By 2100 the Old Empire had disintegrated into smaller constituent polities and city-states—a fate similar to but rarer than that in Mesopotamia (for a detailed comparison of Egypt and Mesopotamia during this period, see Baines & Yoffee, 1998).

The First Intermediate Period (2181–2055 BCE) witnessed a resumption of the divide between the Delta and Upper Egypt as rival polities. In 2050 BCE, Upper Egypt defeated the northern polity and thereby reunited the country into what is known as the Middle Kingdom (2055–1650 BCE). Unification, however, is a social construction. The country did not begin unified. Rather, the Old Kingdom ideology referenced the former divide between north and south in the iconography and Pharoah's crown. The Old Empire's dissolution witnessed the reemergence of the divide (van de Mieroop, 2011; Redford, 1992). Four hundred years after the reunification and founding of the Middle Kingdom, the divide once again emerged as Upper Egypt was once again ruled from Thebes, and the delta was under new rulers.

The Second Intermediate Period (1650–1550 BCE) was one of horror for later Egyptian scholars. The country came under the control of the Hyksos, kings of Canaanite origin who ruled the north for most of the period and even conquered portions of Upper Egypt for some time. The Hyksos and their Canaanite progenitors were portrayed as ethnically distinct and even inferior as early as the Old Kingdom, and so this period stands out for its "foreign" rule. The Hyksos' expulsion by the Theban Pharoah Ahmose circa 1550 BCE was the event that again "reunited" the country. After the fall of their capital, Avaris, the Hyksos were pursued to the southern Canaan town of Sharuhen, where they were besieged and destroyed. As early as the writing of the Jewish historian Josephus (1999) in his first-century work *Against Apion*, scholars have suggested a possible link between the Hyksos and the Joseph Cycle in the Hebrew Bible that recounts a similar (though victorious) fleeing to Canaan from Egypt. Redford (1992) has suggested that the historical events inspired both the Biblical myth and the Phoenician myth of *Io* in which fleeing Canaanites are destroyed. Friedman (2017) has suggested that some remnant population fled to southern Canaan and became the Levite priests in ancient Israel—the only "tribe" not alloted a territory of their own. Intriguing speculations, but in need of more evidence.

The triumph of Ahmose marks the beginning of the New Kingdom, a 500-year period that came to a close around 1077 BCE in an event known to historians as the "Great Catastrophe." The Great Catastrophe marks the end of the

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

Bronze Age, a high water mark of social complexity throughout the Eastern Mediterranean and southwest Asia. Substantial empires existed not only in Egypt, but Assyria, the Hittite Empire, and in the Indus Valley of Pakistan. The "collapse" was primarily one in which the great empires lost control over urban-rural systems that of necessity would fend for themselves. An earlier truce (discussed in chapter 7) between the Hittites and Egyptians, drawing a boundary between the two in what is today northern Israel, was meaningless as the Bronze Age collapsed. It had bolstered the region's economy throughout the late Bronze Age as a degree of peace reigned. In Mesopotamia, the collapse of trade networks after the Great Catastrophe led to economic contraction. In the Aegean, however, the organization of the Mycenaeans in city-states was a reminder that such small-scale city-states, based on urban-rural systems, were the foundations of larger empires—even in Egypt. After the Great Catastrophe, Egypt would never again hold the power of the New Kingdom. As the Iron Age took form, during the first millennium, the territory would alternate between "local" rule and being subject to Assyrians, Persians, Greeks, and finally the Romans.

EXPANDING POLITICAL ECONOMIES

In essence, we see regional world-systems as empires existing between city-states—sovereign urban-rural systems. The modern nation-state is a circumscribed network of hierarchical urban-rural systems. Ancient world-systems were centered on powerful city-states that managed to exert some level of power over neighboring city-states, creating a core-periphery dynamic within the emerging empire. From the mid-fourth millennium BCE until the turn of the Common Era, the earliest world-system was centered on Uruk's extensive urban-rural system. It grew through expansion and coalescence with neighboring urban-rural systems. By the rise of the Roman Empire, the Uruk world-system engulfed much of Asia, Africa, and Europe. Like smaller cities in the north, Uruk was more powerful than its neighbors and exercised limited control over them. Uruk assumed essential transit functions in southern Mesopotamia, but the influence was weaker since neighboring urban-rural systems had many of the same functions. By the beginning of the third millennium, city-states would form defensive leagues and alliances, but the region did not yet have a powerful central polity until the rise of the Egyptian Old Kingdom, and later, the empire of Sargon the Great. The interactions between urban-rural systems exercised some (minimal by modern standards) level of gatekeeping and appropriation of trade (tax).

The logic of expansion within urban-rural systems is rooted in the instability inherent to urban dependency. Successful urban-rural systems see their

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

urban populations flourish, thereby knocking them out of balance with their rural resource base—necessitating expansion into and incorporating more resource-rich rural areas. The outcome of expansion is increased, system-wide stability, though this is always temporary. Larger and more complex systems achieve more stability due to an ability to adapt to adversity—a drought in one region can be minimized by importing system resources from another rural region. Expansion also increases the variety of resources available such that a shortage of one (e.g., obsidian) can be substituted with the import of another (e.g., flint). This effect also allows for more elaborate circuits of urban production—and more complex finished products.

System expansion, posited earlier as a wave emanating and taking hold in new regions where core technologies can be utilized and/or modified, also allows for a recentering of system dynamics. This can take place in two ways. During the late fourth and early third millennia, Uruk seemingly was the center of a southern Mesopotamian world-system, but the growth of rivals in the region allowed for a recentering of power to Lagash in the mid-third millennium, then to upstart Akkad, and finally to Ur later in the millennium. Not all recentering takes place within an existing system: the expansion of the world-system can also lead environmentally fertile locales to develop into rivals to the core region even to the point of acting as a core itself. This is the case in Egypt, early on a beneficiary of Uruk expansion, but by the Old Kingdom, a serious rival to the developing states in Mesopotamia. City-states can be integrated into regional empires, but these empires can split into factions of urban-rural system—a divided empire—or even revert to independent city-states.

It is vital to recognize that although system dynamics are rooted in maintaining environmental demographic energy balance, the specific manifestation is context-dependent. Given the chaotic (in a scientific sense) nature of Complex Adaptive Systems, a replay of events since the Neolithic would not likely end with the same results. This effect is both temporal and spatial: similar cultures migrating from the same region will evolve in response to the new environment in which they find themselves. Although there is a linkage between the PPNB and both the Mesopotamian and Egyptian civilizations of the third millennium BCE, the differences between them arose due to thousands of years of social evolution in different—though similar!—environments.

As city-states coalesced into greater empires, none achieved the permanence of Egypt. Throughout the nearly 2,000-year history of the Bronze Age, Egypt was only "divided" during the two intermediate periods. In Mesopotamia, empires rose and fell in greater succession during the same time period, the centers of political, economic, and cultural dominance recentering again and again (see table 6.1). After the Akkadian Empire's

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

Table 6.1 Major Bronze Age Mesopotamian Polities after Fall of Akkadian Empire

Empire	*Principle City*	*Years Active*	*Ethnicity of Elite*
Third Dynasty of Ur	Ur	2112–2004 BCE	Sumerian
Old Babylonian Empire	Babylon	1894–1545 BCE	Amorite
Old Assyrian Empire	Assur	2025–1378 BCE	Assyrian
Mitanni	Washukanni	1500–1300 BCE	Hurrian
Yamhad	Aleppo	1810–1517 BCE	Canaanite
Hittite	Hattusa	1600–1178 BCE	Hittite

fall in 2154 BCE, power eventually centered in Ur to the south by 2112 BCE, the Third Dynasty of Ur, and a growing northern empire centered in Assur (the Assyrians) in 2025 BCE. The Old Assyrian Empire expanded and contracted through 1378 BCE, pressured by the Mitanni Empire (1500–1300 BCE), Yamhad Empire (1810–1517 BCE), and the Hittites (1600–1178 BCE). To the south, the Old Babylonian Empire reached its peak during the reign of Hammurabi (1792–1750 BCE) before fizzling out in the mid-sixteenth century BCE. Throughout this period, smaller city-states played a largely unrecorded role, and at the level of everyday life, most people lived a rural or agrarian life, toiling for food (van de Mieroop, 2004; Smith, 2019). By the end of the Bronze Age, many empires collapsed during the Great Catastrophe (Cline, 2014). We will return to this event in chapter 7, and will now focus on cultural continuities from the Bronze Age through the Iron Age that succeeded it. One of the most central mechanisms responsible for holding empires together is not powerful militaries—though they can help create empires. Maintaining an empire, however, requires potent cultural systems.

CULTURAL CONTINUITIES IN RELIGIOUS BELIEF

The Fertile Crescent was characterized by urban-rural systems that could coalesce into more complex empires, given the favorable environment and social structure. Given the higher order of organization involved with a large territory and population, some level of bureaucracy was necessary to keep the polity of the empire running efficiently. This bureaucratization involved a level of cultural construction as well, including both "secular" concepts undergirding the power structure and "religious" ideologies that justified the status quo. The importance of members of the power structure, particularly the king, participating in temple rituals was a constant throughout the entire

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

region until the rise of Christianity in the early Common Era. Some rulers, such as the Egyptian Pharaohs and later Roman Emperors, were themselves worshipped as gods. Indeed, during a time period when a chief concern of theology was the construction of order to keep the chaos of war and famine away, both religious ritual and the existence of law became important not only for their integrative but also for ideological purposes. Although the specifics would vary, the development of law codes during the Early Bronze Age would become a staple of the complex societies that followed.

As today, laws were designed both to deter criminal activity as well as protect the innocent, thereby bringing order out of chaos. One of the oldest law codes was the *Code of Hammurabi*, although similar codes date from Ur as well. In it are found laws and punishments for their violations that impact daily life. For example, law #53 states:

> If any one be too lazy to keep his dam in proper condition, and if the dam then breaks and all the fields get flooded, then whoever let the dam break shall be sold for money (enslaved), and the money shall replace the crops which he has caused to be ruined. (King, 2015)

As irrigation was central to agriculture, it was imperative that all workers take personal responsibility for their actions. Similarly, law #218 notes, "If a physician performs an operation and kills someone or cuts out his eye, the doctor's hands shall be cut off." The law was also a tool for protecting against injustice. Law #48 states:

> If anyone owes a debt for a loan, and a storm wipes out the grain, or the harvest fails, or the grain does not grow for lack of water; in that year he need not give his creditor any grain in payment, he washes his debt-tablet in water and pays no rent for this year. (King, 2015)

The laws also reflected the inequality of the social structure, however. Law code #202 states, "If any one strikes the body of a man higher in rank than he, he shall receive sixty blows with an ox-whip in public." Importantly, however, there were also provisions protecting one from the power of the state, as in law code #5:

> If a judge tries a case, reaches a decision, and presents his judgment in writing but later an error is found that is the judge's own fault, then the judge must pay twelve times the fine set by him in the case; in addition, he shall be publicly removed from the judge's bench, never again to sit on the bench nor render judgment. (King, 2015)

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

The law also reflects the cultural beliefs of the time, such as the trial by ordeal from the accusation of sorcery in law #2:

> If anyone accuses someone else of sorcery, the accused shall leap into the river, and if s/he drowns the accuser shall take possession of the accused's house and belongings. However, if the accused reaches the shore unharmed and the river thus proves that the accused is innocent of the charges, then the accuser shall be put to death, while the one who leaped into the river shall take possession of the house and belongings of the accuser. (King, 2015)

Law and religious rituals were important elements of ancient cultures, and they both reflected and constituted the social environment to which people adapted. Just as law varied by time period and place, religious beliefs as reflected by elite texts also shared a strong affinity for one another.

The invention of writing in the fourth millennium and the subsequent encoding of literary works beginning in the third millennium gives us our first good glimpse of the narratives that informed religious symbolism. The archaeological record indicates a certain continuity of symbolism from the Neolithic into the Early Bronze Age (2900 BCE–2000 BCE). Although certain continuities of oral tradition can be assumed, the exact nature of those continuities cannot be surmised. With the written record, the use of symbolism and associated narratives can help construct a sequence of cultural understandings as they developed, eventually, into the later universal Judeo-Christian-Muslim God.

A full examination of the creation myths is not possible here, but we will examine two excerpts related to the creation mythology of Mesopotamia as they aid us in understanding cultural continuity and dissimilarity over time. Dating to the early third millennium, ca. 2800 BCE, an exorcism ritual meant to cure a toothache read:

After Anu had created heaven,
Heaven had created Earth,
Earth had created rivers,
Rivers had created canals,
Canals had created marsh,
Marsh had created worm. (Quoted in Bottero, 2004, 85)

In this poem, the mythological account of creation pertaining to the worm thought to be responsible for the toothache is recounted. The chief deity is Anu, the lord of the sky credited as the creator deity. Anu was sometimes portrayed wearing a crown sporting bull horns. Anu was associated with Enlil and Ea, forming a sort of trinity of divine beings. Anu appears to have lost

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

power within the culture as Enlil is the dominant deity: it was Enlil credited with being the ruler of the world, Anu relegated to a sort of "retirement" as a creator deity who has turned over his power to his son (Bottero, 2004). This likely represents the social structure of the time as the father of the family turned over day-to-day operations to a son. One thousand years later, the rise of Babylon ushered the rise of their patron deity, Marduk, in the religio-cultural realm, according to a document titled *Enuma Elish* (see below and Dalley, 2000). As a result of this theological shift, the introduction to the *Code of Hammurabi* contains the following reference:

> When the lofty Anu, king of the Anunnaki, and Enlil, lord of heaven and earth, he who determines the destiny of the land, committed the rule of all mankind to Marduk, the eldest son of Ea. (Quoted in Bottero, 2004, 54)

Again, we see Anu listed in his role as creator, followed by the "lord" Enlil. Ea, the third of the triad, is listed as the father of Marduk. This is important as it grants to Marduk the legitimacy conferred as the son of a ruler. In Mesopotamia, the gods were viewed as ancestral to the king, who ruled the city on behalf of the divine patron. As such, a concern for the heredity of the gods is not surprising.

At times, the "three" top deities involved a goddess figure. The cult center for Anu was the Eanna district at Uruk, the earliest and largest of the region's cities. The Eanna district also housed the temple for Inanna, known later as Ishtar (in Babylonia) and Astarte (in the Levant), who took the place of Ki and several other goddesses as consort of Anu, creating a triad of the creator deity Anu, his consort Inanna, and the lord of the world Enlil, with Ea taking a secondary role (Bottero, 2004). The divine triad's specifics could vary from region to region, but the centrality of association of the divine with the number three was common across the region. During the Middle and Late Bronze Ages (2000 BCE–1200 BCE), for instance, the Canaanite pantheon, as found at Ugarit on the Mediterranean, acknowledged a triad including the creator god El, his consort Asherah, and the lord of the world Ba'al (Coogan, 1978). The goddesses were represented in stylized versions of earlier goddess figurines, often (but not always) with prominent breasts cupped by the hands, prominent buttocks, and a pubic triangle.

Cultural continuity as narrative is apparent in certain motifs found in the region's literature. Tellingly, although the basic themes are shared across time and space, the specifics are subject to considerable variability. This is evident when comparing the Babylonian creation epic, *Enuma Elish*, to the Canaanite *Ba'al Cycle*. In *Enuma Elish*, the Babylonian patron deity Marduk is the only god brave enough to challenge the goddess Tiamat, portrayed as a sea serpent, whose body is slain by Marduk and used to create the heavens

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

and the Earth. Marduk then formed humans from the blood of a sacrificed minor deity and clay. In the *Ba'al Cycle*, Ba'al volunteers to slay the evil god Yam, or the sea, also portrayed as the sea serpent Lothan (or Leviathan). In both myths, the narratives are quite distinct, but the basic motifs—a descendent of the creator god (Anu in *Enuma Elish*, El in the *Ba'al Cycle*) is, unlike the rest of the pantheon, brave enough to challenge an evil deity portrayed as a sea serpent, and as a result of his victory is proclaimed "lord" over the Earth. In Christianity, the victory over death and resultant proclamation on the part of God of Jesus as Lord of the world is also central to the theology.

Despite cultural continuities, there are also significant differences between the myths. Inanna changes in character during the third millennium BCE, eventually outshining Anu as she became the patron deity for sailors and prostitutes (Bottero, 2004). She was consort to Anu in Mesopotamia, but at Ugarit she was consort to Ba'al as Astarte, and at Babylon as Ishtar she was associated not with Anu but rather with Marduk. In the Bible, the consort of Ba'al was not Astarte but Asherah, who at Ugarit was the consort of El. Indeed, as noted below, there is considerable evidence that Asherah was the consort of Biblical YHWH as well (Dever, 2005). Similarly, the Bible portrays YHWH as the slayer of Leviathan, not Ba'al (Cross, 1997).

Another important region-wide myth was that of the great flood. The great flood is mentioned as a turning point in history in both the Sumerian King's List (ca. 2100 BCE) and in the Biblical Book of Genesis (ca. 800 BCE). Allusions to the myth date from the early third millennium, but the first full account in the literary record was the Sumerian Flood Myth, an incomplete series of tablets that outline the story (Bottero, 2004). In the myth, the gods create the "Black-Headed people," as the Sumerians called themselves. For a reason unknown due to a break in the tablets, the gods Anu and Enlil decide to destroy humanity by flooding the Earth. The god Enki (another name for Ea), who has been sworn to secrecy about the plan, betrays the confidence of the two higher gods by telling the house of Ziusudra, a local king who "overhears" the conversation, to build a great boat with which to survive the flood. It is likely that buried in the missing eighty lines of text is a narrative about saving the animals by bringing them aboard the boat, but that is nevertheless speculative. As Ziusudra finishes the boat, a windstorm rises and floods the land for seven days: the numbers seven and forty are significant throughout Near Eastern literature. As the waters recede, Ziusudra exits the craft and makes a sacrifice to the gods.

A similar story is told in the myth *Atrahasis*, dating to the early second millennium (Dalley, 2000). *Atrahasis* represents a fuller creation myth as it seeks to explain a variety of conditions afflicting humans. The god Enlil is kept from his sleep as the imperfect gods had created humans to be immortal yet with the ability to reproduce, resulting in overpopulation. The assembly

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

of gods tries differing ways to quiet humans, specifically drought and disease, but are foiled by Enki. When the gods decide to bring a flood to destroy humanity, Enki is sworn to secrecy but again foils their plans by telling the walls of *Atrahasis*' home about the plans. Atrahasis "overhears" Enki tell the house to build a boat:

Reed hut, make sure you attend to all my words!
Dismantle the house, build a boat,
Reject possessions, save living things.
The boat that you build
[ ]
Roof it like the Apsu
So that the sun cannot see inside it!
Make upper decks and lower decks.
The tackle must be very strong,
The bitumen strong, to give strength,
I shall make rain fall on you here,
A wealth of birds, a hamper (?) of fish. (Dalley, 2000, 29–30)

As in the Sumerian Flood Myth, the mechanism for the flood is a windstorm and the flood lasts seven days and seven nights. Again, as the waters recede, *Atrahasis* offers a burnt offering to the gods who are dismayed and pleased that someone has survived the flood. To control the population, they introduce death.

The flood story contained on the eleventh tablet of the *Epic of Gilgamesh* appears to have been a later addition to the earlier epic; the first ten tablets date to the late third millennium, but the flood story may date to the middle of the second millennium. Dalley (2000) relates:

> This story seems to have been an independent tale in Sumerian . . . . It had no connection originally with Uruk or with Gilgamesh, and may not have been included in the Old Babylonian version of the *Epic of Gilgamesh*. The hero is a man of Shuruppak, a city not far from Uruk. (43)

In this version, Gilgamesh searches for immortality and learns the tale of the only human to have been granted immortality by the gods, Ut-napishtim. As in the other flood stories, Enlil convinces the gods to destroy humanity with a flood due to the noise, and Enki foils the plan by telling the house to build a boat within earshot of Ut-napishtim. Ut-napishtim saves animals, the mechanism for the flood is a windstorm, and there is a sacrifice at the end of the flood. While there are at times significant differences, each of the stories has much in common:

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

> In each, we are faced with gods who are little evolved from mythological ancestors. The advantage of a god is that she or he can win converts and be attractive to the entire population regardless of ancestry; ancestors are limited to their family tree. In other words, a god offers universality. Beyond that, the gods exist in a supposed other world but are capable of works in our world in much the same way that ancestors and/or animistic spirits are conceived. The gods are also imperfect. In *Atrahasis* and *Gilgamesh*, they are hysterical as they witness life being wiped out. They are unaware of the work of Enki and Atrahasis and so are surprised when they discover the boat. Each of the gods is prone to the ordinary array of human emotions. This provides a diffusion of responsibility for the gods: one's personal foibles can be blamed on one god even as the individual petitions another. Misfortune is thus blamed on a variety of demons and underworld gods and the "good gods" are often held blameless. (Thomas, 2010, 169–170)

Given such variation within the Mesopotamian versions, it should not be surprising that the two later Biblical versions also demonstrate a mixture of cultural continuity and difference.

The Book of Genesis contains two flood stories intertwined with each other. According to the Documentary Hypothesis, the J source, marked by the name YHWH to refer to god, was written in Judah's southern kingdom between 922 and 722 BCE (Friedman, 1997). The other story is from the P, or Priestly, source and appears to date to the reign of Hezekiah between 712 and 687 BCE, although some scholars place the P source to the period after the Iron Age ended in 587 BCE.

In the J version, God called Noah to gather the animals to be saved on the ark, although there is no explicit mention of building the ark itself. The animals to be gathered are two of the impure animals and seven of the pure animals. The number of pure animals is meant to facilitate the burning of a sacrifice at the end of the story, as in the Mesopotamian versions. As in the Mesopotamian stories, the mechanism of the flood is a rainstorm: both windstorms and rainstorms were associated with the same god in the region, specifically Ba'al, Hadad, or Adad, depending upon the language. At the end of the flood in J, Noah releases three doves, whereas in the *Epic of Gilgamesh*, the birds released were a dove, then a swallow, followed by a raven. Given the cultural and temporal space involved, the similarities between the two accounts are considerable, but the differences also point to cultural evolution.

Not surprisingly, the P source Noah story, written later and in support of a cultural revolution of sorts—the rise of monotheism among the Jerusalem priesthood—is quite distinct. Written during the reign of Hezekiah, the faction of the priesthood known today as the "YHWH Alone" movement was

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

interested in centralizing worship in Jerusalem and limiting that worship to the god YHWH (Friedman, 1997). The P source reflects this theological effort: Hezekiah had removed the various artifacts devoted to other deities, including Asherah and Ba'al. As in J, the reason given for the flood was god's disappointment in humanity's sin, but there are significant differences as well. In P, the authors seem to specifically argue against the authors of J by noting that the animals "came to Noah, to the ark, by twos of all flesh in which was the breath of life" (Genesis 8:3) and "Of the animals that were pure and of the animals that were not pure . . . they came by twos to Noah, to the ark, male and female, as God had commanded Noah" (Genesis 7:8–9). P thus stresses that Noah could not have made a sacrifice to god as he would not have had the animals to do so, and this point confirmed their contention that the sacrificial system did not exist until the time of Moses and the founding of their priesthood. The P source also reflects an educated Mesopotamian view of the universe: that of the Earth being protected from primeval waters above and below by a firmament (or "dome of the sky" as it is sometimes translated). Thus, in P, the mechanism for the flood is god opening the apertures in the sky and the fountains below to let in the waters, and then closing them to drain the Earth of the water.

The flood stories demonstrate variations as the result of cultural evolution and scribal choice over a millennium and a half. In P, for instance, the sole bird released by Noah was a raven, the same bird that indicates land in the *Epic of Gilgamesh*. In J as in *Gilgamesh*, the third bird indicated land, but in J, that bird was a dove, and it indicates land by bringing Noah an olive branch—a tree that does not grow in Mesopotamia. Nevertheless, the overwhelming similarities of theme indicate a common cultural tradition of the flood. Indeed, the commonalities found in the textual tradition and other related cultural similarities are further evidence of a shared cultural root and extensive cultural evolution and diffusion.

A MULTICULTURAL CULTURE

Unity is best achieved through hegemonic means, and in this regard, we see the interests of the political elite and the economic elite at odds with one another. The economic elite benefits from a highly inclusionist culture that treated varying local traditions as "equal." We see a general syncretism of traditions, resulting in a highly refined form of paganism to be discussed shortly. In contrast, the political elite benefited more from the creation of unity through stressing nationalistic themes, such as a shared history or a single (dominant) national god. This dynamic was apparent throughout the Iron Age. The Levant in particular:

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

> has to be seen as a multicultural zone where people with many different backgrounds interacted closely, mixing languages, cultures, and devotion to various gods. Some maintained second-millennium traditions—the kings of Hamath had Hurrian names until 800—but there was no resentment of, or resistance to, new ones. A king could write inscriptions in Luwian and Phoenician at the same time. Artistic styles mixed various influences without difficulty. People seem to have maintained an international spirit and were outward-looking. They welcomed merchants from abroad. (Van de Mieroop, 2004, 214)

This response to a multicultural world can be seen in the attempts to agree upon the basic "facts" of creation. As previously noted, there were many creation myths in antiquity, and it is not possible to say that there was even vague agreement, but the influence of some myths upon others is nonetheless recognizable.

Revisiting the Babylonian Creation Myth, *Enuma Elish*, elements of both Semitic and Sumerian traditions can be discerned. As noted, the motif of Marduk killing Tiamat, or "Sea," is related to similar motifs in the Semitic *Ba'al Cycle* written about the same time. We find a similar alteration of Sumerian motif in the creation of the world, this time relating to the flood story. In this case, the gods of the fifth generation made a great clamor. Apsu, the first of the gods, is upset at the noise and approaches Tiamat, his lover and the original mother goddess:

> And spoke to Tiamat in a loud voice,
> Their way have become very grievous to me,
> By day I cannot rest, by night I cannot sleep.
> I shall abolish their ways and disperse them!
> Let peace prevail, so that we can sleep.
> (Dalley, 2000, 234)

One might recall the similar role of Enlil in the flood story of Atrahasis. Tiamat is, however, a patient mother:

> How could we allow what we ourselves created to
> perish?
> Even though their ways are so grievous, we
> should bear it patiently.
> (Dalley, 2000, 234)

Faced with the destruction of the younger gods, Ea, as in the flood stories, casts a spell that "stilled the waters" (Dalley, 2000, 235). For Mesopotamians at the time, the sequence of events would have been familiar and the reference

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

to the flood was assumed, though not explicitly stated. Notice a key difference, however: the flood was intended to kill the younger gods, not humanity. This alteration in the widely disseminated story allowed for the story of Ea slaying Apsu and building a palace or dwelling on his body—also called Apsu. In revenge for her husband's death, Tiamat creates an army to wipe out Ea and the younger gods. Ea, the primary beneficiary of praise in Atrahasis and Gilgamesh for saving humanity, is too afraid to face Tiamat—and it was not the human beings to be saved anyway. Thus, Ea is reduced in stature as his son, Marduk, agrees to face Tiamat and her new lover Qingu. Out of this conflict, a primeval cosmic chaos, the world is made.

Marduk ensnares Tiamat in a net of wind. There is a reference to the flood as his greatest weapon, but it is apparently not used. Tiamat is cut in half and her body is used to create the firmament and the Earth. He then takes Qingu's body and uses the blood to create humans. Humanity is created to do the work of the gods, such as agriculture, industrial goods, and, perhaps most important, sacrifice. The emphasis on the part of the priests who wrote the *Enuma Elish* on humanity laboring for the gods justified the proceeds being for the gods, although by the Iron Age, the military complex and the vast resources of the temples and palace must have been an obvious form of social inequality. Just as war is justified by "service to the national god," the social order itself needed justification. Toil for the sake of the gods reminded peasants to give "first fruits" to the temple and state. It is here that we see the brilliance of religion as a mechanism for maintaining order across a large empire.

The extent to which such attempts at hegemonic control actually worked is unclear. Certainly, one must consider that the priesthood and their texts survived for millennia, indicating that the populace was often reluctant to target their religious officials. By the same token, rebellions did occur, indicating at least some transparency in the system. At least some members of the non-elite classes could see the inequities and most likely doubted the ideological basis of the states. This likely was related to social inequality as well. When one considers a genuinely meritocratic society, which has never truly existed in reality, those of greater capabilities should in theory rise to leadership positions befitting their abilities. Social inequality limits this feature as social networks and familial ties become dominant. For instance, in a highly unequal society, we might find a class of intellectuals receiving meager rewards as familial and class ties promote economic elites' leadership, lacking ability and merit. In the ancient context, those of ability frustrated by the social order's limitations may have incited their brethren to rebel. Perhaps the most useful method of limiting such rebellion is to instill the fear of the gods in the population. Over time, this would protect the priesthood more than the king.

Public ritual thus became an important avenue for rationalizing and defending the social structure. To be effective, ritual was necessarily spread

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

throughout the year for constant reinforcement. Ideally, the king was utilized as a role model. The priesthood served as a potential rival for power, and as such, had to be respected. Though there was no "religious/secular" divide in the ancient world, the state had an interest in ensuring that religion met their interests. We thus see the countervailing forces in religion during the time: the state (military caste) necessitated a unifying national god, the economic elite (merchant caste) engaged in trade, while the priesthood (sage caste) who relied upon the "gifts" of a diverse population, necessitated syncretism. We see syncretism in the reliance on motif from both the Semitic *Ba'al Cycle* and the Sumerian Creation Myths in the *Enuma Elish*. However, also note that these motifs are used for creating a "national god." In Babylonia, that god was Marduk, and the special relationship between city and god was stressed:

> His face lit up greatly, like daylight.
> "Create Babylon, whose construction you requested!
> Let its mud bricks be moulded, and build high on the shrine." (Dalley, 2000, 262)

In Assyria, where the priests borrowed heavily from the more ancient (and thus revered) southern traditions, the god was Assur, but the story was by and large the same.

In the Near East, the dominant view of the universe was provided by the pagan emphasis on syncretism. Syncretism worked in part because common motifs were known orally to most people, and only the literate could have read the logical discrepancies. The structure is apparent when one looks at cosmic theories, such as the concept of the firmament. In Mesopotamian cosmology, the world was essentially flat, and Mesopotamia was at its center. The land was an island, the sea of which was found at either end—the Mediterranean in the northwest and the Persian Gulf in the southeast. Above the Earth was the firmament, a "bubble"' that separated the realm of people from the primeval waters that surround creation. The stars were affixed to the firmament, and the sun crosses it daily. We find this understanding of the universe in the earliest writings of Mesopotamia, and as such, we can suppose a date back to the oral tradition of the Uruk period or even before.

In the *Enuma Elish,* the firmament is created early, after the slaying of Apsu. Mesopotamian myth deified its creation by making it part of the narrative of the first gods. Divine couples "beget" the universe as an act of sexual reproduction. As with humanity itself, sexual activity is presumed as part of the creation process. Indeed, the gods are said to be "inside the belly," etc., of Tiamat, who then bore them.

The Egyptians similarly had a concept of the firmament. As in Mesopotamian tradition, it appears early in the creation and is associated with a deity—the goddess Nut. The sun god Re was consumed every evening by her mouth,

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

traveled through her body and emerged, or rather was born, via her vagina every morning. Re would then travel across her body (the sky) until being consumed again at evening. The priesthood acted as "midwives" every morning, trying to help Re's birth and thus usher in another day.

There were differing traditions, even within a fairly unified Egyptian society. For instance, the *Hymn to Re* of Heliopolis differed from the *Hymn to Ptah* from Memphis in several details, and there is variation even within the different traditions. In Heliopolis, we see a potential problem in that the universe begins with a single deity, Re, who brings the other gods into being:

> Then I copulated with my own fist.
> I masturbated with my own hand.
> I ejaculated it into my own mouth.
> I exhaled Shu the wind,
> I spat Tefnut the rain.
> Old man Nun the sea reared them,
> Eye the overseer looked after them.
> (Mathews & Benjamin, 1997, 8)

So, even in the absence of a divine consort, a sexual act still is the mechanism of creation. This solitary act was also discussed as being the word of god: "I spoke and living creatures appeared" (Mathews & Benjamin, 1997, 8). The juxtaposition of these two mechanisms of creation, speech and sex, would have been resolved with different components in a multicultural society—one being native Egyptian and the other of Semitic origin.

We also see in Egyptian mythology several generations of important gods from whom all humans owe their existence. Re begets Shu and Tefnut, wind and rain in the Hymn to Re, but this varies by tradition as well. Shu and Tefnut beget Geb and Nut, and they beget, depending on the story used, Osiris, Horus, and Set or Osiris, Isis, Set, and Nephthys. Regardless of the specific tradition, stories of these early gods are used to explain specific earthly maladies and social relations:

> The relationships among members of this family play an important role in Egyptian mythology. One story tells how Geb (Earth) and Nut (heaven) disobeyed the chief deity and how he punished Nut with difficulty in childbirth. Another tells how Shu (the sky, son of Atum and father of Geb) pulled Nut from Geb's body and separated heaven and Earth. And still another tells of how one of the brothers killed one of the other brothers, and how the third brother founded the line of legitimate heirs to the Egyptian throne . . . . These plot lines should sound vaguely familiar to those who know the story of Adam and Eve. (Greenberg, 2000, 44)

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

Indeed, there are many parallels with the Hebrew Bible.

The definition of the *firmament* changed as society itself changed. The P source creation story in the Bible has god create the firmament, with an act of speech befitting his solitary nature, on the second day. The specific view of Earth was not the Mesopotamian or Egyptian view, although the Bible does not give a straightforward rendering of the known world. However, we can see the change over time by reference to the Pseudepigraphic "Secret Book of Enoch," or 2 Enoch, written in the first century CE. This book, familiar with the Roman conception of the world as centered on the Mediterranean Sea, describes the creation of the firmament as such:

> And then I made firm the heavenly circle and commanded the lower water, under Heaven, to collect itself together into one whole, and the chaos to become dry, and it became so. Out of the waves I created rocks hard and big, and from the rock I piled the dry, and the dry I called Earth. The middle of the Earth I called abyss, the bottomless. I collected the sea in one place and bound it together with a yoke. And I said to the sea, "Behold. I gave you eternal limits, and you shall not break loose from your component parts." Thus I made fast the firmament. On this day I called myself the first created. Then it became evening, and then again morning, and it was the second day. (Barnstone, 2005, 5)

In the region, we see a wide array of agreed-upon details that vary by culture in their specifics. The firmament is a good example of this trend as it is a widely accepted feature of the universe even as its identity changes from culture to culture.

Such agreement among residents of various regions made it possible for traders and priests to carry out business, often including participation in rites for various local gods. If an adherent of Ba'al traveled in Egypt, the local temple of Set (or Seth) functioned as a temple of Ba'al as they were manifestations of the same god (Greenberg, 2000).

ENCODING SOCIAL STRUCTURE

The political, economic, and cultural structures of ancient cities were encoded in the physical environment in which people lived. Thus far, we have examined the interaction between the carrying capacity of the environment and urbanization, but urbanization itself transforms the environment. The built environment reflects the structure of the society in which it is located, and as cultures may be found across groups of individual communities, the settlement space of each will accommodate the artifacts of the culture. Indeed, this

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

trait has allowed for the accumulation of much of the data that informs so much of the previous three chapters.

During the Neolithic, the artifacts of agriculture were found utilizing the technologies available at the time: stone, wood, and bone during the Pre-Pottery Neolithic, with the addition of ceramics after. Relatively egalitarian social structures not surprisingly produced homes of roughly equal size, and there is no evidence of favored locations within settlements—even larger settlements such as Çatalhöyük. In contrast, from the rise of Uruk through the Roman Empire, urban societies were heavily stratified, as evidenced by their built environments. Heavily fortified citadels were home to palaces and temples. Populations seemingly required access to such elite structures, but those in the lower classes were relegated to outer quarters of the city or, worse, to the surrounding unprotected countryside. Skilled artisans clustered around others within their occupations, tanners near tanners and potters near potters.

As each city reflected the broader culture of their respective region, there was scaling involved from community to community. Apex cities typically housed the most important temples, palaces, and other elite institutions, while less impressive versions were found in lower-tier communities. However, this should not be understood as a "top down" phenomenon, and religious architecture is a case in point. All households worshipped their own unique family gods, from the Sumerians through the Romans, and they are known as *teraphim* in the Hebrew Bible (van der Toorn, 1990). Household gods would be set up in small sanctuaries within the home, and wealthier homes typically had more elaborate sanctuaries. Most cities had several cult sites dedicated to various gods, sometimes corresponding to a neighborhood shrine that would often be aligned with a particular occupation or craft. The city's central temple was the most important, and thus elite, version of such sanctuaries. A similar presence is seen in modern cities as well. In most predominantly Christian countries, it is common to find a church in every town, whereas in Muslim countries, a mosque is more likely. Smaller villages may have only one such place of worship, whereas larger towns will have more, and often more variety of each. The apex city in the region has the most important and most elaborate elite versions. Not surprisingly, this scaling of social structural artifacts in the built environment created a sense of cultural identity across regions with similar cultures, thereby reinforcing social integration at a regional level. On the level of everyday life, however, the shifts of global political-economic events were on a day-to-day basis far off for most people:

> Even after the development of the permanent hierarchies that began to separate elites from non-elites, high-ranking people had only a limited control over daily

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

> life. . . . For ordinary people, the emergence of sociopolitical hierarchies starting around six thousand years ago may not even have been particularly dramatic. (Smith, 2010, 177)

Much of the drama of global events was most relevant to people only when they directly affected their neighborhood.

The Bronze and Iron Ages witnessed a fluorescence of cultural evolution and the integration of urban-rural systems in a vast network organized by regional polities (or empires). The early world-systems necessitated continued expansion due to the underlying dynamic found in urban-rural systems: urban-dependent places and regions must expand to gain access to rural resources. Such expansion of world-systems could create long spans of relative stability and prosperity, but when social complexity waned, the results could be catastrophic.

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

Chapter 7

Collapse or Continuity?

The Bronze and Iron Ages grant us a vision of the city transformed, the fully formed cog in a machine that has transformed human existence itself. The basic functioning of a stratified society ultimately depends on the social distance and narrowed networks of interactions provided by urbanization. Urbanization, as exhibited during this period, provides the basis for the dynamics that Marx would later blame on modern capitalism:

> The bourgeoisie has subjected the country to the rule of the towns. It has created enormous cities, has greatly increased the urban production as compared with the rural, and has thus rescued a considerable part of the population from the idiocy of rural life. Just as it has made the country dependent on the towns, so it has made barbarian and semi-barbarian countries dependent on the civilized ones, nations of peasants on nations of bourgeois. (Marx & Engels, 1985 [1848], 84)

The logic of capitalism as noted in the above passage from *The Communist Manifesto* captures the spreading urban-rural dynamics of the nineteenth century, but these same dynamics were found at less complex scales during the Late Bronze Age. Before there was a bourgeoise, urban elites, dependent as they were on the resources of the hinterlands, fostered a rural dependency on the city's products. These same dynamics fostered high levels of social complexity and social stratification, and these social relations were written into the environment. Spatial distance means social distance, and we would be well-advised to look for it not only in the country but in the city as well.

The state itself was the creation of the city. During the Ubaid, even the largest towns were comparatively small (less than ten hectares) and controlled a hinterland entirely their own. Cities grew larger and necessitated a greater amount of agricultural surplus. In at least the more populous areas—southern

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

Mesopotamia and particularly well-situated areas of the northern river valleys—one town became dominant over others in the hinterland and extracted the additional surplus from the surroundings of other villages as well. By the late fourth millennium, the growing cities were surrounded by villages functioning as satellites producing agricultural products and a variety of industrial products. In other words, from the mid-fourth millennium on the city was an administrative center, and as time went on, certain cities would dominate even larger territories and the cities within them. Indeed, the political structure could have a significant impact on a city based on the whim of the leaders. In Babylonia, kings kept Babylon as the capital, but in Assyria, the capital was moved several times, with dire results on the former dominant city. Even as the territorial state became dominant, cities were rarely destroyed so long as the defeated king agreed to administer his territory for the benefit of the state by the payment of tribute and provisioning of troops.

Basic demographics ensured that cities would become elite residencies. Even a city with a large amount of space within its walls would eventually force poorer residents out of the city as growth continued. The provisioning of local artisans, troops, religious officials, elite merchants, and traders increasingly dominated the inner city. One answer to this state of affairs was to build a second, outer wall as was done at such cities as Babylon. Another answer was that of the Assyrians, who built a whole new city at Nineveh renowned for its large walls and space inside. In many, if not most cases, the answer was that of Jerusalem: the peasantry simply could not live in the city proper.

Today, the city is associated most often with diversity, which was true in the ancient world as well. A city, particularly a capital such as Jerusalem or an important trading center such as Tyre, would have, either as residents or visitors, merchants and workers from throughout the known world, people speaking different languages, praising foreign gods, and wearing different clothes. In addition to ethnic differences, people of different social classes would have mixed together—even if the lower classes lived in segregated neighborhoods at a distance from more fashionable precincts or even relegated to satellite villages. Indeed, many of the urban issues that we consider "modern" were present in ancient cities as well (Emberling, 2010).

Cities also narrowed the range of interactions possible, particularly at the top of the social order. Populations were high enough to support a high number of cliques, and so it was simply not necessary to associate with those different from oneself if not considered desirable. With elaborate palaces and temple precincts more or less "cut off" from other areas of town, it is debatable how often an individual might have a meaningful interaction with members of other social groups—many such interactions would have been quite trivial. In other words, the classic issues with density were to be found

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

in ancient cities (Wirth, 1938; Bettencourt et al., 2007). Even if one desired interaction with all the city, populations were prohibitive: even comparatively small cities such as Jerusalem had 20,000 or more residents, and a city like Memphis or Babylon could have 200,000 people.

Even if it were possible, the vast majority of those societies were rural: about 95 percent of Judah; 90 percent of Israel; and even still an overwhelming majority in southern Mesopotamia (Dever, 2003). Even the lower classes in the city had access to public festivals and all the goods, such as food, jewelry, pottery, and so on, the urban-rural system had to offer. Those in the hinterlands might occasionally partake but often would not. The urban elite, in particular, found itself ruling over a nation with which it had little in common. One might recall the constant pronouncements against the high places and the standing stones and the asherahs in the Bible: all practices associated with what Dever (2005) has called "Folk Religion," and all practices with which the Jerusalem elite found itself at odds. The elite often found more in common with those of like position in other societies than with their own people.

Such social distance allows for a conceit to develop among the elite. The Assyrians and later the Babylonians would conquer a territory and simply deport the inhabitants. Much of the population found itself clear across the empire in new villages, only able to communicate with others in the new *lingua franca*: Aramaean. It is curious that the Assyrian policy of mass deportation helped to spread Aramaean so far and wide (Ostler, 2005). To do such a thing, however, a king must see the population much as cattle. Similarly, the centralization of worship under Hezekiah and Josiah cared little for the peasants and the hardship imposed by a trip to Jerusalem any time one wished to slaughter an animal. It is no wonder that their heirs reversed the reforms: as newcomers, they were politically weak, and rebuilding the local high places so that worship could occur in the home villages would have been a populist gesture. In both cases and countless more, social distance enabled the elite to dream up forms of oppression that could not have been imagined, much less instituted, in a less complex society. The city remained a trading center and religious center and administrative center. By the Iron Age and for long after, it was also a center for oppression—particularly of those living outside the city.

THE GREAT CATASTROPHE

The end of the Bronze Age and the beginning of the Iron Age was a period known to historians as the "Great Catastrophe." The transition was a long process that had roots as early as the reign of the Egyptian Pharaoh

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

Akhenaton in 1379 BCE and lasted to the New Kingdom's fall in 1070 BCE. Such a schema, so bounded by events in the region's major power, should not be interpreted as implying that it was the Egyptian state that determined events. As the largest and most powerful state, Egypt could guide or inform trends to its purposes more than its contemporaries. The Great Catastrophe had a great impact on empires and the cities they supported, and it gives us our first good opportunity to hear the voices of those living outside the main currents of Near Eastern civilization.

The Late Bronze Age was marked by a steady decline in the southern Levant and the eventual collapse of the system itself. The collapse was facilitated by the collapse of the Hittite Empire in the north and the accompanying collapse of the global economic system. As will be discussed, much of the Late Bronze trading system was enabled by a truce between the Egyptians and the Hittites that encouraged trade throughout the Eastern Mediterranean. Numerous population groups, particularly from the Aegean, were migratory during the Late Bronze Age and were collectively known as the "Sea Peoples." The Egyptians of the thirteenth and twelfth centuries were moderately successful at repelling them, but some migrants settled along the southern Levantine coast in cities like Gaza and Ashkelon and became known as Philistines. At least one such group, Donoi in Egyptian and the Tribe of Dan in the Bible, settled north of the Galilee and eventually became home to the northern border of the Iron Age state of Israel. In the meantime, however, the amalgam of largely unregulated populations in the Israelite Hill Country formed an ethnic identity in opposition to both the Egyptian and Canaanite authorities; they were known as "Israel" by at the latest 1210 BCE (Faust, 2007; Dever, 2003). As the global collapse known as the "Great Catastrophe" continued into the Iron Age and culminated with the collapse of the Egyptian New Kingdom in 1070 BCE, the power void left in its wake allowed the former Canaanite populations to reassert their independence, but in many cases, the Bronze Age city-states were substantially weakened. The northern coastal cities, including Sidon, Tyre, and Byblos, used their nautical skills to rebuild—eventually to be known by the Greeks as "Phoenicia." The Greek population of Philistines in the southern city-states blended into the native population, and even the Bible is silent about them in later time periods. In inland Syria, a variety of Aramean tribes, also culturally related to the native Canaanites, grew small states in place of the former Mitanni and Hittite areas. And in the southern Levant, tribes of Shasu, Canaanite peasants, and others increasingly settled into tiny agricultural villages (Redford, 1992).

The Late Bronze Age was the high-water mark of social complexity in the Mediterranean Basin until the *Pax Romana* of the early Common Era. Its collapse is instructive of the complex dynamics that enabled the prosperity of the period and its fall. Complexity theory has been invoked as an explanation

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

for the dynamics guiding the Late Bronze-Iron Age transition (Cline, 2014), and we can expand on these through the lens of the parameters of social evolution.

In 1274 BCE, Egyptian and Hittite forces clashed in the Battle of Kadesh, an apparent draw that both sides nonetheless declared a victory (Drews, 1993). Sixteen years later, Pharaoh Ramesses II and Hittite King Hattusilis III concluded a peace treaty that established relative peace from the Bosporus, south through Turkey and the Levant, and southern Egypt. The result was unprecedented trade throughout the Mediterranean Basin, including Mycenaean Greeks, Mesopotamians, and Persians, and as far away as modern Pakistan. The political stability of the period allowed for an expansion of trade, and in turn, an expansion of urban production and trade in luxury rural products such as wine and olive oil. The appearance of these commodities signifies an agricultural strategy oriented to trade rather than subsistence, linking rural and urban places into overarching urban-rural systems—the core of the system aligned along an axis of territories controlled by the Egyptian and Hittite Empires. We can glimpse this system's inner workings through correspondences between the pharaohs Amenhotep III and Akhenaton with their vassals in Canaan, a collection of texts known as the *Amarna Letters*.

The *Amarna Letters* reveal a world that is recognizable in its interconnectedness and foreign in its language. Power is a central feature of many letters, as even a simple greeting can be fraught with symbolism. In addressing the leaders of powerful territorial states deemed as somewhat "equal" by the pharaoh, the term "brother" was employed in the greeting. In a letter in which the pharaoh complains of a misconception by the king of Babylon, the king is addressed as such:

> Say to Kadasman-Enlil, the king of Karadunise, my brother: Thus Nibmuarea, Great King, the king of Egypt, your brother. For me all goes well. For your household, for your wives, for you sons, for your magnates, your horses, your chariots, for your countries, may all go very well. For me all goes well. For my household, for my wives, for my sons, for my magnates, my horses, the numerous troops, all goes well, and in my countries all goes very well. (EA1; Moran, 1992, 1)

This standard greeting reads as a cordial exchange of information, two friends "catching up" before the unpleasantness of the issue at hand. In contrast, the king of Jerusalem, a vassal, addressed Pharoah:

> To the king, my lord: Message of Suwardata, [your] servant. I fall at the feet of the king, my lord. I fall 7 times and 7 times *more*, both on the stomach and on the back. (EA 284; Moran, 1992, 324)

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

Just as in earlier millennia, the family is the metaphor for power relations, and the king of Jerusalem is intent on showing the appropriate level of fealty.

The *Amarna Letters* reveal that the high levels of trade and increasing level of economic integration were nonetheless based on the earlier notion of trade within a gift economy. A request from the king of Alasiya, likely on Cyprus, notes a large gift of copper—the largest noted in the entire corpus (Moran, 1992, 108, note 2)—followed by a request for silver:

> I herewith send to you 500 (talents) of copper. As my brother's greeting-gift I send it to you. My brother, do not be concerned that the amount of copper is small. Behold, the hand of Nergal is now in my country; he has slain all the men of my country, and there is not a (single) copper-worker. So, my brother, do not be concerned.
>
> Send your messenger with my messenger immediately, and I will send you whatever copper you, my brother, request.
>
> You are my brother. May he send me silver in very great quantities. My brother, give me the *very best* silver, and then I will send you, my brother, whatever you, my brother, request.
>
> Moreover, my brother, give me the ox that my messenger requests, my brother, and send me, my brother, 2 *kukkubu*-containers of "sweet oil," my brother, and send me one of the experts in vulture augury.
>
> Moreover, my brother, men of my country keep speaking with me about my timber that the king of Egypt receives from me. My brother, [*give me*] the payment due. (EA, 35; Moran, 1992, 35)

A pitfall of such an approach is that, at times, the amount sent might be unsatisfactory. In EA 16 (p. 39), the Assyrian king complains of such treatment:

> Is such a present that of a Great King? Gold in your country is dirt; one simply gathers it up. Why are you so sparing of it? I am engaged in building a new palace. Send me as much gold as it needed for its adornment.
>
> When Assur-nadin-ahhe, my ancestor, wrote to Egypt, 20 talents of gold were sent to him.
>
> When the king of Hanigalbat [wr]ote to your father in Egt[pt], [h]e sent 20 talents of gold to him.
>
> [*Now*] I am the [*equal*] of the king of Hani[galba]t, but you sent me [. . .] of gold, and it is not enough [f]or the pay of my messengers on the journey to and back.

Regardless of the metaphors of family and gifts, the amount of trade was impressive. Much as today, the world-system allowed for a degree of economic specialization. Specialty metalworking, olive oil, and wine were exported from Canaan—both as tribute and in exchange for other goods. The

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

ability of other societies to import such products allowed for their own specializations and, as important, production for staples. In essence, the Uruk-era specialization of fiber production by pastoral nomads who exchanged wool for urban staples was intensified and regionalized by the Bronze Age.

In economic terms, most city-states strove to grow staples and trade for luxuries—a sensible approach of feeding the mouth before the purse. Cities large and small also featured industrial facilities for trade goods. In Canaan, as noted, olive and grape cultivation was aimed for processing in urban centers for oil and wine—much of it for trade. This trade also required pottery production facilities to transport such goods, not to mention shipbuilding itself. The collection of resources into cities and distribution of goods, both locally and foreign, required additional laborers and managers. All of these transit functions required traders and the infrastructure to feed, house, and provision them. As the network spanned the entire Eastern Mediterranean Basin, Southwest Asia, and at least as far as India, the accumulation of transit functions at particular nodes in the network resulted in the growth of ever-larger cities (Scott et al., 2020). This was, of course, true in earlier periods as well, but the amount of trade and the higher populations ensured greater complexity, social stratification, and interconnectedness of people from disparate regions of the world. As such items as pottery vessels for trade might be produced in one city and sold to another, workers and artisans in one city were increasingly dependent on unknown laborers in other cities.

The high level of interconnectedness also meant that a disruption in one area of the system could not only reverberate throughout the system but even, under the right circumstances, magnify. In practice, the political structure of the world-system was a complex network of individual city-states, some of which had access to the resources of the territorial state of which they were a part (e.g., Egypt, Hittite, Mitanni, Assyria) and others, such as those in Greece, that were independent. Of course, access to territorial state resources such as those of Egypt did not necessarily translate into getting those resources.

The territorial states, by necessity, had investments to make in maintaining this complexity: a military to control the peace and extract resources from vassals, and to expand when necessary; roads to facilitate military transport and trade; port facilities along coasts and riverways; defensive fortifications around major and even not-so-major cities; and numerous smaller investments in food, supplies, and personnel. As Joseph Tainter (1988) pointed out, the marginal returns on this investment diminished over time: distant resources required more roads or ships for transport, more soldiers for protection, and carried with it additional mouths to feed, and the possibility of fewer resources available to the core. The imposition of taxation and *corvée* (forced labor) became even greater in the core, hollowing out the interior

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

as the periphery expanded. In a modern context, Kennedy (1989) made a similar observation he referred to as *Imperial Overstretch*. This is likely a factor in Amenhotep III and Akhenaton's inability to properly provision their Canaanite vassals in the mid-fourteenth century and an incentive for Ramesses II to conclude a peace with the Hittites, in effect drawing a border between the two empires in 1248 BCE. Peace enabled the pharaoh to direct investment internally, evidenced in part by the mortuary complex that bears his name and his new capital of Pi-Ramesses in the Nile Delta.

Into this tightly independent world were thrown a number of potential factors that could have precipitated a collapse. These are well-reviewed by Cline (2014), who summarizes them as such:

A. Clearly there were earthquakes during this period, but usually societies can recover from these.
B. There is textual evidence for famine, and now scientific evidence for droughts and climate change, in both the Aegean and Eastern Mediterranean, but again societies have recovered from these time and again.
C. There may be circumstantial evidence for internal rebellions in Greece and elsewhere, including the Levant, although this is not certain. Again, societies frequently survive such revolts. Moreover, it would be unusual (notwithstanding recent experience in the Middle East to the contrary) for rebellions to occur over such a wide area and for such a prolonged period of time.
D. There is archaeological evidence for invaders, or at least newcomers probably from the Aegean region, Western Anatolia, Cyprus, or all of the above, found in the Levant from Ugarit in the north to Lachish in the south. Some of the cities were destroyed and the abandoned; others were reoccupied; and still others were unaffected.
E. It is clear that the international trade routes were affected, if not completely cut, for a period of time, but the extent to which this would have impacted the various individual civilizations is not clear—even if some were overly dependent upon foreign goods for their survival, as has been suggested in the case of the Mycenaeans. (165)

Of course, in each case we see factors from which a healthy society can often recover. Cline ultimately falls back on Complexity theory to explain the collapse:

> Based on the evidence presently available, therefore, we may be seeing the results of a systems collapse that was caused by a series of events linked together via a "multiplier effect," in which one factor affected the others, thereby magnifying the effects of each. Perhaps inhabitants could have survived

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

> one disaster, such as an earthquake or a drought, but they could not survive the combined effects of earthquake, drought, and invaders all occurring in rapid succession. A "domino effect" then ensued, in which the disintegration of one civilization led to the fall of the others. Given the globalized nature of their world, the effect upon the international trade routes and economies of even one society's collapse would have been sufficiently devastating that it could have led to the demise of the others. (165–166)

In addition, the potential for a disease epidemic to spread through dense urban populations could likewise contribute to collapse, especially when coupled with some of the events and conditions described above. The collapse of the Bronze Age resulted in a reversion to smaller states in the territories lost by the Hittites and Egyptians. Luckily, we have both a textual and archaeological record of the recovery in the southern Levant.

INDEPENDENCE FROM COLONIZERS

As the Great Catastrophe settled and turned to a period of increasing social complexity once again, the trajectory built upon the past bears little resemblance to the initial evolution of complexity. The Late Bronze Age had ended, but the reversion was not to a Neolithic or nomadic existence but instead to lower scale urban-rural systems. In this way, the Great Catastrophe was an upscaled version of earlier events such as the end of Early Bronze and the Egyptian Old Kingdom. At that time, collapse was at higher orders of organization—the state and international trade system—and rural villages were affected only minimally (Schwartz, 1994). The higher complexity of Late Bronze created a stable and flourishing trade system that integrated communities throughout the Eastern Mediterranean so tightly that the collapse was more severe. As the region rebuilt, it did so as a network of urban-rural systems now set free from the territorial states that dominated them before.

The collapse cut off exotic goods from further abroad, and urban-rural systems were forced to be more self-sufficient as a result. Indeed, the collapse likely only diminished social complexity to a level where self-sufficiency was a possibility. Unfortunately, this involved the full range of Malthusian remedies: migrations, disease, and war each redistributed population. As individual populations struck a new energy balance with the caloric well of their environments, demographic growth was once again possible, and rebuilding complexity could begin. This was not only evident in the southern Levant, where the historical texts of the Bible shed so much light, but throughout the region as a whole (e.g., Schwartz & Falconer, 1994).

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

In the aftermath of a collapse in social complexity, the surviving populations are left in a position to rebuild some semblance of what life had been based on the cultural and environmental examples left behind. As Egypt contracted back into the Nile Valley, the territories in the Levant that had been divided between the Hittites and the Egyptians were free to rebuild. However, the rebuilding was not from a Neolithic baseline but rather as urban societies that had been colonized and oppressed by foreign rulers, and so their cultures moving forward would reflect that experience. In southern Canaan, collections of urban-rural systems that had existed during the Bronze Age under Egyptian rule now attempted to coalesce in new states, with results that were similar to that of southern Mesopotamia in terms of instability and eventual foreign rule. Their struggles are recounted in the historical books of the Hebrew Bible, but for their roots we must look back to the Late Bronze Age (Faust, 2007).

There had existed from at the latest the fifteenth century BCE, and likely far earlier, a population of pastoral nomads to the south of the Dead Sea and Beersheba Valley known to the Egyptians as Shasu (Redford, 1992). This population migrated from areas to the east of the Jordan River into Egypt's eastern Delta region. Little else is known about this population except for their chief god: Yhw, universally accepted among scholars as YHWH, the god of the future Israelites. Indeed, Moses is said to have learned of YHWH in the land of Midian, home of the Shasu. Some of these nomads would later settle in the territory that became Israel. Some of the population was likely found in the south of Israel, but the word Hebrew derives from a root for "to cross over," and given their domain in Transjordan it is possible that the tradition of Joshua crossing the Jordan River derives in part from the traditions of this population.

A second group was discussed in chapter 6: the Hyksos. The Hyksos were expelled from Egypt around 1550 BCE, placing the event firmly in the Bronze Age. But the Asiatics fled to Shuruhen where they withstood the Egyptian siege before finally collapsing three years later. This is sometimes taken as the end of the story, but it was not. Redford (1992) discusses the Phoenician Mythology that arises from this event, namely the story of *Io*. In the Phoenician city-states, the cultural memory of the Hyksos expulsion reversed the obvious defeat into an escape from Egyptian tyranny. Redford suggests this was due to the reliance on the oral tradition that, as all oral traditions, tended to become more complimentary of the Hyksos over time. The Egyptians followed the expulsion by taking control of Canaan to prevent a resurgence of Hyksos power, and thus was the birth of the New Kingdom. The Egyptians would not, however, have sided with Hyksos leaders in controlling the region. They would have been better served by "propping up" rulers of cities hostile to the Hyksos. This would have had two effects: 1) it

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

would have relegated the Hyksos descendants to continued nomadism as city rulers refused them assistance out of fear of the Egyptians; and 2) it would have created animosity among Hyksos descendants toward the urban elite. If we are to take the self-identification of later Phoenicians seriously, this hostility would have been directed toward the Canaanites (the word "Phoenician" is the Greek label for the population). The Joseph Cycle and the Exodus likely derive in part from this cultural tradition as it was known throughout the Canaanite cultural sphere (Redford, 1992; see also Freidman, 2017).

While an influx of population in the Israeli hill country is attested from the archaeological record (Stager, 1985), a third population was already resident on the land: the Canaanite peasantry. The Peasant Revolt hypothesis, first proposed by Mendenhall (1962) and Gottwald (1979) and supported in an amended form by Dever (2003), explains the larger portion of the Israelite population. Mendenhall first proposed that it was the indigenous Canaanite population that staged a revolt against the older system. Set amid the city-states' long-run decline, particularly the chaos of Egyptian rule (and its failings), Mendenhall saw the "revolt" as a peasantry rising against the masters with the religious fervor of converts. A highly significant first step, the theory suffered from a relative lack of sophistication in analyzing class struggle. This limitation was addressed by Gottwald (1979), who used Marxist theory to analyze the exploitation and increasing demands upon the peasantry. For Gottwald, urbanism was a principle around which the peasantry could unite. The Peasant Revolt hypothesis suffers from a relative lack of evidence, the continuity of Proto-Israelite settlements of the early Iron Age being the primary indicator. Nevertheless, there are indications of urban decline during the Late Bronze accompanied by increased tribute and labor demands. Even if a majority of peasants remained loyal to their city-states, not all would remain. The decline of the urban-rural system during the Late Bronze Age would have made flight easy as the kings had little control over the countryside.

The various populations mixed in the central hill country, today roughly encompassed by the West Bank, over a period of hundreds of years (Faust, 2007). We know of chaos in the region as early as the reign of Akhenaton in the early fourteenth century, and later pharaohs attempted to regain some control. The late thirteenth-century Merneptah Stele (ca. 1210 BCE) celebrates the victory of the Pharaoh Merneptah over a number of Canaanite city-states and a population called Israel, as below:

Not one of the Nine Bows lifts his head:
Tjehenu is vanquished, Khatti at peace,
Canaan is captive with all woe.
Ashkelon is conquered, Gezer seized,
Yanoam made nonexistent;

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

Israel is wasted, bare of seed,
Khor is become a widow for Egypt.
All who roamed have been subdued.
By the King of Upper and Lower Egypt, Banere-meramun,
Son of Re, Merenptah, Content with Maat,
Given life like Re every day. (Dever, 2002, 202)

There is an order here, from more complex societies to less, with Israel and one supposed Khor as sedentary agrarian populations and the nomads listed last (Dever, 2002). Israel is here referred to as a "people" or ethnic group rather than a state, an obvious indication that a population who called themselves "Israel" existed (Faust, 2007). According to Dever (2003), this population would have existed in the central hill country from Jerusalem north to the Jezreel Valley—an area that approximates the core territory of the eighth-century state of Israel (but not Judah). The reference to them as a people indicates a comparative lack of political organization. Redford (1992) suggests that Israel belonged to the territory originally administered for the Egyptians by the king of Schechem. A temple to the Canaanite god El was located there and reconstructed by the Israelites (Dever, 2003). There were several holy places dedicated to El, such as Bethel, Gilgal, Dan, and others.

During the tenth century, we see the rise of a state centered on the hill country and consciously calling itself Israel. The first king was Saul, appointed by the great judge, priest, and prophet Samuel. Saul was from the northern territory (and tribe) of Benjamin, a small territory near the future border with Judah. His ascension as king was marked with considerable instability, and upon his death, the kingdom was split into factions roughly correlating with the north and south—Israel (north) and Judah (south) under Kings Ishbaal and David, respectively. We see here a clue to the differences between north and south that plagued Israel from the beginning: differing cultural traditions. In the north, a territory bound by the Philistine and Phoenician city-states on the coasts, the Jordan River to the east, and the Aramean tribes to the north in Syria, Israel was characterized by several cities including Dan, Meggido, Hazor, Bethel, Schechem (the original capital), and Samaria (the future capital during the northern kingdom). According to the Book of Judges, large swaths of territory were still "Canaanite," but today's scholarly consensus sees a continuous evolution of Israel out of this Canaanite base (Faust, 2007; Dever, 2003; Finkelstein & Silberman, 2002). Not surprisingly, the northern kingdom retained many Canaanite practices, such as the name of the god El for the god of Israel, symbolized by the Bull and said to reside on Mount Saphon—or "North." The cultural center at Schechem dates to Canaanite times, reconsecrated to El in the Bible but likely always home to its original inhabitant Ba'al. The golden calves later

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

established at a southern site (Beth-el) and a northern site (Dan) were symbols of El, and indeed "Israel" means "People who know El." In the Ugaritic texts, El has as a consort the goddess Asherah, who appears in Iron Age symbolism and inscriptions aside both El and YHWH (Dever, 2005; see also Anderson & Giles, 2002).

We have little reason to doubt the Biblical account's veracity in its broad treatment of the birth of the monarchy, particularly when controlling for the bias attributable to the elite nature of the documents, for two reasons. The first is that the Israelite Kingdom is not impressive by standards of the day—many empires, such as the Hittites, Mitanni, Egypt, and the Mesopotamian empires, controlled more territory. The second reason is that the holdings were short term, indicating the Levantine context (Dever, 2002, 2003; Finkelstein & Silberman, 2007).

The founding of the monarchy by Saul was as such on difficult ground in terms of uniting the territory, and of course, the kingdom split upon his death. The king of the southern territory, David, then benefited from the assassination of the northern king Ishbaal. One suspects that David was more than a casual observer of these events as he assumed kingship over both north and south as a consequence of Ishbaal's death. Notice that the name of Ishbaal contains the name of the Canaanite god Ba'al, and consider that the need for some mechanism of national unity was deemed necessary. One can see elements of some early tradition aimed at creating such unity in the elements of commonality between the E and J sources of the Bible. Both E and J were written after the collapse of the United Monarchy, but as they share certain characteristics (deliverance from Egypt by Moses, for instance), one might presume an earlier tradition, likely written, dating to the reigns of David and Solomon that formed the basis of later works. The Bible retains some of these earliest works, such as the Song of the Sea (Exodus 15:1b–18), but likely the majority of the earliest works, whether songs, poetry, stele, or even an archaic narrative, is uncertain, are lost. What is certain is an attempt to link the southern god YHWH, with whom David as a Judahite would have been very familiar, with the northern god El dates to this period (Friedman, 1997). According to the Bible (1 & 2 Samuel), David conquered the territory from Egypt northeast to the Euphrates, and even if exaggerated, there would have been a need to integrate the population. Syncretism between the two gods would have altered the perception of the conquest. If separate, the northern inhabitants would have perceived a defeat of their own gods, primarily El and the storm god Ba'al, at the hands of YHWH of the south. By equating El and YHWH, the conquest was portrayed as the national god uniting his people and not conquering them. Even with such nationalistic propaganda, David faced a revolt from the north, most dramatically in the face of his son Absalom (2 Samuel 18).

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

David was followed, through intense covert intrigue, by his son Solomon. Solomon was revered for his wisdom, but according to the Biblical account, it was under his reign that extensive territories in the north, including all of Syria, were lost. He ceded northern territory to the Phoenecian city of Tyre and taxed the north to best fortify the south, festering the rebellion that would permanently split the kingdom after his death. Solomon was quite a diplomat, however, having married a great many wives from throughout the region—a primary form of diplomacy at the time was building family relations between royal families of different societies. He built the first temple at Jerusalem, by now having been taken by King David and made the capital, hiring Tyrians to build a grand building in the Phoenecian style (Dever, 2003). Solomon also constructed a palace that was, in fact, larger than the temple complex. In doing such things, we see Jerusalem finally assume a status and design similar to other near-eastern cities with their own royal temples and palaces. It is notable that in order for a city to grow in this way, it took a system in which labor and materials were taken from the hinterlands and transferred to the capital city.

The extravagance of Solomon's reign was met with opposition, as the loss of Syria and other territories makes clear. After his death, the northern kingdom of Israel broke away under King Jeroboam, who established his capital at the earlier capital at Schechem. It was the result of this split that the earliest "epic" sources of the Bible, J and E, were written (for a discussion, see Dever, 2002; Friedman, 1997). The "J" source is primarily concerned with the southern kingdom of Judah and is littered with references to why Judah is the rightful heir to God's indulgence. The E source appears to have been written by Levite priests at Shiloh, themselves excluded from the northern power structure but thoroughly shut out in the south. Therefore, it is critical of both kingdoms but has an apparent affinity for the north over the south.

The Biblical record of this period confirms a picture suggested by the archaeology: the Levant was marked primarily by small kingdoms and city-states. Israel (the northern kingdom) was comparatively small, its new capital of Samaria one of a few small cities that dominated political and economic life in a country where over 90 percent of the population lived in tiny rural hamlets of family members. These hamlets were composed of *bet'ab*—house of the father, or individual family households—and tied into kin networks in a village called *mishpaha*. A tribe was a network of such villages, and the collection of tribes made up Israel (Stager, 1985; see also Dever, 2003). Stretching from the northern city of Dan to the southern city of Bethel, only 15 kilometers north of Jerusalem, the country was about the size of an American county or two. After losing control of Moab in about 850 BCE, a feat celebrated by the Moabite King Mesha on the Mesha Stele, Israel was even smaller. The kingdom of Aram-Damascus to Israel's north was of like

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

size, with some city-states and small kingdoms beyond. In the south, Judah was dramatically centered on Jerusalem, a city of perhaps 20,000 residents, with only a handful of minor cities such as Lachish and Beersheba. About 95 percent of Judah's population lived in the countryside, while about 80 percent of its urban population lived in Jerusalem. Along the coast, independent city-states reliant on the sea were the norm. Along the southern coast, the Philistine Pentapolis, peopled by native Canaanites and the descendants of the "Sea Peoples" from the Aegean Sea, was a loose configuration of cities that was reminiscent of the Sumerian leagues of cities over a thousand years earlier. Along the northern coast, the Phoenician city-states grew wealthy and founded colonies throughout the Mediterranean world, and thus went beyond the politics of the Levant. One of these, Carthage in modern Libya, would one day rival Rome for control of the "known world." This political disunity in the Levant would once again be challenged by the great powers beginning to rebound from the misfortunes of the Great Catastrophe.

The states themselves appear to have had varied and arguably weak ideological foundations. In the northern Levant, a number of states termed the "Neo-Hittite" states garnered support by modeling themselves as heir to the defunct Hittite Empire (Van de Mieroop, 2004). As the Aramean societies gained greater control over the northern Levant, the ideological justification for the state, that is, the rule of the elite, became more ethereal:

> It was the Arameans, however, who formed the most important new population group that held political power in the west. During the centuries of the Dark Age, they took control over states throughout Syria and expanded their political influence, at the expense of the Neo-Hittites and others, up until the eighth century. Their states were often referred to as the "House of" an ancestor, and the inhabitants were identified as his sons, acknowledging a tribal background. Some of these ancestors are attested historical figures. For example, Gusu, the ancestor of Bit-Agusi, was the opponent of the Assyrian Assurnasirpal II around the year 870. But the territorial claims of the tribes and their control of urban centers led to different designations of the states at the same time. When the Bit-Agusi turned Arpad, some 30 kilometers north of Aleppo, into a major city, their kingdom was also called Arpad. Similarly, what we usually call "Israel" was referred to by the Assyrians as the "House of Omri," after its ninth century kings, or as Samaria after its capital. The term "Israelite" was rarely used. Another designation of Aramean states, especially in the Bible, included the term Aram, usually coupled with the name of a region or a city, for example, Aram-Damascus. (Van de Mieroop, 2004, 211)

The Levant was a crossroads of a great many diverse cultures. Whereas the Early Bronze Age urbanism was based primarily on relations with Egypt,

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

the urbanism of the Iron Age was based on a truly multicultural trading economy. This was perhaps best seen along the coast in Philistia and in the Phoenician cities that could maintain their independence like the emerging Greek city-states across the sea. The larger territorial states were primarily inland affairs. Israel grew under David and Solomon and then slowly broke down into smaller polities throughout the period. Such shifts were common in the Aramean states as well. Beginning in 880 BCE, however, a territorial state in northern Mesopotamia was once again consolidating the region into an empire: Assyria.

THE RISE OF ASSYRIA

In a world that a close reading of the Bible reveals was unbelievably violent, Assyria stood out, although its features were only an extension of a broader cultural pattern (Van de Mieroop, 2004). Even the most "civilian" of jobs was relegated to a military position, a vast military hierarchy centered around the king. The role of the king was conceived as conducting war for the national deity, and thus all wars were holy wars and all territory belonged to the Sovereign Lord of the Universe, Assur. All people were thus subject to the King of Assur, and he merely put down rebellions. During the Middle and Late Bronze Ages, Assyria struggled with the Old Babylonian Empire and the Mitanni state but was nevertheless treated as "equal" in the Amarna Letters, although the king of Babylon was distressed at one point as he considered Assyria his vassal state (Moran, 1992). With the collapse of Mitanni during the Late Bronze Age, Assyria attempted to expand with some success, but was met by Hittite resistance. As the Hittite Empire collapsed amid the Great Catastrophe, Assyria was free to secure its territory at least. Compared to earlier periods, the early Iron Age economy was weak, however, and even Assyria and Babylon were troubled.

Assyria had experienced up and downs since the early second millennium. We first hear of the city in relation to its role in the Middle Bronze Age trade network, and as such we cannot say that the empire's militarism was there from the beginning. Van de Mieroop (2004) notes considerable diplomatic relations during the Middle Assyrian Empire (1350–1050). After a silence in the historical record of over 100 years, in 935 BCE, palace records begin again, and Assyria had begun its rebirth. The Middle Assyrian road system was rebuilt, and the upper Euphrates Valley was retaken from Aramaeans. When Assurnasirpal II assumed the throne in 883 BCE, the Assyrian homeland was ready for a sustained campaign of expansion. Assurnasirpal then pushed to the foothills of the Zagros Mountains in Iran and the Taurus Mountains in Turkey, thus unifying all of northern

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

Mesopotamia under Assyria. He then moved the capital from Assur to Kalhu.

His son, Shalmaneser III, ascended the throne in 858 BCE. His first task was the domination of the Aramaean states across the Euphrates. The goal was not empire but rather the securing of safe passage to the Mediterranean and the Aramaean states by creating vassals. Vassals were requested (required) to pay tribute and supply troops when necessary, the subjugated king functioning as a "governor" but still retaining at least the appearance of independence. In Syria, the Assyrian threat from across the Euphrates inspired a sense of unity among the Levantine states. At the Battle of Qarqar in 853 BCE, Shalmaneser faced a coalition of:

> 1,200 chariots, 1,000 cavalry, and 20,000 troops of Hadad-ezer of Damascus; 700 chariots, 700 cavalry, and 10,000 troops of Irhuleni, the Hamathite; 2,000 chariots and 10,000 troops of Ahab, the Israelite; 500 troops of Byblos; 1,000 troops of Egypt; 10 chariots and 10,000 troops of the land of Irqanatu; 200 troops of Matinu-Ba'al of the city of Arwad; 200 troops of the land of Usanatu; 30 chariots and [ ],000 troops of Adon-Ba'al of the land of Shiannu; 10,000 camels of Gindibu' of Arabia; [ ] hundred troops of Ba'asa of Bit-Ruhubi, the Ammonite. (Quoted in Van de Mieroop, 2004, 212–213)

Assyrian power could inspire such unity, but its absence would result in a resumption of hostility among the Levantine states.

Cosmic Struggles in the World of the Levant

The historical books of the Bible give us a clue as to the world of the Levant during this time. The Books of 1 and 2 Samuel detail David's ascension and reign, likely during the early tenth century, as King of Israel and the growth of the kingdom over a vast expanse under his leadership. As noted earlier, the kingdom was neither stable during his reign nor that of his son, Solomon, and the kingdom split into north and south after Solomon's death. The kingdom further disintegrated, with Judah losing control over Edom and Israel over Moab. Alliances among kingdoms were fleeting, with Israel aligned with Judah at certain times and at other times, a sworn enemy. Basic to this cultural milieu was the notion of a national god, equated with YHWH in both Judah and Israel during the combined kingdom. Indeed, as noted earlier, YHWH and El were equated with one another in order to forge national identity by merging the traditions into one syncretistic belief. At several points, Genesis 17:1, and 35:11; and Exodus 6:2, God refers to himself as "El Shaddai," or "God Almighty" in most English translations (Cross, 1997). The Priestly, or P, source accounted for the difference in the names YHWH and El by having

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

God say to Moses, "I am YHWH. And I appeared to Abraham, to Isaac, and to Jacob as El Shaddai, and I was not known to them by my name, YHWH" (Exodus 6:3; Friedman, 2003, 128).

According to the book of 2 Kings (2 Kings 3), Jehoram King of Israel, who had apparently returned to the worship of El after his father had worshipped Ba'al, allied with the kings of Judah and Edom to reclaim Moab, an Israelite vassal across the Jordan River. Through the divination of the Prophet Elisha, they are given instructions by YHWH for provisioning their horses with water and then to defeat Moab and its king, Mesha. The instructions were followed, and the Israelites were granted an apparent success. In desperation at the city of Kir-hareseth, Mesha killed and burned his oldest son—a ritual known throughout Canaan as a *'mlk* sacrifice—as an offering to the Moabite national god Chemosh. At this point, "the wrath against Israel was so great that they gave up the siege and returned to their own land" (2 Kings 3:27). The Catholic edition of the New American Bible notes this line as meaning, "the wrath of Chemosh, the Moabite god to whom the child was offered. He was feared by the Israelites who lost heart on foreign soil." The episode shows the association of nations with a specific patron god, and whether it was the Moabite god or the sacrificial ritual to him that drove the Israelites and their allies from Moab, Mesha was no longer a vassal of the Israelite king. If there is any doubt, one may look to the Mesha Stele for the Moabite version of events. The language was quite "biblical," but the king and his god are not:

> I am Mesha, son of Chemosh, the king of Moab, the Dibonite. My father was king over Moab for thirty years, and I became king after my father. I made this high place for Chemosh…because he has delivered me from all kings, and because he has made me look down on all my enemies. Omri was the king of Israel, and he oppressed Moab for many days, for Chemosh was angry with his land. And his son reigned in his place; and he also said, "I will oppress Moab!" In my days he said so. But I looked down on him and on his house, and Israel has been defeated; it has been defeated forever! (Gibson, 1971)

In this passage, the god Chemosh is credited with Israel's defeat as he possibly is in 2 Kings as well, and perhaps as significantly, his anger with his people is cited as the reason for their domination by Israel. The stele dates to circa 850 BCE, and it is notable not only that their god is credited with their "deliverance" from Israel, but that the god's anger with the people is blamed for the destruction, just as YHWH's wrath is blamed for the Babylonian destruction of Jerusalem 300 years later.

War was thus conceptualized as a cosmic struggle between two deities. Within this context, the militarism of the Assyrians was a cultural response

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

to a violent social environment. The way to defeat violent states was to be more violent, and the way to goad a population into compliance was to make it a religious duty. In this way, the national deity itself was the creation of the regionalized urban-rural system as it sought to unify diverse city-states into one territorial state: the national god, most often the god of the dominant city in Mesopotamia, overruled local pantheons. Assur unified all of Assyria by virtue of being the head of the pantheon; in Babylonia, it was Marduk, in Moab Chemosh, in Israel, and in Judah it was YHWH.

Shalmaneser III carried out many campaigns in Syria and against the northern kingdom of Urartu, yet:

> Despite the high level of military activity, Assyria under Shalmaneser III was not an expansionist state. The borders established by Assurnasirpal were maintained, and campaigns beyond them were to protect them and to obtain booty and tribute. (Van de Mieroop, 2004, 228)

After Shalmanezer, Assyria experienced a minor decline until the ascension, in 744, of Tiglath-Pileser III. Tiglath-Pileser consolidated a truly imperial structure in the homeland and then pursued an expansionist policy of direct control over the vassals that were all too prone to revolt. However, direct control was not suddenly seen as particularly more desirable, as Assyria continued to try to keep local elites in power. However, as acts of rebellion in vassal states did not cease, direct control was increasingly seen as necessary. The conquest of Israel shows the typical progression.

In 738, Tiglath-Pileser III campaigned in the Levant and turned a number of states into vassals; he conducted his first campaign in the Levant, turning Hamath and Israel into Assyrian vassals while avoiding the more powerful Aramaean state of Damascus. In 732, the kings of Damascus and Israel invaded Judah, whose King Ahaz "took the silver and gold that were in the temple of YHWH . . . and sent them as a present to the King of Assyria" (2 Kings 16:8) in a bid for Assyrian protection. Tiglath-Pileser invaded and conquered Damascus, turning it into a province: Israel was reduced in size to the small kingdom of Samaria, losing about 75 percent of its territory and subject to a king beholden to and installed by Assyria. King Hoshea was loyal to Assyria for only a short time before his rebellion, and in 722 BCE, Assyria destroyed the capital of Samaria and assumed direct control of the territory of the northern kingdom. Israel was no more.

Judah remained a vassal and buffer against Egyptian animosity until the ascension of Sennacherib. In 701 BCE, King Hezekiah rebelled and triggered a disastrous invasion by Assyria, who ransacked the countryside and destroyed the city of Lachish. As a result:

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

> Hezekiah king of Judah sent to the king of Assyria to Lachish, saying, I have offended; return from me: that which thou puttest on me will I bear. And the king of Assyria appointed unto Hezekiah king of Judah three hundred talents of silver and thirty talents of gold. And Hezekiah gave him all the silver that was found in the house of the LORD, and in the treasures of the king's house. At that time did Hezekiah cut off the gold from the doors of the temple of the LORD, and from the pillars which Hezekiah king of Judah had overlaid, and gave it to the king of Assyria. (2 Kings 18:14–16)

Jerusalem was spared, but Hezekiah had been put back in place. The narrative did not reflect well on the king nor God, and so later in the same account (2 Kings 19:35) Sennacherib was defeated by an angel who killed 185,000 of his troops. While there is extra-Biblical verification of the sack of Lachish and the extraction of tribute on the walls of Sennacherib's palace in Nineveh, there is no mention of angelic activity. Afterward, Assyria turned to conquer Urartu, Babylon, Elam, and eventually Egypt.

Babylon was a unique problem for the Assyrians. Home to the prestigious cities of Sumer and Babylon itself, the Assyrians often treated the region with "kid gloves" as there were religious considerations. Assyria was a Mesopotamian society, and the centers of culture were in the south. Nevertheless, rebellions were necessarily crushed. In 689 BCE, Sennacherib sacked Babylon and declared the city could not be rebuilt, an act respectfully reversed by his son Esarhaddon who rebuilt the celebrated city. Esarhaddon turned his attention to Egypt, capturing Memphis in 671 BCE. When in 663 BCE, Assurbanipal took Thebes, Assyrian power had reached its peak and its demise came shockingly fast. Beginning in 652 BCE, Babylon was in revolt once again, signaling a sequence of events that ended in Babylon's independence in 626 BCE and the sacking of the Assyrian capital, now at Nineveh, in 612 BCE by the Babylonians and the neighboring Medes.

Babylonian and Egyptian Allegiances

The end of Assyria created a power vacuum quickly exploited by the Babylonians, by now controlled by an ethnic group known as the Chaldeans. They fought with Egypt for control of the Levant, with Babylon scoring a critical win at the Battle of Carchemish in 605 BCE. Levantine rulers were put in the unenviable position of siding with one power over another. The Judahite King Josiah was able to reassert control over parts of Israel and Philistia, for instance, putting him in conflict with Egypt and siding with Babylon. He was killed in battle with Egyptians in 609 BCE at the age of forty and replaced by Jehoiakim. Jehoiakim was himself replaced after a raid by Nebuchadnezzar of Babylon in 598 BCE in response to the king

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

switching allegiance to Egypt. His successor, Jehoiachin, ruled for only three months before Babylon returned. Jerusalem was soon under siege, and in 597, the king surrendered, resulting in the exile of much of the Judahite elite to Babylon and the installation of a puppet king, Zedekiah, on the throne. Zedekiah, possibly due to pressure from his own people and his inability to control them, rebelled in 587 BC. The city was again sacked:

> He (Nebuchadnezzar) burned the House of the Lord, the palace of the king, and all the houses of Jerusalem; every large building was destroyed by fire. Then the Chaldean troops who were with the captain of the guard tore down the walls that surround Jerusalem. (2 Kings 25: 9–12)

The rebellious king was forced to watch the execution of his family, after which his eyes were gored and he was deported, along with what was left of the Judahite elite, to Babylon. Jerusalem was, at least for the time, destroyed. The last two cities to be destroyed, Azekah and a rebuilt Lachish, were subject to the same treatment, as related by Tubb (1998):

> The archeological evidence fully supports the historical record, for everywhere in the excavated areas were found the signs of extensive burning. The last few days before the fall of Lachish are poignantly documented by a group of ostraca, letters written on potsherds in black ink, discovered among the burnt debris of the guardroom between the inner and outer city gates. They are written in ancient Hebrew script, and are mostly addressed to the military commander of Lachish, Ya'ush. They were sent from an officer named Hosha'yahu, who was in charge of a military outpost positioned somewhere between Lachish and Azekah. Most ominous of all is letter IV . . . which contains the lines, "we are waiting for the signal-fires of Lachish, according to all signs which my lord gives, for we no longer see the signals of Azekah:" the implications are clear. (121–122)

The final moments of Judah give clues to the role of the city at the time. Only 5 percent of the population lived in cities, and they were primarily the elite. The elite soldiers, mostly commanders, the political elite of the king's court, the priests of the temple. The artisans who produced the goods necessary to the state's functioning and for export, increasingly as tribute, were often also in the city. The remainder of the population was rural and largely worked the land or were pastoral nomads guiding their sheep. These were two different worlds, and the elite of Judah ultimately had more in common with the elites of other states with whom they shared interests than with their own countrymen. This is apparent when considering the culture not only of the Israelites but across the region.

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

THE MEDITERRANEAN WORLD TAKES FORM

With the fall of Jerusalem to the Babylonians, the Iron Age ended, and ancient history was once again marked by the rise and fall of great empires. In 539 BCE, the Babylonians were conquered by the Persians. Situated in modern Iran, a region long in interaction with Mesopotamia, the Persians ruled the Fertile Crescent and tangled with a new enemy: the Greeks. Mycenaean Greeks played an essential role as traders during the Late Bronze period and, as the Sea Peoples, had even contributed to its demise. Emerging from their own "dark ages" after 800 BCE, the age of classical Greece was composed of city-states in competition with one another in a manner similar to the Levant during the Iron Age. For the Persians, they would have been a tempting target.

Between 499 and 449 BCE, the Greco-Persian Wars raged between a sophisticated heir to earlier such empires in Southwest Asia and the Greek city-states. As immortalized in such films as *300*, the Persians are portrayed as tyrannical barbarians intent on destroying Greek civilization. It is a Western myth, and in truth, it was the Persians who represented the traditional "civilized" (should that term apply at all) polity. The Persians controlled the core, and the disunited Greeks were at the periphery of a world-system that they would in time conquer. The Greeks did not unify as a territorial state until Philip of Macedon did so by force in 338 BCE. By 322, the Macedonians had ended the Athenian experiment in democracy that, for male citizens, had lasted for over 150 years. Athens aside, other city-states looked similar in structure to those of Southwest Asia, ruled by kings limited in power by councils of elders and dependent upon a temple establishment for cultural support and a veneer of legitimacy. In one, Sparta, the level of militarization of the society is better described as the forerunner of a modern totalitarian state rather than a Western democracy.

The Greek victory over the Persians in 451 BCE and the subsequent peace treaty of 449 BCE, followed by Philip of Macedon's expansive policies after his rise in 359 BCE, was foundational for later events. Philip was instrumental in creating the League of Corinth, a coalition of Greek city-states, and as elected hegemon, planned an invasion of Persia. When he was assassinated in 336 BCE, he was replaced by his son: Alexander the Great. Considered one of the greatest military commanders of all time, Alexander ascended the throne at the age of twenty. By his death in 323 BCE, he had conquered much of the Mediterranean Basin, including Egypt, Persia, and Asia, as far east as modern India. He reportedly wept due to the belief that there were no more lands to conquer (Keay, 2010). Having amassed the most extensive empire then known, it is not surprising that it crumbled into a number of successor states upon his death, including the Ptolemaic Empire in Egypt and the Seleucid Empire in Syria. As we call it today, the Hellenistic Period spread

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

Greek culture, particularly its philosophy and science, over an immense area that resulted in a "global culture." Trade contacts accelerated throughout the region, and the world-system extended from the Atlantic to the Indian Oceans for the first time.

COLLAPSE AND REEMERGENCE

With the Late Bronze and Iron Age universes populated by established city-states, territorial states, and expanding empires, the root in urban-rural dynamics is easily lost in the drama of conquest and decline. The social dynamics were more complex, spanning broader geographies home to more people. As different as these societies were from earlier urban societies, the underlying dynamics shared a common logic of emergence from urban dependency.

Our model in chapter 1 predicted that as the caloric well—the demand for calories by a hungry population—deepened the resource horizon would expand. In time, on a calorie-rich plain, the creation of secondary centers would evolve to move resources more efficiently from the expanding periphery to the core. We noted that a population would already be resident in an adjoining center in the real world, and thus the neighboring population would be compelled through some means (peaceful or otherwise) to perform the role of secondary center in an expanding system. We are reminded of the gruesome archaeological record of this dynamic at Hamoukar as early as 3500 BCE, as well as the third-millennium account of war between Umma and Lagash. Based on the evidence of chapters 5 and 6, we can now add that although the model is mute about how caloric resources would be obtained from the wider resource horizon, we see that by the Uruk period and throughout the Bronze Age, the wise political decision to trade for luxuries and develop staples locally was the primary strategy exercised from Mesopotamia to Egypt. In other words, if we consider the model a reflection of the economy parameter, the actual practices reflect its interaction with political and environmental realities.

As the Bronze Age developed, the city-state remained a building block of larger polities, and as those polities grew, the urban-rural systems took on the efficiencies of a true world-system. Even if it were environmentally possible to produce a given commodity such as olive oil or wine in a region, if another could do so more efficiently, that region in time came to dominate such trade, allowing less suitable climes to concentrate on staples and commodities that could be efficiently produced and marketed. Urban economies not surprisingly became dominated by commodity production and the state, whether local or imperial, grew according to the transit functions accumulated at

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

those sites. As the system evolved, the interdependence of individual polities provided an incentive to control trade routes and sources of "exotic" products. For example, both the Hittites and Egyptians sought control over the Levant—a source of wine, olive oil, metalworking, and key trade routes.

Increased urban production transformed the nature of the "basic" economy vis-à-vis the luxury economy. As an urban center became more dependent on commodity production, particularly those that required exotic raw materials such as jewels or tin, the resources became part of the basic economy for the city and region. Simply stated, bronze working required tin and copper. As the system grew more interdependent, it was not only a lack of food resources that could impair a city: a lack of raw materials could do the same, and during a time of near-constant warfare, a simple shift in control of a particular trade route could have this effect.

Distinguishing between political and environmental factors is difficult. A significant function, and even cause, of empire-building, was environmental: extending the accessible environment, extending a city's reach to include resources not locally available. In contrast, resource-starved environments were often avoided by central authorities. One is struck by the Assyrian and Babylonian avoidance of the Arabian Desert between Southern Mesopotamia and Canaan, and similarly by the thin ribbon of the river valley comprising the majority of the Egyptian state. Once established, political structures became part of the environment, and cities were frequently local power centers of territorial states and symbols of their grandeur and oppression. As in earlier periods, the social structure was "written" in the environment. Viewed this way, early Israelite disdain of Canaanites can be understood as ruralites reacting to urban oppression in the name of benefiting the Egyptian state.

The interdependency of so many cities in so many regions provided stability against regional catastrophes, but a prolonged period of "bad luck" as at the end of the Bronze Age could and did result in a systemic collapse. This process was aided by contradictions in the system itself. The Egyptian New Kingdom was extraordinarily powerful but rested ultimately on the exploitation of rural labor in its constituent city-states. In Canaan, even during the good years of Amenhotep III and Akhenaton, bands of Habiru roamed the less controlled hill country and raided the cities. As the world-system collapsed over a 100 years or more, these cleavages were both consequences and causes of further weakness. By the beginning of the Iron Age, Egypt had survived but had lost its Asian possessions.

The period that many would associate with Biblical history is a record of the urban-rural systems of Canaan reorganizing around rebuilt small territorial states. In this instance, the state is as much a cultural construction as physical space, and the speed with which Iron Age events blended them back into empires is a reflection of the knowledge of state formation and elite

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

desires to build them. It seems unlikely that the "Israel" of the Bible was more than an ideological and cultural construction for more than the period of David and Solomon: the Bronze Age kingdom of Jerusalem known from the *Amarna Letters* is roughly identifiable as the territory of Iron Age Judah, and after Solomon, the northern kingdom of Israel, roughly identifiable as the Bronze Age kingdom of Samaria, revolted against their Judahite overlords. Several of the Amarna Letters detail conflicts between Jerusalem and Samaria during the Late Bronze Age, and it is unlikely that the two city-states were naturally part of the same state (Finkelstein and Naʾaman, 2005). Indeed, the kingdom of David and Solomon was comparatively short-lived. Despite the meager historical realities, the concept of "Israel" remains a powerful ideological concept even today.

Of course, our case study of Israel is not the whole story. Neo-Hittite kingdoms to the north proliferated, eventually to be conquered by the Assyrians. Along the coast, Canaanite populations expanded and migrated throughout the Mediterranean Basin and known to the Greek historian Herodotus as Phoenicians. Their descendants would settle the cities of Carthage and Utica along the North African coast, bringing their religious customs with them. And with the rebound from the Bronze Age came the same and even greater levels of international trade and interconnectedness. As the Bible says of the Canaanite city of Tyre along the Lebanese coast:

Men of Rhodes trafficked with you;
many coastlands were your agents;
Ivory tusks and ebony wood
they brought back as your payment.
Edom traded with you for your many wares:
garnets, purple dye, embroidered cloth,
Fine linen, coral, and rubies
they gave you as merchandise.
Judah and the land of Israel
trafficked with you:
Minnith wheat, grain,* honey, oil, and balm[g]
they gave you as merchandise.
Damascus traded with you for your many wares,
so great was your wealth,
exchanging Helbon wine and Zahar wool.
Javan exchanged wrought iron, cassia, and aromatic cane
from Uzal for your wares.
Dedan traded with you for riding gear.
Arabia and the sheikhs of Kedar were your agents,
dealing in lambs, rams, and goats.

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

The merchants of Sheba and Raamah also traded with you,
exchanging for your wares the very best spices,
all kinds of precious stones, and gold.
Haran, Canneh, and Eden,
the merchants of Sheba, Asshur, and Chilmad,
Traded with you, marketing rich garments,
purple cloth, embroidered fabric,
varicolored carpets, and braided cords.
The ships of Tarshish sailed for you with your goods;
You were full and heavily laden
in the heart of the sea.
(Ezechiel 27: 15–26)

The rebuilding of this Mediterranean world-system led to its fullest fruition: the Roman Empire and a world-system that would span the Eurasian landmass (McLaughlin, 2018). Unlike the Bronze Age civilizations, Romans would know of money and credit, the British Isles and Chinese silk, and a Mediterranean Basin subject to one overarching government. At the opposite end of this ever-expanding world-system was the Han Dynasty, its hitherto unknown counterpart. Across the oceans from each great empire, a landmass beyond the imagination of any "Old World" resident followed its own trajectories of social evolution.

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

Chapter 8

Dynamics Culminating

The rebuilding of the Mediterranean world-system brings us—finally—to the period many consider to be the root of Western civilization. Of course, after 3,000 years of urban-rural dynamics, empire building, and system expansion, the Greco-Roman world is as much a culmination of processes as the root of anything. The rise of the Roman Republic and the Empire that followed brought the Mediterranean world-system under a single polity, remnants of which lasted to the fifteenth century as the Byzantine Empire. In the early Common Era, the empire witnessed an efflorescence of economic vitality not matched again in the West until the eighteenth century. Rome also extended its reach to meet, ever so tenuously, the Han Empire in China, thus trading with a world-system with origins and traditions quite unlike those of the Fertile Crescent. As the logic of urbanization met a high-water mark of sorts in the Roman Empire, it is appropriate to revisit the story so far.

URBAN-RURAL DYNAMICS AND THE ROMAN EMPIRE

In chapter 1, we noted that social systems are Complex Adaptive Systems (CAS). Composed of individual agents, the interactions among them produce emergent characteristics that guide the system and, in a sense, give it life. Those individual agents are, of course, people. To paraphrase: the whole is greater than the sum of its parts. It is this systemic logic that Marx (1981) described as the "logic of capitalism," but we argue that underlying this logic is the logic of urbanization, itself governed by the complexity of the social system evolving over time.

Central to the emergence of early urban societies was urban dependency. As settlements grew and outstripped their local environments, deepening

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

their caloric well, the resource horizon required expansion. Successful expansion into new hinterlands brought renewed success in reproduction and population growth, again deepening the caloric well and further necessitating the expansion of the resource horizon. Growth requires expansion, expansion leads to growth. This underlying mechanism of urban dependency can drive settlements to ascend to regional domination as higher-order centers. It may alternatively usher in collapse as success is difficult to achieve in an increasingly crowded field of competing urban-rural systems. What appears to be most elusive is any form of stability as urban dependency continually holds energy balance at bay.

Our model in chapter 1 predicted the creation of secondary centers to more efficiently expand the resource horizon while economizing on transport costs. In fact, we witnessed this happen in the Fertile Crescent during the Ubaid Period with its rudimentary two-tier urban-rural systems. As populations expanded over time, urban-rural systems became more complex and wars of conquest were evident during the mid-fourth millennium BCE. During the fourth millennium, the rise of cities held a complex array of technologies, such as writing, and ever-more-complex social stratification, governed the rudimentary city-states. By the Early Bronze Age (third millennium), leagues of city-states formed for defense in an environment that was increasingly violent, and empire building in the form of such territorial polities as the Akkadian Empire of Sargon the Great attempted to exert political control over the large expanses of an urban-rural system that was regional due to a more modest resource horizon.

A territorial polity's primary goal is to achieve energy balance between the population and the environmental resources required to support it. This, of course, means access to food, but in an economy dominated by urban production for trade, access to raw materials for manufacture becomes a part of the basic economy. Without such access, the system risks collapse. As CAS, the interaction between the economy and the environment was only part of the story: political control of the environment required both the ability to project force when necessary and cultural, that is, ideological, tools to exert hegemonic power.

The tools of ideological control were lain long before the rise of Rome. During the Neolithic, there were various spiritual belief systems, evident at such sites as Gobekli Tepe, Jericho, and Çatalhöyük, each with evidence for distinct spiritual practices even allowing for a degree of overlap among them. Without central authorities during the Neolithic, the utility of spiritual practices for political control was limited. With the birth of the first temples during the Ubaid period, the dedicated priesthood was charged with administering the fields, including the accumulation of knowledge necessary to do so. This included ritual practices intended to win the favor of the spiritual realm,

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

laying the foundation for more intense hegemonic power. By the Bronze Age, the Sumerian kings looked to the religious authorities, particularly the priests of the temple at Eridu, for divine sanction of their earthly power. Once established, such a relationship between religious authority and political power would be a constant theme in every city-state and territorial polity in the Mediterranean world-system. By the rise of Rome on the edge of a world-system dominated by Asian and African states in the eighth century BCE, this relationship between religion and power was well established and accepted as part of the natural order—the distinction between "religion," "science," and "politics" is a modern invention.

Early Culture of Rome

The Roman Empire was, by the turn of the Common Era, a multiethnic society that spread from one end of the Mediterranean Basin to the other. The multiplicity of religious cults found in the empire reflected the variety of cities, each with its own patriarchs conquered by Rome. The empire's polytheistic religious system was highly syncretic: goddess figurines often featured many of the same characteristics as those dating to the Neolithic, with hands cupped beneath the breasts and an incised pubic triangle. But there were multiple goddesses, each with their own personalities and divine traits. For example, in Canaan alone, three major Late Bronze Age goddesses, Asherah, Astarte, and Anat, were prominent in regional mythologies. In the Ba'al Cycle, Asherah was the mother of the gods and consort to the creator, El. Her daughter, Anat, was portrayed as a teenage girl, impulsive and sexually hungry, was so angered by the death of her brother and lover Ba'al that she slashed her way through the valleys until human blood washed to her knees—all that on her bid to save him (Coogan, 1978; see also del Olmo Lete, 2004). Asherah appeared in earlier Akkadian texts as Athirat, the wife of creator god Anu, and in Egyptian texts as Qudshu; as noted in chapter 7, she was possibly revered as the wife of El (the Hebrew God) before the fall of Jerusalem in 587 BCE. In a similar vein, Canaanite Astarte was identified as Mesopotamian Ishtar and as Aphrodite to later Greeks. Indeed, the nature of syncretism among Mediterranean religions can be confusing: all three goddesses were revered as one at times in Egypt, for example, and at an early date, Ishtar was also worshipped as the wife of the Mesopotamian creator god Anu. In any case, the goddesses and the symbolism associated with them were retained and evolved from Neolithic times forward, and they continued to be powerful symbols of feminine power and fertility in Ancient Rome. Indeed, the cult of Venus—a Roman version of Greek Aphrodite, Canaanite Astarte, and Mesopotamian Ishtar—was popular among women and men, and the cult of Egyptian Isis was a serious challenger to early Christianity.

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

If women fared well in the religious realm, it was not due to the lingering effects of matriarchy. By Greco-Roman times, the *oikoi* was further evolved from the earlier Mesopotamian versions: headed by the father, the *paterfamilias*, or the eldest son upon his retirement. Within the home women likely held considerable power, but in dealing with the outside world—the state, other *oikoi*, and customers—it was men who gained the upper hand. The specific time period and culture in which the transition from a relatively egalitarian balance between men and women and the emergence of full-fledged patriarchy is difficult to pin down. The transition was clearly underway during the Neolithic and accelerated with the emergence of the first cities and their *oikoi*; with a diverse array of cultures, multiple systems certainly existed. As today, the particular individuals involved and the family cultures in which they were found defy a macro-level analysis with any real certainty. However, what is certain is that the period of Classical Greece (fifth and fourth centuries BCE) and the entirety of Roman dominance are marked by patriarchal relations. Roman senators were nearly always the *patresfamilias* of their respective families, and the early success of Christianity among women was in part a response to the experience of male oppression.

The transition from a comparatively egalitarian Neolithic to patriarchy took place during a similar time period as the increasingly complex caste and class system; patriarchy and class were intertwined from the beginning (Flannery & Marcus, 2012). The rise of the temple during the Ubaid period led to the emergence of a sagely caste, the priests, and in time the scribes responsible for the administration of the agricultural regime. By the rise of cities, a military caste had arisen headed by the king, and the dance between these castes for legitimizing rulership became a constant over the ensuing millennia. The merchant caste concentrated on trade and production and was necessary to the success of the other castes. Within each caste, a particular subculture reflected the knowledge and mindset required to perform the administrative functions. For the sages, the accumulation of knowledge, theological and ritual practices, and protocol were central to the priests' livelihoods and their retainers. For the military, an emphasis on marshall practices, respect, and hierarchy predominated; for merchants, it was the accumulation of wealth and ever more exotic goods.

The Roman Economy and Stratification

Within each caste there were social class divisions, and this cross-stratification was found throughout the society. Scribes were educated within the sagely institutions, specifically scribal schools, but were increasingly necessary throughout the social order: by the Roman Empire they were found in the service of the temples, the imperial government, and the various merchant

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

houses. Skilled artisans, such as potters, metallurgists, and other trades, plied their respective crafts as did other members of the class but performed different tasks depending on the caste with which they were affiliated. A metallurgist in imperial service might be dedicated to the crafting of weaponry, a set of skills of limited utility to the crafting of cult paraphernalia in the temples. The bulk of the population was seemingly outside the caste system, their class status as peasants or slaves was more central to their identity than their caste. In the Indo-Pakistani caste system, the top three castes would become known as "twice-born," the commoners and untouchables members of lower castes; they were simply commoners in the Mediterranean world.

The class dynamics found today are quite different, but certain basic social patterns are likely timeless. In *Distinction*, Bourdieu (1986) argued that members of the elite classes—roughly the upper 20 percent in the modern United States—strive to distinguish themselves through the accumulation of status goods in particular fashions or styles unavailable to the lower classes. Those just below in the social hierarchy, such as the middle class, seek to affiliate themselves with the elite classes by accumulating such goods themselves, often settling for lower-priced versions. The eventual ubiquity of what had previously been elite class fashions among the lower classes eventually lead members of the elite classes to seek out new or more exotic items to (again) distinguish themselves from those they deem inferior. Built into this dynamic is an elite class tendency toward *exoticism*: the cultural stress on exotic goods as markers of social superiority. We can see this tendency in fashion in clothing, art, and other aspects of material culture, but it is also evident in such services as restaurants and even cuisine. Such a dynamic is not new: it is at the root of elite gifts as expressed in the *Amarna Letters*, in the economies of dedicated facilities in Canaan for the production of olive oil for export and the even earlier trade in jewels from Central Asia during the Uruk period. By the Roman Empire, the elite thirst for ever more exotic trade goods would lead to an accelerating trade with the Han Empire for silk and other goods.

Roman Polity and Expansion

The elite thirst for exotic goods dictated the course of the Roman Empire. The expansion of the empire further into Western Europe may have been an obvious geographical course of action, but the woodlands of Gaul and Britain added little in the way of exotic fare. By the early Common Era, the real prize was to the east: Persia. Persia first arose in the periphery of the Assyrian and Babylonian empires, and in 539 BCE, Cyrus the Great entered Babylon as the victorious king and immediately placated the Mesopotamian gods by offering sacrifice to their honor. The acceptance of the culture of the conquered did not end there: after freeing the Judahite elite to return to

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

Jerusalem to rebuild the temple, Isaiah 45:1 records him as a messiah sent by God himself. The relative respect of their subjects and the willingness to learn from them helped the Persians grow an empire that stretched from the Aegean in the West to Central Asia in the east. Greek history records the defense against the overwhelming Persians, and when a young Macedonian named Alexander ascended the throne after the death of his father, much of his work of conquering all the known world had largely been done for him. Alexander defeated the Persians, used their highly advanced road network to propel himself eastward, and united the world from the Mediterranean to India. Upon his death, his empire broke into three sizable empires, and the Hellenistic world was born.

In a like manner to the Persians, Rome grew in the periphery of the "known world." At its height, it turned from further pursuits into comparatively backward Germany—where nomadism remained—to dreams of conquering the newly constituted Persian Empire. Persians controlled the territory once held by the Hellenistic Seleucid Empire, roughly from Mesopotamia to India. The draw was not merely food: with Carthage and later Egypt's defeat, Rome could import so much wheat at state expense that all citizens were guaranteed a regular allotment. This not only allowed the city of Rome itself to grow to heretofore unseen population sizes—it was the first city in world history to attain a million residents. Because of extensive trade, it also allowed the Italian countryside to focus on luxury foods (Morley, 1996).

Early in the Common Era, Rome had expanded to its peak of power and affluence. The span of the empire stretched across the Mediterranean, but it was the fall of Egypt to Rome that introduced merchants and elites to a new range of exotic goods. McLaughlin (2018) notes:

> The world changed when Rome annexed Egypt and gained access to the Red Sea shipping lanes that lead into the Indian Ocean. Within a decade, there were over a hundred Roman ships sailing to India and the Mediterranean markets were suddenly inundated with goods from across the eastern world. These imports included products such as incense, spices, gemstones, and silks. The Roman Empire imposed a quarter-rate import tax known as the *tetarte* on these commodities and as trade increased, the *tetarte* began to generate enormous new revenues for the imperial regime. It is estimated that by the first century AD, foreign trade was supplying Roman government with perhaps a third of the income required to finance the entire empire. (xiii–xix)

In contrast to their European holdings, such as Gaul and Britannia, Egypt provided revenue and food that enabled even the middle classes to live a lavish lifestyle.

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

From Judea and Syria to Persia and India, the seduction of Asia was spices and, at first in small trickles, silk. As Rome and China stretched their traders across the Eurasian landmass, two world-systems became one. Frankopan (2017) mused:

> Two millennia ago, silks made by hand in China were being worn by the rich and powerful in Carthage and other cities in the Mediterranean, while pottery manufactured in southern France could be found in England and in the Persian Gulf. Spices and condiments grown in India were being used in the kitchens of Xinjiang, as they were in those of Rome. Buildings in northern Afghanistan carried inscriptions in Greek, while horses from Central Asia were being ridden proudly thousands of miles away to the east. (26)

This ancient globalization did not occur because a world-system grew, but rather because multiple world-systems, rooted in urban-rural systems, grew together and coalesced.

ANOTHER WORLD-SYSTEM

Nearly 55 million years ago, a large chunk of the Earth's crust careened into the Eurasian landmass, thrusting a string of mountain ranges along the entire collision zone. These include the Himalayas and the Hindu Kush, and some of the tallest mountains on Earth, including Mount Everest. As impressive as the peaks are, the breadth of the ridges rises to impressive heights as well, each more imposing than the next. To the north of what we now know as the Indian subcontinent lay the deserts and steppes of Central Asia, and to the west the deserts of Iran gave way to Mesopotamia and the Mediterranean Basin beyond. To the east, however, the thousands of miles of high mountains and arid plains created a barrier through which travel was difficult. When the Han envoy Zhang Qian traveled west to Central Asia and Persia in the second century BCE, he was met with Chinese silk in some Indian markets, but having "discovered" the region for the Chinese, he was intrigued that such a distant land knew of their wares. Indeed, prior to Zhang, the trade between China and India was a trickle of "down the line" commerce. The Chinese world-system had evolved in relative isolation from the Mediterranean system and its Fertile Crescent forebears, and now the two great empires of Eurasia—Roman and Han—were about to meet (Keay, 2009).

The geographical barriers between China and the Fertile Crescent and even the Indus Valley Civilization translated into demographic barriers as well. At the time toward the end of the Common Era, when the Han diplomat Zhang Qian explored Central Asia, the presence of other civilizations came

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

as something of a surprise to the emperors back home. Such relative isolation does not occur suddenly: it resulted from thousands of years of primarily (but not exclusively) independent social evolution. While the Fertile Crescent and the descendants of the Indus Valley civilization of Harappa evolved into significant centers of trade in the world-system spanning across southwest Asia into Europe and Africa, China did the same.

Like the Fertile Crescent, hunter-gatherers roamed the various environments of Southeast Asia for thousands of years. Like southwest Asia, the broad-spectrum revolution was a response to increasing population pressure, and possibly pre-dated that of Southwest Asia as evidence in China dates as early as 33,000 years ago (Zhang et al., 2016). After the Younger Dryas, as the Natufian culture was transitioning to the Pre-Pottery Neolithic in southwest Asia, domesticated varieties of millet (ca. 8000 BCE; Lu et al., 2009) and then rice (ca. 6000 BCE; Zhang et al., 2012) appeared in Southeast Asia. Like the earliest experiments in cultivation in the Fertile Crescent, these were grasses, and as anyone who has ever filled in a patch of lawn can attest, an easy plant to cultivate. The Chinese Neolithic followed a similar pattern toward urbanization: the caloric well deepened, the resource horizon expanded, and wars broke out between competing urban-rural systems. By the second millennium BCE, the Longshan Culture in the Yellow Valley was one of several late Neolithic cultures developing a hierarchy of settlements. For the Longshan, however, these primary centers were less like the religio-administrative centers of the Ubaid and more like military-administrative centers. Well planned and defended, the settlements were surrounded by rectilinear walls made of packed earth (Keay, 2009). The central plains appear to have become overpopulated, and competition led to a level of militarism earlier than in Mesopotamia. As a Chinese author described the situation during the Han Empire many centuries later:

> In the central provinces and central commanderies, cultivated land fills the borders to bursting and one cannot be alone. The population is in the millions and the land is completely used. People are numerous and land scarce. (Quoted in Harper, 2017, 32)

This population density appears to have started during the Longshan.

By the end of the second millennium BCE, there were cities in China, culminating in the highly mythologized Xia dynasty in the Yellow River Valley between 2070 BCE and 1600 BCE, followed by the more firmly attested Shang Dynasty. The Shang ruled over an expanded territory until 1046 when the Zhou Dynasty took over the region. Under the Zhou the maximum extent of the early dynamics was achieved, and much of the territory was lost to breakaway city-states after 771 BCE. This phase is known as the Western

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

Zhou, and the Zhou's partial dissolution resulted in the succeeding Eastern Zhou state during the Spring and Autumn Period (722–479 BCE) and the Warring States Period that followed, ending in the rise of the Qin Dynasty in 221 BCE. In both periods, the Eastern Zhou continued in weakened form as former territories warred, finally resulting in the Qin reconstituting a Chinese state under the ruler known as the First Emperor, Qin Shi Huan, known today for the massive army of terra-cotta warriors who guarded his (still unfound) tomb (Keay, 2009). The Qin were short-lived as an empire, but their ideological and legal precedence as being the first "empire" established a pattern of robust central control and an extensive bureaucracy that were mainstays of Chinese governance for thousands of years after. Beginning in 206 BCE, the Qin was replaced by the rebel Liu Bang, rebranded as Emperor Gaozu when ascending the throne as the first Han emperor. It was the Han who investigated the "western lands" and opened trade with Central Asia and Rome (Frankopan, 2017).

Like the expansion of the Fertile Crescent world-system to Egypt in the third–second millennium BCE, there was independent development of the system prior to coalescing together. Unlike the earlier expansion, however, there is little if any evidence of cultural interchange between China and Western Asia and Europe. Whereas Egypt was initially settled in the delta by migrants from the Fertile Crescent bringing Southwest Asian plants to northeastern Africa, there is no such influence in China. The cultivation of grasses is a similarity, but as noted, grasses are comparatively easy to cultivate. The species utilized were similar in terms of nutrition but specific to Southeast Asia. As such, the similarities between the two spheres, including being stratified agricultural societies with urbanism developing in response to administrative and military purposes, is not the result of cultural diffusion. They are independent responses to higher population densities, expanding resource horizons, and increasing urban dependency. Similarly, the elite emphasis on exotic luxury goods and the need to expand territory is rooted in urban dependency and, in the case of raids from nomads from the north, defense of cities and the agricultural fields necessary for feeding them. More ominously, the social distance created by social stratification was also antagonized by increasing urbanization. By the time of the Han, the peasantry was dismissed by the elite as "black-haired people" (Keay, 2009).

THE GOLDEN AGE

The Roman Climate Optimum, lasting from circa 25 BCE to 400 CE, was a warm period during which the Mediterranean Basin experienced above-average rainfall (Bianchi & McCave, 1999). During this period, the fullest

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

expression of the Roman Republic and Empire came to fruition, with expanding populations fed by abundant food production and a trade network benefiting from the comparative peace of an era with few large states (Morley, 1996). By the turn of the Common Era, Egypt's fall had awarded control of the Mediterranean to the Romans and the *Pax Romana* was established.

The city of Rome grew, reaching 700,000 in the city proper and a million in the city and immediate hinterlands. As the capital of an empire of 75 million people, a quarter of humanity at the time, the tremendous wealth of the elite and even the elevated standard of living of the middle classes was the envy of the world and impressive even by some modern standards. The city was more than a political capital. It was the single largest urban market on the planet at the time, similar in size to Salt Lake City, New Orleans, or Rochester, New York. As the largest city in the empire and likely the world, Rome has a hub home to consuming elites and their middle-class imitators, stretching its trade network to all corners of the known world to satisfy its customers. This is consistent with the model in chapter 1: the caloric well and subsequent resource horizon it produced most efficiently transported food and raw materials through the intercession of secondary centers, resulting in a rank-size distribution that spanned the empire and focused trade toward the center in Rome. This was true even after the founding of a new capital in Constantinople in 325. As so much of the trade was oriented toward Southwest Asia and, increasingly, Central Asia, many of the largest cities were in the eastern half of the Mediterranean world:

> Other great metropolises, like Antioch, Carthage, and Alexandria, flourished without the same fabricated political supports of the two capitals. Alexandria still held out the claim to be "the greatest of the cities of the inhabited world." . . . . These were the super-cities, but just beneath them, the landscape was dotted with great towns in the range of 50,000–100,000, places like Ephesus, Jerusalem, Caesaria, Sardis, Thessalonike, Apamea, Trier, or Milan. True cities, in the 25,000–50,000 range, places like Hermopolis or Hippo or Scythopolis or Bordeaux, were more common still. All of these, and many even smaller, would have had the familiar texture of the classical city, with public baths, colonnades, fora, and other amenities. (Harper, 2017, 186)

Over thousands of years of social evolution, the rudimentary two-tier settlement hierarchies of Ubaid Mesopotamia culminated in a rich urban-rural hierarchy, nearly modern in its proportions.

The trade network featured a well-developed market economy, complete with credit markets and insurance (Temin, 2013). As so much of the trade was by sea, and with distances increasing over time from the turn of the Common Era into the fourth and fifth centuries, these were necessary provisions. The

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

Pax Romana provided the military power to protect merchants and the legal framework and courts to provide protections less martial in character than the military could provide (Beard, 2015).

The intensity of trade for both food and raw materials brought traders from all points in the empire into the empire's vast cities. Harper (2017) related the following:

> The Greek orator Dio remarked that Roman Alexandria was "situated at the juncture, so to say, of the whole world and of the remote nations, like a marketplace of a single city that brings everyone together in one place." There he could see, taking in the city's entertainments, not just "Aithiopians and Arabs, but even Bactrians, Scythian, Persians and a few Indians." (97)

The diversity spread to the neighborhood level as well, with various ethnic or religious groups settling near one another. For example, nearly every major Roman city had a Jewish quarter centered on a local synagogue, a major factor in the spread of Christianity early in the Common Era (Stark, 1997).

Although the majority of the empire's population did not live in cities, the concentration of power and wealth in the cities resulted in an urbanormative culture. The social distance between those in the cities allowed for a certain romanticism of country life, as a poem from Claudian (370–404) shows:

> Happy he who has passed his whole life amid his own fields, he of whose birth and old age the same house is witness; he whose stick supports his tottering steps o'er the very ground whereon he crawled as a baby and whose memory knows but of one cottage as the scene where so long a life was played out. No turns of fortune vexed him with their sudden storms; he never travelled nor drank the waters of unknown rivers. He was never a trader to fear the seas nor a soldier to dread the trumpet's call; never did he face the noisy wrangles of the courts. Unpractised in affairs, unfamiliar with the neighbouring town, he finds his delight in a freer view of the sky above him. For him the recurring seasons, not the consuls, mark the year: he knows autumn by his fruits and spring by her flowers. From the selfsame fields he watches the sun rise and set, and, at his work, measures the day with his own round of toils. He remembers yon mighty oak an acorn, and sees the plantation, set when he was born, grown old along with him. Neighbouring Verona is, for him, more distant than sun-scorched India; Benacus he accounts as the Red Sea. But his strength is unimpaired and the third generation see in him a sturdy, stout-armed grandsire. Let who will be a wanderer and explore farthest Spain: such may have more of a journey; he of Verona has more of a life. (Claudian, n.d.)

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

The sentiment of rural life, defined here as *life on a farm* with a distinct lack of mobility, is glorified as a better life than an urbane trader or explorer. It is similar to the rural mystique found in modern societies, a glorification of rural life as simpler and more virtuous that is often quite out of sync with reality (Fulkerson & Thomas, 2019). Such idealization reflects the urbanormativity of a class of society so detached from rural labor that the presumed simplicity compared to urbane life in the city is attractive.

The elite of Roman society was among those most entranced with such sentiments, as it was they who were most separated from rural labor. Indeed, much of the elite's wealth came from the massive landholdings that elite families owned across a wide span of territory. At the top of the social hierarchy, the senatorial elite owned vast estates in the countryside, their agricultural production equaling approximately the production of 80,000 family farms every year. The estates took on the air of cities in their own right, equipped with temples and baths, and, of course, slaves to operate them (Harper, 2017, 182). It would not be until the early modern era when such wealth would be seen again in the West. Wickham (2005) notes that such wealth was "greater in relative terms than any other aristocracy ever" (156).

In the modern United States, it is notable that extreme levels of economic inequality and a pronounced concentration of wealth in the upper classes is accompanied by a wide dispersion of a similar level of wealth in the upper-middle classes, or the managerial-professional class (Reeves, 2017). He notes:

> The United States exhibits, then, both stubborn poverty and extreme wealth. But what is missing from this picture is the steady economic separation of the people who are just below, and sometimes temporarily members of, the top 1 percent: the upper middle class. It is true that the degree of separation increases toward the very top, especially for the top 1 percent, but the top fifth as a whole is pulling away from the rest of society. The gap between the top fifth—those with household incomes of $112,000 or more in 2014—and the 80 percent below them is the "Great Divide" in both the American economy and in American society. (23)

Reeves notes that this class "hoards" the opportunities in society in part through wealth but also in part through the sheer numbers of individuals and families involved. Compare this to Harper's discussion about the stratification system in Ancient Rome:

> [T]he dominant social process of the late Empire was not the concentration of wealth in a few hands. Far from being lop-sided, late antique society was dominated by middling persons, respectable but fragile, locked in networks of

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

> patronage. The late antique city was a hub of production, exchange, and services. It bustled with professional, merchants, and craftsmen of unpretentious means. Many of them clung to slender patrimonies. Only rarely do we have the opportunity to see the combined weight of this unspectacular prosperity. But the fragments of land registers from Egypt provide solid proof that modest land-owners and small independent proprietors were numerically dominant. (182–183)

These "middling classes" were marked by their skillset, and their ability to demand higher wages (or prices) was due to their holding of skills necessary to the functioning of society. It is, to a large degree, the definition of the "middle class" today (Wright, 1998).

As in all urban societies until the comparatively recent past, the peasantry was the largest single social class. As they toiled for wealthier landlords or, if fortunate, their own small lots, the peasantry also benefited from the technology of their time. The peasantry ate off of plates mass produced in Roman industrial works, paid for by the Roman coinage found at their sites (Harper, 2017, 183). The embeddedness of the rural peasantry in the urban-dominated economy functioned as a form of hegemonic control. The production of roof tiles or dinnerware was time-consuming and complicated, and it was simply more efficient to work the farm and buy such wares from firms capable of specializing in them. However, this also tied the peasant to the urban economy, and wider social structure, that required acceptance of the unequal terms of production.

At the bottom of the scale were the truly destitute. In cities, they were often beggars or petty criminals or prostitutes struggling for the next meal. Contemporary descriptions often compare them to animals, and it is likely that a considerable number were mentally ill. There was perhaps better access to food in the countryside, but shelter would have been an issue. However, much of the food even in rural areas would have depended upon harvest crops (a crime) or in many cases hunting animals that belonged to a local elite (also a crime).

The entire system was reliant on a class of slaves who provided much of the labor. Slaves were at that time often prisoners of war or those who, for whatever reason, found themselves sold into slavery: the child of a peasant who needed to pay bills, or a peasant who could not pay one's debts. Inhabiting a low status in Roman society, slavery was nevertheless not tinged with the racial animus of later time periods. Harper uses the number of slaves as an indicator of the social class of a household. Elites, for example, often owned many rural estates that could accumulate thousands of slaves. But slavery was found in households of the middle classes and the peasantry as well. Owning a slave was a mark of respectability and was common both in the cities and

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

the countryside. Slavery was so central to the Roman economy that Marx (1981) even considered a slave-based economy a "stage" before feudalism.

There was at least some ability to experience social mobility. Downward mobility could occur for many of the same reasons as today: illness, financial loss, a fire, and so on. Upward mobility was more difficult but nonetheless achievable. Slaves could work to earn extra funds and purchase their freedom, and some could start small businesses and grow their finances. Particularly in cities, food service was a vital street business: such delicacies as grilled mice on a stick functioned as the Roman equivalent of "fast food." For many, however, working one's way through a bureaucracy, sometimes a private firm but often in the military, was a less risky route to the middle classes and above. As the empire expanded, even the senate, traditionally reserved for Rome's inherited upper classes, opened to those who "worked their way up" and even those from the provinces. When the new senate of Constantinople was formed, the conservative senate in Rome was taken aback by the number of sons of middle-class occupations who had been admitted to the city's elite (Harper, 2017).

The Pax Romana was not, however, particularly peaceful. Rome was a highly unequal stratified society that provided an obnoxious level of luxury for its elite and even a pleasurable standard of living for the average person, but it was built on the labor of slaves and the suppression of provincials. Rome had no choice: the city of one million and its surrounding Central Italian countryside had long before experienced a regionalized urban dependency that required the import of food. Earlier empires had prioritized food production and imported luxuries, but Rome, by necessity, imported both. This required a strong military devoted to growth and the suppression of subject peoples who, at least in some cases, resented the invaders. Resistance to Rome was found empire-wide, but nowhere so institutionalized as in Judea (Goodman, 2007).

The economic basis of the empire required the suppression of rural peoples in distant provinces. The defeat of Carthage and its rich North African countryside allowed Rome to grow to magnificent scales, and the conquering of Egypt and its own Nile Valley breadbasket furthered Italian wealth. It is telling that the principal cities in both provinces were their ports: Carthage and Alexandria. From these cities the fruits of African labor were exported to Rome, and it was from these cities that centurions marched to ensure the order that produced such surplus. Urban elites in colonized countries benefited by working with Roman authorities, and more than a few grew quite wealthy indeed. They maintained an air of legitimacy on social relations: they were "all Romans now."

The legal framework that allowed for unprecedented trade also functioned to preserve order. Public demonstrations were viewed with considerable

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

suspicion and, when need be, state violence. Lest there be any doubt about the intent to oppress the locals, Roman citizens were by law treated differently, even in rare cases of execution. Citizens were executed infrequently, but the mechanism was typically beheading when they occurred: a fast and painless way to go. In contrast to citizens, slaves and provincials were more likely to receive more spectacular treatment. Crossan (1994) notes that

> The three supreme Roman penalties were the cross, fire, and the beasts. What made them supreme was not just their inhuman cruelty or their public dishonor, but the fact that *there might be nothing left to bury in the end* [emphasis in original]. That bodily destruction was involved in being cast into the fire or thrown to the beasts is obvious enough. But what we often forget about crucifixion is the carrion crow and scavenger dog who respectively croak above and growl below the dead or dying body . . . . I want to emphasize that Roman crucifixion was state terrorism; that its function was to deter resistance or revolt, especially among the lower classes; and that the body was usually left on the cross to be consumed eventually by the wild beasts. (126–127)

When, in 71 BCE, the slave Spartacus led a revolt, over 6,000 slaves were crucified along the Appian Way as a warning to future would-be rebels. Rather than elevated high above the road on the way to Rome as often depicted, the more accurate image of the dead and dying a few inches above the ground as dogs gnaw at what they could reach would be enough to keep order. If not that, then the stench.

Roman law was administered through a bureaucracy established to ensure the effective collection of taxes. Much of the empire was administered directly by the bureaucracy with military support—the army functioned as a modern police department in many provinces. Not all Roman territories were necessarily directly controlled. Like earlier empires, Rome maintained a number of vassal states that were nominally independent on the local level but pledged to Roman policy and, most importantly, taxation. In some cases, this relationship evolved. In Egypt during the last two centuries before the Common Era, for example, the independence was gradually lost as early generals received tribute in exchange for not sacking the country. By the time of the Roman General Pompey, Egypt was clearly a vassal state and remained so as Julius Caesar came to power and ended the Republic. When war broke out between his competing successors, Octavian and Mark Anthony, the alliance between Mark Anthony and Cleopatra resulted in the victorious Octavian ruling the Nile directly, and the country's independence was lost (Beard, 2015).

Similarly, Rome's initial foray into Palestine involved the appointment of the Idumaean King Herod to rule the entire region from the coastal city of Caesaria. Idumaea was of questionable Israelite Bona Fides as the country

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

was identified in the Hebrew Bible as Edom, a desert waste that, at times, was ruled from Jerusalem and at other times was independent. Herod was Jewish, but his ethnicity was a cause of discontent among some in Roman Judea; more importantly, he was a reliable ruler for Rome. The Temple authorities in Jerusalem were less reliable in terms of their religious criticism but functioned effectively to share power with the Herodian kings. This accommodation to Roman authority led to numerous resistance movements, including those of the Essenes, the Pharisaic leadership who often found themselves at odds with the Temple, and the various apocalyptic movements (Schiffman, 2010; Goodman, 2007; Crossan, 1998). When actual rebellions broke out in 66–73 CE and again in 132–136 CE, Rome responded violently: the spoils of the first war were used to build the Coliseum, and after the second war Jews were prohibited from entering Jerusalem (Goodman, 2007).

ANATOMY OF COLLAPSE

Like the end of the Bronze Age, the "collapse" of the Roman Empire is best explained by grappling with the complexity of the variables interacting over time. As in the Bronze Age, the "collapse" took place over a long span of time; in the case of Rome, centuries. In the Bronze Age, the loss of social complexity affected different regions in separate ways. In the West, *collapse* is an accurate description: Britannia reverted to an economic and social order less complex than the one the Romans had conquered (Harper, 2017). Gaul and the Iberian Peninsula similarly devolved into smaller constituent states. However, in other regions, the collapse was a less traumatic decline that favored the Eastern Empire centered on Constantinople. And, regardless of the status of the Roman state, the world-system that had emerged during its time continued for hundreds of years, now centered on the Indian Ocean.

In 165 CE, near the peak of Roman power, the empire was home to 75 million people (about twice the population of California). Based on that demographic strength, the economy was expanding. Roman emperors looked for new areas into which to expand the empire, and industrial production was at its highest level until the modern period. Rome spread across the seven hills, a streetscape of five-story *insulae*, or apartment blocks, presenting a density that would be quite familiar to those living in early twentieth-century New York. Although much of the empire was built of stone and brick, the level of deforestation—for building materials and fuel—was astounding (Chew, 2001). Deforestation results in a loss of heat as more sunlight is reflected away, and over time the human-caused deforestation combined with natural climate variations to bring the Rome Climate Optimum to an end. The result was cooler temperatures in some locales and drier conditions in others, and

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

lower crop yields throughout much of the empire. Given our current climate crises, it is tempting to stop here—the end of the Rome Climate Optimum brought the end of the Roman Empire. Nevertheless, Rome survived for centuries as the climate changed, and its successor Byzantine Empire for centuries more. A robust economic and political system can withstand such factors, albeit with some adaptation. As with the Bronze Age, it was a cascade of interacting variables that led to Rome's demise.

At this peak of Roman civilization, the most influential physician of the ancient world walked the streets of his adopted city. That physician was Galen, so influential that he would still be a mainstay of medical texts a 1,000 years later—perhaps because, unlike him, later physicians were reluctant to conduct autopsies and vivisections. Galen was an eyewitness to an epidemic that killed up to a third of those stricken and set in motion dynamics that would eventually lead to the collapse of the Western Empire hundreds of years later. The 165 event, known as the Antonine Plague after Emperor Antonius Pius, was followed by a second nine years later, sapping the empire of its demographic strength. McNeill (1998) ascribed the two epidemics to Smallpox and Measles, but historians are more likely today to see both plagues as smallpox (Harper, 2017; Stathakopoulas, 2017). The rise of smallpox at such a great level was not simply about a disease, but about an interaction between the microbe, *Orthopoxvirus*, and a human social environment that enabled death at massive scale.

Urbanization brought human populations together in ways quite different from the environments in which we evolved. People were crowded into dense population centers—Roman *insulae* being an extreme level of population density—but sanitation systems had trouble keeping up. Most Romans retrieved water from an assortment of public fountains throughout the city, private plumbing being a privilege of the wealthy. If infected, a fountain could spread disease throughout an entire neighborhood. Bathing and defecation took place in public baths, also sites of significant sexual activity, that were also centers of disease. Waste matter was washed away by periodic and massive flushing of the sewers underneath the baths, leading in most cases directly to the Tiber River. A pride of the Roman Empire was that this sanitation infrastructure, advanced in so many ways, was replicated throughout the Mediterranean, and so the disease ecology of Rome was found in every major city. The result was that Roman cities, like ancient cities everywhere, provided an opportunity for disease growth and transmission unparalleled during earlier stages of human evolution. Of course, these conditions were not new. By the height of Rome, cities had been part of the human environment for thousands of years.

The novel change in the early Common Era was the political economy spanning the Eurasian landmass, thus giving microbes in Southeast Asia

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

seeking victims among a partially resistant Chinese population a new set of susceptible populations to the West. In earlier times, Rome suffered most from the bacteria of its native environment, and summer was a frighteningly deadly time of year. Malaria spread with insect bites, and cholera festered in polluted water. Those with means escaped the city to rural estates, a foreshadowing of the "summer season" that would echo in nineteenth-century upstate New York. Harper (2017) notes:

> It is telling that the naturalist Pliny the Elder believed the elderly were spared the onslaught of plague: it implies that their acquired immunities from previous infections buffered them when native diseases flashed into mass mortalities. The close association of epidemic years with short-term environmental disturbance, like floods, also betrays the guilt of the local disease pool, spun up by the climate fluctuation into a surge of mortality. The Roman world was repeatedly the victim of its own boiling broth of microbes. (88)

Living in the lands between the Sahara Desert and tropical wetlands of Africa, however, the humble gerbil began a process that would reverse that.

The Naked-Soled Gerbil was host to a species of *Orthopoxvirus*, a close relative of *Variola major*—the human smallpox virus. During the Paleolithic, or even the Neolithic, the virus might have remained a local phenomenon, but Rome was the major power of an emerging world-system that expanded to China. At the center of this trade was the Indian Ocean, and sea-faring ships braved the monsoon winds to connect the Horn of Africa, Yemen on the Arabian Peninsula, India, and China in the burgeoning network that drew Roman eyes peering east for riches. For example, Frankincense was traded on the Arabian Peninsula as early as the Uruk Period, whereas Myrrh originated from the Horn of Africa: both plant products are offered to the Baby Jesus in the New Testament. China, of course, was the only source for silk—a source of wealth for the Han and a state secret (McLaughlin, 2018). The trade in such products enabled a virus well-equipped for transmission, such as through air droplets from a cough, to travel from land to ship and thus everywhere. The earliest evidence of the Antonine Plague, named after the emperor in whose second-century reign it emerged, not surprisingly was recorded in Yemen, with successive accounts of the pestilence drawing closer to the city.

The demographic effects of the Antonine Plagues were dramatic but uneven (Harper, 2017). Not every location was in the crosshairs of the disease, and a mortality rate of 30–40 percent ensured that most people who contracted the disease survived. As it was more likely to kill the young and the elderly, the age structure of a community had a serious impact. At its peak in Rome, up to 2,000 people per day died; in some rural villages, the entire population either died or was forced to flee due to the reduced population. It is estimated

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

that between 10 and 20 percent of the population perished across the empire, and some estimates approach 24 percent. The reduction in population system-wide had profound impacts. The military found it difficult to replace soldiers who had died with healthy proxies. Labor shortages at silver mines led to the devaluation of the coinage, in turn leading to inflation. The combination of inflation and a reduced military similarly led to increased difficulty in the ongoing war against the Persians. Harper summarized:

> In sum, all of the evidence—from the debris of an unparalleled religious response to the literary reports of a mortality event spanning the whole empire, from the glimpses in microcosms of the plague's violence to the widest-scale view of its economic effects—are consistent with the conclusion that the Antonine Plague was a mortality event on a scale the empire had never experienced before. (114)

The plague prevented the return of the Roman Mission that had contacted the Han Chinese, who, in turn, seemed bewildered that their earlier guests did not reappear (McLaughlin, 2018). By the third century, Smallpox was savaging China as well—the gift of a trade network that spanned the known world. In Rome, the writings of Marcus Aurelius, successor of Antonius Pius, speak to an emperor who spent a lifetime mimicking in vain the expansionary policies of his forebears: the lack of soldiers, the emerging equilibrium back home, and the repercussions of at least eight million, and perhaps twice that many, deaths that marked the end of the Roman Golden Age. Still centuries away, the collapse had begun.

By 180, the Antonine Plague was over, and an uncomfortable recovery took place in a less populated environment in which the climate itself was changing, resulting in waves of famine. By 251, some sort of plague was back and would last another twenty years. The Plague of Cyprian has generated more controversy in terms of causes. Stathakoupoulas (2017) claims it to be another round of smallpox, whereas Harper (2017) blames a hemorrhagic fever similar to Ebola. McNeill (1998) believed it to be Measles. For our purposes, the specific disease matters less than the effects. Like the Antonine Plague, the population of the empire was reduced with similar economic and military effects. The Plague of Cyprian did not represent the first such dire news—it came on the tail of a century of floundering in Rome, including ineffective military campaigns, inflation, famine, and of course, the diseases themselves. Unlike the Antonine Plague, which had occurred during a period of Roman triumphalism, the political and cultural response to the Plague of Cyprian would build on a century marked by partial recoveries stunted by renewed misfortune.

The 240s witnessed a highly active monsoon season in the Indian Ocean tied with further climatic disturbances, each with an economic cost. As the

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

plague itself spread through the empire, the frontier against the Germans grew active, and as the Romans attempted to stem the damage, the Persians attacked in the Euphrates Valley. Faced with inflation, potential famine, and wars on two fronts, the political system faced renewed strain. Since the Antonine plague, the empire had undergone a rambunctious period of political instability. As the Plague of Cyprian unfolded, the empire churned out new emperors at an astounding rate. Between 235 and 285, the empire endured numerous leaders, the longest (Gallienus) lasting fifteen years. His reign was balanced by those of Gordian I and Gordian II, each lasting a mere twenty-one days in office before being killed. Most emperors lasted at most a year or two, and policies changed almost at random. Decius, emperor for less than two years between 249 and 251, instituted a requirement that all Romans demonstrate their loyalty to the empire by offering sacrifice to the imperial cult—one of several emperors who earned disrepute among the small sect called Christianity whose members exalted those martyrs who chose the Coliseum instead. And then, he was killed fighting the Goths. The low point was the capture of the Emperor Valerian at the Battle of Edessa in 260. The Persian king used him as a step stool for mounting his horse, and after some years had him flayed. His stuffed body was on display in the temple in the Persian capital of Ctesiphon. Even after the disease retreated after 260, the empire convulsed with revolving leadership and near-constant internal rebellion—to say nothing of the assaults on the frontiers.

Amid the Malthusian trifecta—famine, disease, and war—large swaths of Roman society experienced a spiritual crisis. It is not accurate to say that traditional polytheism was hollow, but it is fair to say that it met with considerable competition (Wilken, 2003a, 2003b; Stark, 1997). For most new cults, the traditional practices could easily coexist with the new faith. The cult of Mithras, for example, gained popularity among the military. Born in Persia and bearing some parallels to Zoroastrianism, the cult included a belief about a cosmic battle between good and evil as well as several "secret" rites (Beck, 2006). Similarly, the cult of Isis, an Egyptian mother goddess, was home to various "mysteries," and the symbolism frequently pictured her as a mother holding her infant child. The Roman aristocracy was not always enthused with the new cults. In his discussion of the persecution of Christians by the first-century emperor Nero, Tacitus neatly summarized attitudes toward the range of new beliefs by noting that Christianity "broke out again not only in Judea, the first source of the evil, but even in Rome, where all things hideous and shameful from every part of the world find their center and become popular" (Tacitus, 2009). His assessment was typical: the physician Galen, an eyewitness to the Antonine Plague, was fascinated with the "superstition," and the scholars Celsus and Porphyry studied the new religion to heap scorn (Wilken, 2003a).

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

Christianity had grown from a small Jewish cult in the first century into a sizable minority by the end of the third century (Crossan, 2007; Ehrman, 2014). For many Romans in the early fourth century, the new religion was a significant force, a fact not lost on Constantine, who in 312, was at war with his co-emperor. He credited his victory over Maxentius at the Battle of the Milvian Bridge to the Christian God. In 313, he issued the Edict of Milan, guaranteeing religious freedom throughout the empire, ending the sporadic periods of official suppression of Christians for refusing to offer sacrifice to the imperial cult. Despite being a major benefactor to Christianity, his own beliefs were out of sync with today's orthodoxy. Roman coinage continued to revere pagan gods for some years after the Milvian Bridge, and he continued to participate in the cult of Sol Invictus. Both the cults of Sol Invictus and Mithras celebrated the rebirth of the sun on December 25, and in time Christians too would celebrate Christmas, the birth of the son, on that same day. The triumphal arch dedicated to the Battle of Milvian Bridge had plenty of pagan gods but no Christian symbols. Constantine was not officially baptized until his death in 337. It seems entirely possible that the exclusivity demanded by Christianity dawned on him slowly, and that for at least a decade or more he worshipped the Christian God in a manner consistent with Roman practice: as a primary but not exclusive creed. Indeed, one may speculate that he perceived the parallels between the cults of Mithras, Sol Invictus, and Christianity that the shared holiday implies.

Constantine had good political reasons to appeal to Christians, even when threatening to conservative pagans. By 300, over 10 percent of the population was Christian (Stark, 1997). Stark notes that a 40 percent growth rate per decade, like the 43 percent growth rate of Mormons during the twentieth century, could account for such a surge. The growth of adherents was particularly popular among the slaves and working classes, particularly in the cities. The role of Christianity as an organization of burial, noted by early Roman authors (see Wilken, 2003a), as well as a social service organization, was a significant draw. At least in some sects, the attitudes toward women were more egalitarian and favorable than traditional Roman society, and that also was a draw (Pagels, 1989). The diversity of Christian groups, from very "Jewish" Ebionites, to highly intellectual gnostic sects, to the Orthodox sects that eventually won out, attracted a wide variety of people: much as today, one could "choose" the denomination that suited their beliefs and needs most (Ehrman, 2003). But personal motivations are often rooted in deeper societal circumstances.

The period after the Antonine Plague was one of tumult; occasional spans of renewed growth and stability were punctuated with renewed rebellions, climate-induced famines, and bursts of pestilence that ensured that the empire would never again reach its earlier heights. Just as hunter-gatherers respond

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

to the perception of shortage rather than actual shortage, as noted in chapter 4, Romans empire-wide faced periodic threats to their livelihoods even when the worst did not come. For those with the means, the impulse was to accumulate a buffer against misfortune. Demographic events ensured flat or even negative economic growth, but those with access to wealth would accumulate more during such a time. As such, healthy periods resumed the hoped-for normalcy of the past. The wealthy constructed spectacular public works, the state did much the same, and the skilled artisans and merchants used their "paychecks" to live in respectable, if not spectacular homes. The state increased pay for soldiers, in part a result of poor recruiting due to demographic decline, but the military as a caste could also benefit during the ups and downs of the late Roman Empire. For members of these higher classes—roughly corresponding to the upper and upper-middle class in today's terms—life and wealth appeared "normal." However, with stalled aggregate growth, continued accumulation at rates like those when the empire was growing both in terms of land and people required the elite to turn inward and take (or simply deny) the wealth to the lower classes. Increased military pay required higher taxes, and to the degree possible, those taxes were raised on non-citizens, particularly in the provinces. In the major cities of the empire, the lower classes paid for the illusion of continued aggregate prosperity: in more demanding work, lower pay, less food, and lower living standards. When the empire was growing through conquest, the additional food and resources could enrich the wealthy and still filter down; without such growth, the lifestyles of the wealthy who were not willing to change resulted in increased oppression of the lower classes. From these classes, and from the higher classes who suspected something was awry, Christianity drew its converts (Stark, 1997; Pagels, 1989). The class divide was echoed in a sharp division in terms of education. In discussing the works of the upper-class Roman critic of Christianity Celsus, Nixey (2018) quotes him saying of the Christian approach to evangelism, "Their injunctions are like this: let no one educated, no one wise, no one sensible draw near. For these abilities are thought by us to be evils" (40). Nixey points out that "there is more than a whiff of actual as well as intellectual snobbery in Celsus's criticisms" (41). The snobbery was evidence of a divide that had emerged between the world-view of the elites, for whom the writings of the Greek philosopher Lucretius stating that the world is created of atoms (from which we gain the modern term in physics) was accepted, and the masses who continued to turn to the gods (or the Christian God) for explanations of nature and help in challenging times.

Christianity had developed out of a Jewish apocalyptic tradition that claimed that the coming of a messiah figure would redeem the world, and Christians believed it to be Jesus of Nazareth (Ehrman, 2014; Crossan, 1998;

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

Boyarin, 2012; Knohl, 2000; Levine, 2007; Vermes, 2001). In Judea, the rebellions of the first and second centuries were enflamed by the belief that God would help fend off the Roman oppressors, and Christianity retained this conviction. As a result, during periods of persecution, Christians could read the imminent second coming of Jesus in the events, giving them hope even as their relatives fell to the lions in the empire's arenas. By the third century, many Christians believed the Roman gods to not only be false idols, a view consistent with the religion's Jewish roots, but actual demons. The Edict of Milan had decreed religious tolerance, but after Constantine's conversion to the "one true faith," succeeding emperors narrowed the options available to the faithful to only Christianity, and only the form practiced by the emperor himself. The result was a century of increasing Christian persecution of pagans (Nixey, 2018). Edward Gibbon (2015 [1788]) summarized at the beginning of chapter 15:

> While [the Roman Empire] was invaded by open violence, or undermined by slow decay, a pure and humble religion gently insinuated itself into the minds of men, grew up in silence and obscurity, derived new vigor from opposition, and finally erected the triumphant banner of the Cross on the ruins of the Capitol. (12874)

He continued to argue that Christianity itself helped to bring down the empire.

The cross in the ruins of the capital was built on the rubble of countless destroyed statues, burned books, and a general reign of terror that resulted in the unbelievable. Throughout the fourth and fifth centuries, Christian laity and priests alike, most often with a complicit state, targeted pagans and their places of worship. Nixey (2018) relates the destruction of the Temple of Serapis in Alexandria, heir to what remained of the collections of the Library of Alexandria after its earlier destruction, and the statue of the god within under the leadership of Bishop Theophilus:

> One day, early in AD 392, a large crowd of Christians started to mass outside the temple, with Theophilus at its head. And then, to the distress of watching Alexandrians, this crowd had surged up the steps, into the sacred precinct, and burst into the most beautiful building in the world . . . . And then they began to destroy it . . . . Theophilus's righteous followers began to tear at those famous artworks, the lifelike statues and the gold-plated walls. There was a moment's hesitation when they came to the massive statue of the god: rumor had it that if Serapis was harmed then the sky would fall in. Theophilus ordered a soldier to take his axe and hit it. The soldier struck Serapis's face with a double-headed axe. The god's great ivory profile, blackened by centuries of smoke, shattered

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

> . . . . The watching Christians roared with delight and then, emboldened, surged round to complete the job. (93)

In time, certain sacrifices were criminalized, temples destroyed or converted to churches, and a menagerie of ideas relegated to destruction as they were considered traps set by Satan (Pagels, 1996). Even within the Christian fold, church councils excommunicated heretics—Christians not deemed Christian enough, or too Jewish, or too Greek—and the great diversity of the early church gave way to a "holy Catholic Church" defined as adhering to the same principles. Nixey (2018) summarized:

> The brief and sporadic Roman persecutions of Christians would pale in comparison to what the Christians inflicted on others—not to mention their own heretics. If this seems implausible, then consider one simple fact. In the world today, there are over two billion Christians. There is not one single, true "pagan." Roman persecutions left a Christianity vigorous enough not only to survive but thrive and to take control of an empire. By contrast, by the time the Christian persecutions had finally finished, an entire religious system had been all but wiped from the face of the earth. (108–109)

So to the list of war, famine, and pestilence, add cultural upheaval of the most personal kind, informing neighbors, and a fear of being labeled a heretic, pagan, or worse. Gibbon (2015) had cited the birth of Christianity for the "fall" of Rome, a claim that most historians today find overly simplistic (e.g., Heather, 2005, 14–15), but as one variable interacting with the others it cannot be ignored.

It should also be noted that Christianity itself changed dramatically as the result of its accommodation to power:

> The extent to which the ecclesiastical leadership made concessions to the emperor is shown by the following decisions of the Council of Arles from 314: "Those who surrender their weapons in peacetime shall not take communion." Official Christianity had deviated so significantly from the radical pacifism of Jesus that it excluded from the Eucharist those who refused military service! (Baumer, 2006, 39)

BARBARIANS (FINALLY)

Ask anyone about the fall of the Roman Empire, and the popular imagination goes to invasions of barbarians. During the fourth-century climate change in Central Asia displaced semi-nomadic herders, the most aggressive being the

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

Huns. The result was a century during which numerous tribes, including the Goths and Vandals, were increasingly mobile and sought settlement within Roman borders. Likely seeking to escape the Huns, the Vandals crossed into Gaul in 406 and fought their way to the Iberian Peninsula, settling into a pair of kingdoms that had wrested control from Rome. With as many as 20,000 troops, another group of Vandals crossed into North Africa and settled along the fertile coast in 429. By the 470s, they controlled Sicily as well (Heather, 2005). The loss of territory was unnerving enough for the empire, but the loss of the Carthaginian breadbasket was devastating. The fourth century had resulted in the city of Rome being upstaged by Constantinople in the East, and even in the West by upstart Milan in the 370s and then Ravenna in 402 when the capital moved there, but the city remained a symbolic center. However, without the regular food rations provided by the state from its North African holdings, urban life itself came under threat. During both the fourth and fifth centuries, the higher classes received the resources they needed, and it was the lower classes who returned to the countryside to subsist or, all too often, simply starve.

By 429, the aura of invincibility in the eternal city had already dimmed. A king of the western Goths (or Visigoths, in distinction to the Eastern Goths, or Ostrogoths) named Alaric I had invaded the empire and then turned on other Germanic tribes, alternatively at war and then peace with the empire and other Germans. In response to Roman raids on Goth villages, Alaric began a campaign against Rome itself in 408. By 410, his troops were in the city's hinterlands, and tired of negotiations for tribute, entered the city on August 24. The sack of Rome reverberated not only through Italy but the entire empire: the namesake and symbolic center of what many considered the entire civilized world had fallen to "barbarians." For their part, the Goths took their fill and left the city, and by 418 had established—with Emperor Honorius's blessing, a Visigothic Kingdom in Gaul. In principle, the kingdom was still a province of the empire; in actuality, the flailing of the western government—the empire had been divided for some time by now—meant that the Visigothic king was a Roman subject in principle only.

The fifth century was a turmoil of overthrown Western emperors in Ravenna, vast territories lost to "barbarians," and famines weakening the imperial finances and killing the lower classes. Italy's population was in free fall, and despite occasional attempts to address the issues by Eastern emperors hoping to aid their western counterparts, the Western Empire was lost already. The year 476 is often cited as the "fall," but it is the year a sixteen-year-old puppet emperor, Romulus Augustulus, was installed on the throne after his father, Orestes, overthrew the previous emperor. Orestes had earlier in his life served Attila the Hun, another Germanic king who had spent much of mid-century terrorizing northern Italy—additional evidence that the "fall"

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

had been in process for decades before 476. Augustulus was unable to gain much political support, and it was Odoacer—a barbarian king—who gained the support of the senate in 476. Referred to as a king, Odoacer was nominally a subject of the Eastern Roman emperor in Constantinople, and so with the senate and imperial support, the year 476 seems an odd choice for the "fall." For the average Roman at the time, it appeared as just another coup, but little changed except for the expected redistribution of large landholders to reward supporters.

As the sixth century began, the Eastern Empire continued itself to be fully Roman, and our modern usage of the term "Byzantine Empire" would have been unrecognizable at the time (Wickham, 2009; Brownworth, 2009). Indeed, the Byzantines referred to themselves as "Rome" until they were taken over by the Turks in 1453. It is more accurate to say that the Roman Empire recentered itself to the east due to increased trade and wealth found there, and then by the fifth century, it lost many of its western possessions but lived on. McLaughlin (2018) notes that as early as the first century it was Eastern trade that paid the taxes to hold and support the less productive northern and western provinces. Given that Odoacer nominally ruled as a Roman subject, it is difficult to locate the exact moment in time when it became evident that the empire had lost its western half. By 527, when Justinian I ascended the throne, the young emperor viewed restoration of the western provinces as his calling. After securing a peace with Persia, he assigned his trusted general Belisarius the task of retaking North Africa. This was accomplished during 533 and 534. It then took twenty years, interspersed by renewed conflicts with Persia, to finally retake Italy. The toll on Byzantium was heavy, with heavy tax loads creating considerable internal unrest, but for Justinian and many others, these were not wars of aggression but defensive actions—the western provinces were being "liberated" from German pretenders. Thus, by 554, all of Italy had been retaken, and even a small portion of the Iberian Peninsula henceforth to be called the province of Spania. When Justinian died in 565, he might have regretted not reuniting the entirety of the former empire, but he could at least take comfort that he had retaken much of the Mediterranean Basin. However, the defeats and the internal disorder of the second half of his reign were not merely economic or military: Justinian presided over perhaps the greatest plague of the ancient world.

A NEW PLAGUE

Yersinia pestis, the bacterium at the center of the Bubonic Plague, evolved into a unique microbe capable of killing humans en masse a thousand years before the Antonine Plague, but disease is more than a simple germ. Evolving

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

on the Tibetan Plateau of Central Asia, its modern strain gained the ability to be transmitted from flea to rodent and back again and was (and still is) home among populations of gerbils and marmots living there. It would not be the gerbil to transmit the disease to the West, however.

As China expanded its trade network into Central Asia toward the turn of the Common Era, it was more than silk that made the journey. China was home to another rodent, the Asiatic Black Rat, that was also host to the rat flea that lived on Central Asian rodents. As Bubonic Plague spread through the gerbil population, it spread to the rats, which in turn spread the disease to China. As the Black Rat spread West due to trade contacts between China, India, and Rome, the stage was set for the first major outbreak in Europe of a disease more terrifying than smallpox.

The Roman Empire had lost Rome and Italy, not Egypt, and as such, Constantinople had a relationship with the Nile Valley that was like that of Rome with Carthage. Dependent upon African wheat, the city was host to numerous ships from Africa at a time when plague was spreading across the Indian Ocean. In 541, the initial wave spread throughout the city, killing as many as 5,000 people per day and eventually killing up to 40 percent of the population—even Justinian contracted the disease but managed to survive. If that were not enough, the spread of the disease throughout the countryside debilitated the local agricultural markets as farmers could not maintain or harvest the crop. As a result, those who survived the plague faced a sharp increase in wheat prices and, in response, a more general inflation throughout the economy. The spread of the disease through the military also weakened the attempt to regain the western provinces, and so it would not be until 554 when Italy was retaken. Farther away, the former Roman province of Britannia, the first of the major provinces to collapse as the Western Empire retracted, faced a new wave of invaders, the Anglo-Saxons, as trade with the Mediterranean placed the Roman Britons at disproportionately more risk than their new foes (Brown, 2001, 94).

Toward the end of 565, Justinian died secure in the knowledge that much of the empire had been restored. In 568, the Lombards in Italy rebelled against their Byzantine overlords, and over time the Western provinces were lost again and not to be recovered. The Byzantine Empire known to medieval historians had taken shape; although the empire would wax and wane during its lifetime, it would never again recapture the glory of Rome. Constantinople would, until its fifteenth-century end, retain the title of the Roman Empire, but its world looked eastward more than westward. As the medieval period set in, Byzantium was one of several advanced territorial states that traded across the Indian Ocean, uniting China, India, Ethiopia, and everywhere in between. The Byzantines were a gateway for this world-system to the West, to smaller states run by "barbarians," to a later upstart Holy Roman Empire,

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

and to a Rome that dominated in religion and little else. The appraisal of Charles Oman (2017 [1898]) of the period being the "dark ages" is unwarranted: there was considerable continuity between Late Antiquity (400–800) and the medieval period that followed, but it was in the east that the main currents of commerce and education were to be found (Wickham, 2009; Wells, 2008). As Islam swept the east and North Africa after the seventh century, its scribes preserved much of what the Christian West had sought to destroy (Lewis, 2008). In northwestern Europe, however, the wares considered commonplace in the Islamic world and the halls of Byzantium were luxury items fit for emerging kinglets and Viking raiders. The age was not dark—the light simply moved from the Mediterranean to the Indian Ocean.

URBAN-RURAL DYNAMICS WRIT LARGE

Between the end of the Iron Age in 587 BCE and the rise of Rome, the currents of the Mediterranean world-system were oriented to ever-larger spheres of influence and economic growth. Empires grew more extensive, with those of the Assyrians and Babylonians dwarfed by that of the Persians. As Alexander the Great swept aside the Persian armies, he assembled what at that time was the largest empire yet, his own massive ego stroked by a Persian military weakened by internal revolts and ill defended cities willing to pay tribute to Alexander's armies as they crossed the carcass of Persia's greatness. He even swept through the Indus Valley, home to the ruins of the Harappan Civilization that had collapsed during the Late Bronze Age (before 1200 BCE) and slowly settled by nomads from Central Asia. By Alexander's time, this was the India that we now know, and if not for a revolt by his own troops, he might have made it across the plains into the Ganges Valley (Keay, 2010). It was not to be. Greek influence in India would not be permanent, the nearest entrepôt being across the Hindu Kush in Bactria—modern Afghanistan.

By the turn of the millennium, Rome had done what Alexander had done: taken over a weakening empire and foisting its own name and ambitions upon the world. The Mediterranean and Southwest Asia were to be home to two mega-states: Rome and Persia. And into this mix, by way of the smaller states of Central Asia such as Bactria and Sogdia with its capital at Samarkand, contact was made with China. The composition of these mega-states from component urban-rural systems was nevertheless recognized, with important cities and their hinterlands often allowed a degree of self-governance. As late as the time of Caesar, citizenship was to one's city and not the empire, and it was only during the early empire that Roman citizenship was expanded to the Mediterranean world. Such concepts of necessity had to catch up to the

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

political realities of great empires, but great empires could not escape the urban-rural dynamics on which they were built.

Rome and the empire's other great cities were utterly dependent on the intricacies of a world-system that extricated surplus agricultural products from the provincial peasantry to the urbane elites. The major provincial cities were often conquered capitals themselves. Carthage had been defeated during the Punic Wars but now functioned as a first-order center for transporting the fruits of African fields to the Roman state; this was true for Alexandria as well. In Judea, Jerusalem was an administrative center and an important center for pilgrimage, but the religious sensitivities combined with the fact that the city was nowhere near the ocean made it a disappointing provincial center for the Romans. They utilized the port city of Caesarea, built by their vassal King Herod, to be the province's capital city.

As during the decline of social complexity during the Bronze Age, the "fall" of the Roman Empire is less a collapse and more of a prolonged period of decline that resulted in less social complexity. The Roman Climatic Optimum that enabled the Mediterranean to flourish ended, not only from ordinary climatic variations but due in part to the deforestation of the Roman world. Climate change and famine go together, just as do expanding trade networks and new forms of pestilence. The various pathways of demographic and economic change that followed favored some Romans more than others, the social unrest forcing cultural changes and further unrest that resulted. As during the Bronze Age collapse, the process took decades. During the Great Catastrophe, it took over 100 years to reduce the complexity of the world-system, and the results were uneven: the Hittites were no more, but the Egyptian Empire persisted even after the loss of Canaan and other provinces. The greater length of the decline of Rome points to the comparative greater complexity at play. Conservatively speaking, the "collapse" took 400 years, and Byzantium persisted for another 1,000 years. It coincided with a dramatic expansion of the world-system into the Indian Ocean Basin, integrating previously disparate pathways of social evolution into a new whole that, as it turned out, could do quite well without the West.

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

Chapter 9

World System

The so-called fall of the Roman Empire may not have been the collapse of civilization envisioned by previous generations, but it was a significant reduction in social complexity. The fairly substantial collapse of the western empire is often the event that informs the view of global calamity, and to a Roman in Britannia or Gaul, it perhaps was. For a German tribesman, their presence in the empire capped a period of migration to escape the Huns, themselves on the move due to climate change in Central Asia. Settlement in the empire for them meant a new home, an end to running, and a chance to live the lives of relative comfort of their Roman neighbors. Nevertheless, on the heels of centuries of war and plague and demographic and economic shocks, the Roman state could not withstand a proverbial straw upon its back.

The eastern empire, formed originally because the sheer girth of the empire had made its administration challenging, continued for another thousand years. However, it was not Constantine who had created the split, but Diocletian, who in 285 selected the Greek town of Byzantium as a new seat of government for the eastern half. It was a fateful decision as quite possibly, without splitting the empire as a whole, it would have collapsed entirely two centuries later. In any case, though the western empire as a political entity collapsed, the surviving components of a world-system now stretching across Eurasia and into Africa experienced a shock. The demise of the West slowed trade with China, particularly across the land routes of Central Asia, with detrimental economic effects in Persia and such trade-oriented cities as Samarkand, Herat, and Kabul. In China itself, there was a dramatic demographic shift:

> In classical times the "center of gravity" of the Chinese population had been in the interior. What external trade existed went overland across the great silk

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

> route. This overland route declined with the fall of Rome and, from about the sixth century onward, the population of China shifted toward the southern coast. (Abu-Lughod, 1989, 303–304)

China turned to the sea, ostensibly collecting "tribute" from the island nations, including goods from as far afield as India, Africa, and, yes, Byzantium.

And so, as Islam spread across Asia and Africa, and as Crusaders struggled to regain and retain territories once held by Rome (this time in the name of God), the world-system centered not on the Mediterranean but the Indian Ocean. The dynamics set in motion during this time enriched the cities around the ocean, and the trade that reached Western Europe—items like spices, incense, porcelain, and cotton cloth—would in time encourage emerging Western states to pursue policies aimed at undermining the middlemen in Byzantium and the Italian city-states. In so doing, quite by accident, they would expand the Eurasian-African world-system into *the* world-system.

A NEW CENTER

The Byzantine emperors promoted their genuine Roman credentials, but the oscillations of the empire never again matched the lofty ambition of Justinian. For a Byzantine with eyes open, the world confronted by the empire was even more threatening and more foreign. Their former nemesis in Persia, with the Zoroastrian faith and its fire temples, nevertheless shared with Christian Rome and Judaism a worldview that included a cosmic battle between good and evil that played out here on earth (Nigosian, 1993). This similarity was, of course, not enough to create world peace in an empire and version of Christianity that saw blood enemies in those who had slightly different theologies of Jesus's divine nature (Jenkins, 2008). In the early seventh century, the Prophet Mohammad began his preaching career in Arabia. The region was at that time home to a paganism no longer welcome in Rome, several varieties of Christianity, and Jewish city-states. Perhaps unsurprisingly, the spread of Islam took root in part because its theology was consonant with these other faiths, noted in the Quran as "people of the book" (Akyol, 2017). Presented in both the Hebrew Bible (Christian Old Testament) and the Quran as descended from the patriarch Abraham, the religions shared a theology of monotheism and the cosmic battle; in the Hadiths, it is Jesus—defined as a prophet and not God—who is the Messiah who returns to earth at the end of time (Donner, 2010; Akyol, 2017). For example:

> Allah's Messenger said, "The Hour will not be established until the son of Mary (i.e., Jesus) descends amongst you as a just ruler, he will break the cross, kill the

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

> pigs, and abolish the Jizya tax. Money will be in abundance so that nobody will accept it (as charitable gifts)." (Sahih Al Bukhari 1: Chapter 47, Hadith 2476)

In later discourse, particularly as Islam moved into territories formerly ruled by Persia, other consonant faiths received favor, namely Zoroastrianism (not strictly monotheistic, but the "good" god Ahura Mazda battling the "evil" god Angra Mainyu correlates with the Abrahamic God and Satan) and Manichaeism—a syncretistic religion with elements of Christianity and Zoroastrianism. As Islam spread, the favoritism toward the religion granted by Muslim states was frequently accompanied by considerable tolerance of people of the book (BeDuhn, 2000; Nigosian, 1993). As formerly Persian Mesopotamia fell, Jewish synagogues and Christian churches were respected. Indeed, the Christology of Islam is quite similar to the Assyrian Church of the East—excommunicated by the Catholic/Orthodox Church in the West—due to "heresies" from the Roman perspective (Donner, 2010). The combination of familiarity to the already faithful, the tolerance of existing traditions, and spectacular military successes that had been aided by the Romans and Persians fighting themselves into a grave helped Islam spread rapidly from the seventh through the ninth centuries, emanating from its base in Arabia across Northern Africa and through Central Asia. Islamic states would, by and large, take the place of Persia and Rome in these regions, producing a stable environment for trade and scholarship (Frankopan, 2017; Hansen, 2012).

As Islam Spread, Christendom slowly split. In 800, Pope Leo III crowned Charlemagne as the first Holy Roman Emperor. In principle, he was reforming the great Roman Empire, and justifiably so for his staunch defense of the papacy in Rome, his campaigns in Muslim Spain, and forced conversions of the remaining pagans in Europe. At least, this was the point of view in the West. There was already a sitting Roman emperor in Constantinople, and Charlemagne and his own Holy Roman Empire seemed an upstart challenger. Tensions between the two major European powers deteriorated politically, and this challenged the unity of the Christian Church. In 1054, the tensions finally boiled into the permanent split still found today: Rome and Constantinople split, the Western Church today known as Roman Catholic and the Eastern as Orthodox. The religious authority of the Roman Pope was not viewed as superior to the Patriarch under Orthodox Christianity in Byzantium, who among other differences, sermoned in Greek instead of Latin. While the Pope had the Vatican and the Basilica over St. Peter's grave, since 537, the Patriarch resided in the awe-inspiring Hagia Sophia in Constantinople (now a mosque in modern Istanbul, Turkey). By 980, the Eastern Orthodox branch spread into modern-day Russia, Ukraine, and Belarus when Vladimir the Great converted after visiting the Hagia Sophia. The major religions of the tenth century became associated with different regional trade networks.

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

Besides theological overlaps and fictive kinship, Judaism, Christianity (Catholic and Orthodox), and Islam shared a feature that influenced their inability to perceive these similarities: adherents of each religion believed themselves, at least officially, to be adherents of the *one true faith* under one universal God. By the thirteenth century, this exclusivity had resulted in hundreds of thousands of deaths. Christians crusaded the Holy Lands to take them from the Muslims, Muslims fought furiously to expel the Christians. Jews were periodically prohibited from entering Jerusalem, the site of their historic temple, and now the site of Islam's Dome of the Rock Mosque. When not fighting each other, internal threats kept the blood flowing. Catholics periodically searched out and burned heretics, perhaps the most famous being the slaughter of Cathars at Languedoc in France (Strayer, 1992). The second major break of the Church during the Protestant Reformation split the Church into seemingly countless denominations, each originally prosecuted as heresy. Not to be outdone, Islam split between Sunni and Shiite factions. In each case, it was the presumption of exclusivity that animated the killing. The Iron Age theologies of exclusive national gods had revealed themselves as cauldrons of tribalistic fervor. Their descendants ironically reflected a shared theology of holy war in the name of God: the Book of Joshua was an early but hardly a lone example. What the Abrahamic West perhaps did not foresee was the radically different religious and cultural landscape that awaited them in the East.

The Islamic world functioned to knit together a zone for trade and intellectual endeavor that effectively decentered the former Roman order. The spread of Arabic accompanied the spread of Islam as a *lingua franca*, and Islamic scholars not only studied their own scriptures but copied the works of the classical Greco-Roman world into that language (Lewis, 2008). This preservation of literature and science resulted in Islamic cities that were as advanced as those of the Roman world, with water and sewer systems and urban planning. The imprint of the tribal structure of Arabia, however, was written into these cities: they were divided into self-sufficient quarters with their own water delivery systems (normally fountains tied into the more extensive city network), marketplaces, a mosque, and often arranged around a particular industry for manufacture, such as textiles, tanneries, or carpets. Trade took place within the city for the urban product (e.g., leather) and for rural products (food and raw materials such as skins for tanning), linking the inner neighborhood to the larger urban economy and thence the global network.

The network of the Islamic world was multimodal. Caravans stretched across the desert regions of Arabia and North Africa, ultimately tying central Africa in the south to the Mediterranean coast in the north as well as the Atlantic in the west to the Indian subcontinent and Central Asia in the

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

east. These overland routes led to major ports where shipping completed the circuits across the Mediterranean to Europe, particularly Muslim Spain, and, more importantly, ports on the Red Sea and the Persian Gulf (Frankopan, 2017; Hansen, 2012).

The global nature of the world-system spanned Eurasia, and the main passages between East and West offered differing sets of advantages that waxed and waned with political events. The "central route" was a variant on the same connections developed thousands of years earlier between Sumer and Harappa. Ports on the Mediterranean, such as Beirut, were transit centers between ship and caravan, with land routes typically leading to other transit points on the Euphrates. Ships on the Euphrates provided transport to Basra, from which larger ships could traverse the Persian Gulf and the Indian Ocean. While some ships could round the southern tip of India, it was more common for ships to dock at ports on the west coast from which overland caravans bridged the gap to east coast ports. From eastern India, ships could travel to ports in Southeast Asia, Indonesia, and China proper just as they had during Roman times (McLaughlin, 2018). Chinese ships were known to have traveled impressive distances west, reaching the eastern coast of Africa, taking pottery for incense and other commodities.

There was an overland alternative along the "central route." From Mesopotamia, caravans traveled to Central Asia and the Indus Valley, and thence down the Ganges River Valley to the Indian Ocean on the eastern side of India. From there, ships could travel to Southeast Asia. As during the wars between Rome and Persia, the ongoing wars between Christian Crusaders and Muslims imperiled this route for large spans of time, resulting in traders looking to the comparatively less troublesome northern and southern routes.

The "northern" route was a familiar one to Rome and China as it was the initial point of contact between the two. It proceeded through Central Asia, enriching cities such as Samarkand and Turfan, and approached China through Xinjiang. The decline of the Western Roman Empire resulted in a decline in the use of the route as Chinese traders turned increasingly to the sea routes. In the twelfth century, the rise of Genghis Khan introduced warfare across the region as far west as Central Europe and Mesopotamia. However, the conclusion of those hostilities with the ascendency of the Khanates formed of his descendants resulted in a resumption of trade along this route. Mongol khans honored the safe passage granted traders by other khans, resulting in a stable trade route that spanned Eurasia during the time period when Saladin was forcing the Crusaders from the Holy Land.

If the "northern" route benefited from the warfare in western terminals of the "central" route, it should not be surprising that it also benefited the "southern" route. This route also seemingly dates to the earliest periods of urban societies as Uruk's influence on Egypt during the late third millennium

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

BCE was seemingly introduced from the south. The southern route utilized Alexandria and Cairo as Mediterranean ports, thence turning to river transport along the Nile to ports in the south of Egypt from where caravans would traverse the eastern desert to the Red Sea. Alternatively, an overland route and even a canal during some periods between the Mediterranean and Red Seas in the north offered another route between the two zones. The "southern" route offered another advantage: access to the Horn of Africa and the treasures of sub-Saharan Africa. From Egypt, the Horn of Africa, or the Yemen on the southwestern tip of Arabia, a ship could traverse the Indian Ocean to the West Indian ports and traverse to Southeast Asia, as noted earlier (Abu-Lughod, 1991; Frank, 1998).

Most often, the Indian Ocean trade was divided into three distinct zones, including the Muslim-centered western zone to the west coast of India (Abu-Lughod, 1991). The central zone traversed the Indian Ocean east of India to the Straits of Malacca and the coast of Java in Indonesia. In India itself, major ports accumulated any number of transit functions that, in turn, attracted workers. The cities grew, in part due to the shipping industry, in part due to the manufacturing occurring in and near the cities, and in part due to the presence of stable quarters of merchants of various cultural backgrounds who were residents in the cities. Indian cities thus served not only as trade centers but as centers for cultural exchange: Muslim traders settled in Indian cities, intermarried, and spread the religion. Indian cities were cosmopolitan centers with people from foreign lands practicing Islam, Hinduism, Buddhism, and Christianity. Indeed, as part of the excommunicated Church of the East, the Chinese Church was more similar to other Asian religions in the sense that an adherent could also practice another religion (often Confucianism and Buddhism) without remorse (Baumer, 2006).

In the Straights of Malacca and the Malay Peninsula, the cities were based in trade from the beginning. The straights are treacherous for shipping today, and during a time period when monsoon winds dictated not only trade routes but the time of year when ships could sail, the region was frequently an enforced layover while sailors waited for winds to shift. This pattern—merchant ships spending months at port waiting for favorable winds—was a factor in the creation of ethnically distinct quarters in most cities. In the Straights, locals could trade in tin, wood, minerals, and various other forest products transported to smaller river ports from the highlands upstream. The region was not, however, agriculturally rich, and within the straights themselves, there was not a particularly obvious port at which a great city could develop. Abu-Lughod (1991) notes:

> Herein lies the paradox of the Straight. On the great path of world trade, the coasts of Sumatra and the Malay Peninsula form a natural and unavoidable

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

> destination; but within that area no particular stopping point is uniquely compelling. (294)

The result was a greater number of comparatively smaller trading towns, but not one that could exercise economic or political dominance over the others for particularly long spans of time (Keay, 2010).

To the east was the zone of the South China Sea, bounded by Vietnam to the west, Indonesia to the south, and the Philippines to the east. This zone arguably extended as far north as Korea and Japan as well, but the focus for traders from India and the West was typically the ports on the south coast of China, and it was China as a political and cultural entity that dominated the region. Much like Rome but 800 years later, even when invaded by "barbarians," in this case the Mongolian Genghis and Kublai Khan in the thirteenth century, the goal was to rule China as a legitimate Chinese dynasty. Kublai thus ruled as the first emperor of the Yuan Dynasty, claiming succession from earlier Chinese dynasties. The Mongols ruled China until they were driven from China proper in 1368, but the dynasty continued in Mongolia until 1635 and is known to history as the Northern Yuan. In China, the rich agricultural hinterland allowed for the emergence of great cities at key ports, most notably at Canton (modern Guangzhou). As important, the tradition of silk processing, porcelain manufacture, and a rich assortment of spices offered merchants highly profitable trade opportunities (Keay, 2009).

In all three zones, cities functioning as ports of call in the trade network developed highly sophisticated cosmopolitan cultures, and urban elites in particular typically had much in common with elites in other regions. In this regard, we are reminded of the Bronze Age world-system in which elites communicated in Cuneiform script and shared bonds of kinship and class viewpoints. In the Indian Ocean system of the medieval period:

> It is likely that inhabitants of some coastal areas of Southeast Asia had better contacts and more interests in common with other such settlements in India or south China than they had with their own hinterlands. (Spencer, 1983; quoted in Abu-Lughod, 1991, 269)

This was likely true across the entire arc of the world-system: elites and merchants in Constantinople and Cairo very likely had much in common in terms of interests and worldview with each other as well as with elites in India and China.

Cities organized production of urban goods for transport to other ports, and this was a function of the merchant communities that developed in cities. However, not all urban goods were manufactured in the cities: processed cloth, for example, was grown in the rural areas near cities in India (rural

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

production) and then spun and woven into cloth by rural artisans (urban production). Beckert (2014) relates the functioning of a British entrepot in Dhaka, India, a facility charged with the acquisition of cotton cloth, in 1676:

> The English merchants subcontracted the task of securing cloth to a number of *banias* eight to ten months before the trading ships arrived, specifying the qualities, designs, prices, and delivery dates they desired. African and European consumers of cotton textiles demanded very particular goods at particular prices. *Banias* then advanced cash to various middlemen, who would travel from village to village to advance funds and contract for finished cloth with individual weavers. Eventually the cloth traveled the same chain back to the British factory in Dhaka, where merchants graded and prepared it for shipment. (33–34)

At the time, a "factory" was defined as more of a collection point or terminal than as a place of manufacture, its modern usage in part due to the Industrial Revolution still on the horizon during this time. Cotton production in India was one of its most important industries, and exports experienced growing demand in Europe and Africa in particular.

A NEW PERIPHERY

In the wake of the decline of the western Roman Empire and the recentering of the world-system on the Indian Ocean, much of Europe west of the remaining Byzantine zone was relegated to peripheral status. Indeed, for much of its remaining history, the Byzantine Empire functioned as a gateway for Western Europeans into the world economy, particularly along the "northern" route, as well as a buffer against the spread of Islam. Seen this way, the Italian Renaissance was less of a rediscovery of the "Old World" and more of an increased reintegration with the Muslim world and the Indian Ocean trade. Indeed, Italian merchants, particularly those in Venice and Florence, were the middlemen between a peripheral Western Europe and Eurasian world-system that had long ago left them behind.

In the thirteenth century, Western Europe was divided into a series of feudal statelets dominated by the Roman Catholic Church. Immediately east, the mass of the Holy Roman Empire swallowed Germany and northern Italy, fusing Catholicism and a monarchical state modeled on an idealized version of the Roman Empire. Further east still, the Byzantine Empire was the actual heir to Rome, locked in perpetual warfare with Islam even further east and south. The progression of political organization from west to east mirrored the centrality of states to the broader political economy centered on the Indian Ocean. Simply stated, Western Europe, France and Britain in

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

particular, were in the periphery. Immediately south of what is now France, the Iberian Peninsula was under Muslim control, and the *Reconquista* of the region by Christian monarchs stretched on for hundreds of years—from the eighth century until the final expulsion of the Muslim Caliphate in 1492, which had experienced several setbacks since the Mongol destruction of Baghdad in 1258.

Although the region was marginal to the overall functioning of the world-system, it was nonetheless connected. Much of the region's industrial production took place as housework in rural villages, and one of the primary industries was in woolen textiles. Wool is sheared from sheep, of course, and although the collection of wool could occur in rural districts it was also possible to transport herds to textile towns. Much of the actual production of cloth, from the spinning of fibers to weaving, took place as industrial housework but often in or near market towns along the northern coast of Europe, particularly in Ghent and Bruges. Much of the production was geared toward export to other regions, and for that the Northern Europeans were dependent upon Italian intermediaries (Abu-Lughod, 1991).

In the Champagne region of east-central France, fairs in such cities as Troyes and Provins were host to merchants from throughout Western Europe. Fairs were regular events, often annual, that dated to the late Roman Empire. Fair towns maintained large fields near the town that could be converted into tent cities host to traveling merchants. The Champagne fairs were regular way stations for merchants from the Italian cities, notably Florence and more distant Venice, with their steady trade in goods, spices, and raw materials from the Indian Ocean system. Approximately the same distance north were the textile towns along the coast, and so the Champagne fairs became essential points of trade between Northern Europe and the rest of the world. European textiles could be found as far away as Constantinople and the Holy Lands, and in exchange came such exotic spices as ginger and, taken for granted by many of us today, sugar. For Europeans in the northwest of the continent, these were extremely desirable and valuable commodities, and they were available from only one source: the merchants from the Italian city-states (Abu-Lughod, 1991; Frank, 1998).

During the thirteenth century, an exotic raw material made inroads into the Western European industrial landscape: cotton. Imported primarily from India, usually through the intercession of Byzantine and Italian merchants continuing the trade begun in ancient times, cotton fiber was so exotic to Western Europeans that many believed the plant to have blooms in the shape of sheep. By the late fourteenth century, a small cotton industry that revolved around the spinning of yarn and subsequent weaving into cloth had developed in northern Italy (especially Milan) and areas of southern Germany. However, the industry was short-lived as the defeat of the

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

Byzantine Empire by the Ottoman Turks in 1453 severed the trade in cotton (Berkert, 2014).

EXPLORERS AND SLAVES

The situation for western Europe in 1400 was of neither a great power nor a center of civilization stretching its influence across a barbaric world; it was a backwater searching desperately for access to a global trade system that necessitated that they buy from Italian merchants or, worse still, Muslim traders. Waves of Bubonic Plague raged across the continent during the fourteenth century, killing half the population and weakening an already weak region (McNeill, 1998; Snowden, 2020). The *Reconquista* continued to rage on the Iberian Peninsula as would-be Christian monarchs continued to push the Muslim Caliphate closer to the Straights of Gibraltar and, eventually, across the sea to Morocco. It was this tension on the continent and the economic stranglehold of Italian merchants, even stronger with the demise of the Byzantine Empire in 1453, that forced enterprising traders to the sea. On the western coast of the Iberian Peninsula, in Portugal, a prince known to history as Henry the Navigator advocated for an aggressive stance against their former foes. In 1415, the young prince convinced his father, King John I, to invade the Moorish port of Ceuta on the north coast of Africa. The *Reconquista* had resulted in a period of instability in the port city as it passed from one invader to another. The city had been a launchpad for pirates into the Mediterranean and Atlantic coasts, some of whom raided seaside towns for spoils and slaves to sell into the African slave trade (Russell, 2001). Upon taking the city, Prince Henry took an interest in further maritime ventures, financing new naval technologies and explorations along the African coast. In 1418, Portuguese sailors blown off course during a return voyage from Africa discovered the uninhabited islands of Madeira off Africa's northwest coast. In 1427, the even more distant Azores were found in the Atlantic, nearly equidistant between Europe and North America. In both cases, the islands were colonized as a way to lay claim to the territories and defend against incursions from other European powers, particularly Spain, as it grew in power and grew closer to expelling the Caliphate from its future borders.

The patterns established by Henry the Navigator and the Portuguese were to be replicated by other European powers seeking to bypass Italian intermediaries in trade. Governments sponsored mariners to explore the oceans, particularly along the coast of Africa, in the hope of finding a new passage to India and China. Newly "discovered" territories were to be settled by colonists to both lay claim on the territory and defend it if necessary. In the event a territory was already inhabited, as was the case along the coast of Africa

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

where states comparable to those of western Europe could be found, trading colonies similar to those found in the Indian Ocean trade were established—often in newly built forts near trading cities meant to defend against other European powers.

In the Azores and Madeira in particular, the Portuguese colonies developed products that, until that time, had been imported from the Indian Ocean trade. Great plantations for sugar developed in the islands and much of the labor was conducted by slaves imported from Africa. During the fifteenth and early sixteenth centuries, however, this trade was minor when compared to that of other commodities:

> The Early European merchant adventurers were looking for luxuries, not labor. They wanted silks, perfumes, drugs, spices, and sugar. And Asia, not Africa, produced these for export. Africa offered ivory, rare skins, ostrich feathers, ebony, gold, and slaves. Prince Henry was chiefly after gold. He hoped to reach the gold fields of Guinea by sea, bypassing the Moslems, who controlled the trans-Sahara trade routes. By 1509, Portugal's daring seamen, sailing round the Cape of Good Hope, were able to trade all along the African coasts from Senegal to the Red Sea. (Meltzer, 1993b,3)

In the early sixteenth century, the trade in slaves was somewhat unremarkable—a continuation of a trade that had been existence since the rise of the first urban civilizations in the Fertile Crescent thousands of years earlier (Meltzer, 1993a).

As was the case of the Assyrians, the Romans, and among Muslim traders, the Portuguese "traders" were often raiders along the African coast:

> They raided and attempted to forcibly take slaves and plunder along the coast they visited. Thus, when they landed at Rio de Oro just south of Cape Bojador in 1441, they seized several Berbers and their slaves. In 1443 a caravel returned to the same Idzagen Berbers to exchange two aristocratic members of the group for gold and 10 black slaves. In 1444 and 1445 merchants and nobles of the Algarve outfitted two major expeditions against the Idzagen and the first brought back 235 Berber and black slaves who were sold in Lagos. Thus began the Atlantic slave trade. (Klein, 1999, 51)

The trade thus began as acts of war, and the Portuguese turned to more peaceful means in the face of opposition from advanced African states:

> [N]ot only did the second and later expedition encounter serious hostility from the now prepared Berbers, but attempts to seize slaves directly from the black states on the Windward Coast ended in military defeat for the Portuguese. The

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

> result was that the Portuguese moved from a raiding style to peaceful trade, which was welcomed by Berber and Africans alike. (Klein, 1999, 51)

There was nothing particularly peculiar about slavery at the time, even chattel slavery in which the individual was legally defined as property. Slavery had an origin deep in social history. Early Mesopotamian law codes specified the terms of selling a family member, often a daughter, as a slave and was normally a way of paying one's debts. Debts were, of course, a characteristic of the peasantry, a class of laborers tied to the land and to varying degrees "semi-free" to begin with. Mesopotamian laws also provided for individuals to be cast into slavery as a way of paying their own debts or as a punishment for a crime. In other words, from the beginning of the institution, it was rooted in the class system: debt ensured that the peasantry worked the fields and provided the tax or tithe to the central authorities, a percentage often low enough to seem attainable (or even be attainable in most years) but high enough to snag a household regularly enough to ensure future labor (Graeber, 2011).

Such debts were a persistent part of everyday life in the ancient world, and Mesopotamian and other ancient rulers would, from time to time, proclaim a cancelation of debt, called a *jubilee*, on certain special occasions, such as the ascendance of a new king. Importantly, these practices made their way into the Bible—a key text for medieval and early modern Europe. The Book of Leviticus (25:8–10) says of jubilees:

> You shall count seven weeks of years—seven times seven years—such that the seven weeks of years amount to forty-nine years. Then, on the tenth day of the seventh month let the ram's horn resound; on this, the Day of Atonement, the ram's horn blast shall resound throughout your land. You shall treat this fiftieth year as sacred. You shall proclaim liberty in the land for all its inhabitants. It shall be a jubilee for you, when each of you shall return to your own property, each of you to your own family.

On such occasions, debts were canceled, and lands were redistributed back to their "proper" owners, a reference to family plots in an agricultural landscape.

If a family could not pay such debts even with the help of a jubilee, some or all would enter into slavery. They were joined by captives from war, the "fortunate" souls whose lives were spared during battle. The ruling class of Jerusalem had been exiled to Babylon in 587 BCE, for example, and such practices were common. It was widespread for armies to kill the male inhabitants of a city but spare the women and children, but not as equals in most cases: women were frequently treated as war booty, forced to join harems as concubines. Compared to men, the comparative survival of women was

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

so pronounced that it has even left a genetic signature in our DNA (Reich, 2019). In an elite ancient household, the "wives" were those given into marriage by their fathers, and it was typical for a daughter to be so utilized in diplomacy. A concubine, in contrast, was not "married" to the patriarch of the household: they were akin to sexual toys, servants who perhaps cleaned by day but were given little choice should the patriarch or, often, a son, choose her for his own gratification by evening. Such practices were, of course, evidence of increasingly brutal patriarchal societies that grew more oppressive in urban societies. By the Iron Age such oppression of women was unquestioned, as the example of Biblical Solomon demonstrates:

> King Solomon loved many foreign women besides the daughter of Pharaoh—Moabites, Ammonites, Edomites, Sidonians, Hittites . . . . He had as wives seven hundred princesses and three hundred concubines, and they turned his heart. (1 Kings 11: 1, 3)

As discussed in chapter 8, slavery was a common practice in ancient Rome—so much so that Marx (1868) referred to the economy of the era as the "Slave Mode of Production." By the medieval period in Europe and elsewhere, slavery was simply accepted.

The English word "slave" is derived from "Slav," referring to the ethnolinguistic populations of Eastern Europe. As Italian merchants acted as intermediaries between the Indian Ocean world-system and Western Europe, one of the many commodities was slaves. As an institution, slavery had gone into decline with Rome's fall as many field laborers, formerly slave and peasant alike, fell into serfdom as medieval feudalism took hold throughout much of Europe. What slavery that continued was often as domestics, particularly in elite households. By the thirteenth century, Italian merchants catered to elite and upper-middle-class desires for such domestic slaves. It is important to note that such servants were of lower status and considered property, but such status was socially derived and not linked to modern conceptualizations of race. Meltzer (1993a) describes a slave market in the Levant as composed of "tall blond Circassians, stocky yellow Tartars, red-haired Caucasians, black Ethiopians" (228). Traders also dealt in slaves from the Iberian Peninsula—in fact, slaves could seemingly be bought anywhere warfare was tearing at the social fabric.

In many markets, it was the female domestic servants who commanded the highest prices, although there was demand for boys to serve in the Egyptian army in Cairo. As many of the girls were sold as concubines, the domestic service to the household included sexual favors regardless of her opinion of the matter. Perhaps unsurprisingly, patriarchal whim was built into the pricing structure:

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

> The young slaves seem to have brought the best prices. An official list of 357 slaves sold in Florence in the late fourteenth century shows that 34 of the girls were under twelve, 85 more were between twelve and eighteen, and only 6 were over thirty. The highest prices were paid for girls just over the age of puberty . . . . The value of a slave compared with other goods can be seen in prices paid by [Francesco Datini] . . . . He gave sixty florins for a slave girl of ten, and thirty florins for an excellent horse. For his daughter's wedding gown of white damask, however, he paid sixty-eight florins. So a young slave was worth not quite as much as his daughter's best dress, but twice as much as a horse. (Meltzer, 1993a, 231)

This was true in African slave markets as well:

> In the Sokoto Caliphate in 1850, the price of female slaves varied depending on the shape and size of the slave's breasts. While "young girls" were valued at 30,000-40,000 cowries and women whose breasts had sagged were worth 20,000 cowries, girls whose breasts had formed were worth 40,000 to 100,000 cowries and women with full breasts could command 80,000 cowries. (Stilwell, 2014, 24–25)

As with ancient concubines, female slaves contended with rape as a condition of this enslavement. Even before the beginning of the Atlantic slave trade:

> Masters had the right of sexual access to slave women, who became concubines or wives, depending on the society. This sexual dimension is a major reason why the price of female slaves has often been higher than the price of men. (Lovejoy, 2012, 6)

The horrors of slavery existed in complex societies throughout Asia, Europe, and Africa, with women in particular so oppressed that the word "concubine" is frequently today breathed as if not a reference to the sins of patriarchal bondage. As Spartacus during Roman times, slaves did resist their plight, and laws across Eurasia betrayed a masters' (very real) fear of being poisoned or otherwise harmed by their slaves and sought strict penalties against those who would help a slave escape. By the beginning of the sixteenth century, millennia of such laws and an array of technologies had been developed to maintain control.

At the beginning of the Atlantic slave trade, the Portuguese were eager outsiders hoping to duplicate the success of Italian, Byzantine, and Muslim traders. Their growing plantations in the Atlantic islands required more labor, and Portugal was (and is) a small country. In contrast, Africa was a large continent, its west coast out of reach to the Mediterranean and Indian Ocean

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

traders they were trying to circumvent. Slavery in Africa, too, had developed in concert with increases in social complexity and urbanization. Stilwell (2014) notes:

> The foundations for the emergence of slavery were laid between 10,000 BCE and 500 CE. The agricultural and iron revolutions led to new settled communities, which had new uses for people in politics and production. In this foundational period, new contradictions *and* opportunities emerged that eventually encouraged the expansion of slavery, although few societies in the period actually used slaves in substantial numbers. Between 500 CE and 1600 CE, parts of Africa experienced major technological, economic, and political changes. Ambitious or clever Africans enhanced their own power by using slaves to exploit new opportunities. In this period, high-density slavery became key to state consolidation and integration, as well as to the continued production of goods that sustained state institutions. (32, emphasis in original)

As the Atlantic slave trade accelerated after 1600, the slaves themselves were "goods that sustained state institutions" as they were traded to Europeans eager to send them to Caribbean plantations.

As in Asia and Europe, the development of slavery was in regions with environmental conditions that encouraged population growth, urban-rural system expansion, and the political-economic complexity that results. Slavery as an institution exhibited tremendous diversity across the second largest continent, from ancient origins in Egypt and Sudan, to:

> [T]he West African forest, [where] slaves were used to clear forests, mine for gold, or simply as palace retainers and servants. Beyond West Africa. . .the East African coast was integrated into new commercial networks via the Indian Ocean, which brought Islam and international trade to the coast. Although slavery existed long before this trade, the development of a coastal urbanized, commercial system along the coast led to an expansion of slavery and the slave trade. Finally, big men in the Central African forests and in the African Great Lakes region used slaves to achieve their goals, but for the most part they were much less integrated into international networks and commerce and slaves tended not to be used very widely in production. Yet, the expansion of slavery in those places demonstrates that decentralized and small-scale societies were both dynamic and could generate a strong demand for slaves. (Stilwell, 2014, 39)

Africa cannot be seen as the "dark continent" of European fantasy—it had a complex history of its own, warts and all (Bennett, 2019; Gomez, 2018). The continent did not await slavery and colonization, but more accurately was an enormously diverse land with west coast empires that were the equal (or

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

better) of those of Medieval Europe and east coast cities better integrated with the Indian Ocean trade than the Western Europeans seeking access. Slaves had been a part of the stratification systems in complex societies throughout the "Old World," but the discovery of the "New World" intensified these dynamics even beyond the scale the urban east coast traders had achieved (Shumway, 2014; Sparks, 2014). The Atlantic slave trade, with its unquenchable market for human labor well outside the bounds of the earlier world-system, expanded the earlier system to grotesque proportions, transforming entire societies on both sides of the ocean. Lovejoy (2012) summarizes:

> Many features of American slavery were similar to slavery in other times and places, including the relative size of the slave population, the concentration of slaves in economic units large enough to be classified as plantations, and the degree of physical violence and psychological coercion used to keep slaves in their place. Nonetheless, the American system of slavery was unique in two respects: the manipulation of race as a means of controlling the slave population, and the extent of the system's economic rationalization. In the Americas, the primary purpose of slave labor was the production of staple commodities—sugar, coffee, tobacco, rice, cotton, golds, and silver—for sale on world markets. (8)

The legacy of this racialized system perpetuated the interests of the ruling classes as they could (and can) appeal to racial animus to maintain power.

There was nothing humane about slavery; it was even before the Atlantic slave trade the purest form of exploitation. Masters could beat their slaves at will and were even expected to do so. The fate of individual slaves and their families varied from lot to lot, but at root, they were property. Slaves on ancient Roman or sixteenth-century Portuguese plantations could perhaps enjoy some aspects of peasant life, but such a life was hardly that of a middle-class artisan or a noble in either society. And of course, the slave could not leave, and any such indiscretion could result in violent punishment. Similarly, a domestic slave in sub-Saharan Africa in the fifteenth century could potentially and under the right circumstances, like an ancient Roman slave, marry, raise a family, and even own their own slave. Even so, the fact of slavery cannot be ignored: as in the nineteenth-century United States, such magnanimity toward human property was a strategic choice by the owner to control labor—there was nothing reciprocal in the relationship in any time period (Stampp, 1989). There is a genuine danger of forgetting this fact: the reality of slavery was and is that of property, centered in coercion and violence under even the best of circumstances, and cannot be sanitized of its brutality no matter the society or time in which it occurred. It is never benign, but as brutal, exploitative, and inhumane as slavery was in the fifteenth and sixteenth centuries, it

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

would actually become even worse. In the Islamic world, slavery was permitted though there were opportunities to win emancipation. These opportunities were nearly non-existent after slavery was racialized.

A NEW WORLD

At the turn of the Common Era, the two great world-systems of the time centered on Rome and Han China reached out their arms and met in Central Asia. The economic and cultural effects were profound as silk, porcelain, and spices made their way to the Roman world in exchange for the products of the West. The two zones had evolved in relative isolation from one another, and the coalescence of the new world-system was marked not only by exciting new products but also by dangerous epidemics that used the trade routes to find unexposed populations to serve as fertile fields of new victims. If there is one figure that can testify to the isolation of the world-systems that had developed in the Americas before the modern era, it is this: as a result of contact with the populations of the "Old World," 90 percent or more of the hemisphere's population died (Mann, 2006).

The scientific evidence about the peopling of the Americas is relatively straightforward. According to DNA evidence, every population of Native Americans in the two continents is descended from a population that traversed Beringia, the so-called land-bridge between Russia and Alaska, toward the end of the Last Glacial Maximum at least 15,000 years ago (Goebel et al., 2008). There is no evidence of Polynesians settling Peru, or Africans posing for Olmec heads, and certainly not for Martians building the Maya pyramids. Although there might have been small unrecorded encounters, we know of only two contacts between the Old World and New after the reopening of the Bering Strait, and both were the result of Europeans taking to the sea in the face of overpopulation and trade.

There is some debate over the exact nature of the Norse Expansion—the movement of Vikings from Norway into the North Atlantic beginning around 800 (Ferguson, 2009). The Vikings are best known to history for their raids in the British Isles and northwestern Europe, but they established trade routes through Russia to Central Asia, settled and ruled England, and expanded their settlements across the ocean to the Shetland Islands, the Faroe Islands, and Greenland. In each new territory, they established settlements and were likely the first humans to settle Iceland. The expansion seemingly matches what one would expect of a population experiencing pressure in the carrying capacity of its environment: like earlier hunter-gatherers, they left when they perceived stress (Barrett, 2008). Looking to Europe, they found settlements ripe for raids and a ready source of gold and other treasures,

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

but they also found land (Hansen & Wickham, 2000). In Iceland and other islands, the lack of population provided only land, and they continued to push west. By the end of the tenth century they had established settlements in Greenland, collapsing finally around 1500 due to climate change (Kintisch, 2016). They also discovered inhabitants in Greenland, with whom there is evidence of skirmishes. Around the same time, about the year 1000, they established a small settlement at the northern tip of Newfoundland at L'anse aux Meadows. A collection of earthen homes reliant on the sea, the settlement appears to have been relatively short-lived (Ingstad & Ingstad, 2000). Unsurprisingly, the Norse had no discernible impact on the disease ecology of the native population.

The second contact is better known to history: the "discovery" of the Americans by Christopher Columbus, an Italian sea captain in the employ of the Spanish court. The Spanish were near the end of their triumphant ejection of the Muslim Caliphate from the Iberian Peninsula and being outflanked by their Portuguese neighbors who were making great strides reaching the Indian Ocean; in 1488, Bartholomew Dias had sailed around the Cape of Good Hope at the southern tip of Africa. Between competition to find an alternate route to India and an end to hostilities on the peninsula, King Ferdinand II and Queen Isabella I funded Columbus's trips to India by way of a trip across the Atlantic. Of course, Columbus was wrong about being able to reach India across the ocean as the Americas stood in his way, but upon finding the islands of the Caribbean, he assumed he had found the subcontinent and duly named the inhabitants "Indians." Columbus sought to develop a system of plantation agriculture similar to that of the Portuguese on the Azores, enslaving the local population. Just as others on the mainland of the Americas, the residents of the Caribbean had been genetically isolated from the "Old World" for thousands of years. Just as the Antonine Plague of Smallpox had killed huge percentages of Romans at the empire's peak, and as a more recent outbreak of Plague had swept through Europe in a devastating demographic event called the "Black Death" that killed between 30 and 60 percent of the population during the fourteenth century, the introduction of Old World diseases to the Americas swept one epidemic after another through a population with little to no natural immunity. Within a 100 years, over 90 percent of the native population had died, and although the purposeful introduction of disease by Europeans cannot be denied, it hardly explains such a devastating mortality rate—even in places with minimal contact with the invaders. The mainland of the "New World" had been home to empires that, as in the Fertile Crescent and in China, had been evolving social complexity for thousands of years. Part of what the Europeans sought in the sixteenth and seventeenth centuries was the wealth of these empires, and through a combination of war and disease, they captured more than they could have dreamed in 1400.

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

In the Fertile Crescent and in China, the end of the last Ice Age was followed by a period of population growth accompanied by cultivation of grasses and eventual domestication of staple crops. In the Fertile Crescent, these crops included wheat, barley, and rye; in China, it was millet and rice. In the Americas, a similar pattern was evident. It was in a narrowing corridor, the highlands of south-central Mexico near the Balsas River, that another grass was cultivated and domesticated around 6000 BCE: Teosinte (Matsuoka et al., 2002). Likely as a result of artificial selection by farmers over many generations, the seed-bearing ears of the grass grew larger and larger, and as the new plant spread north and south, new varieties developed in various environmental and cultural zones. Maize, simply known as corn to most Americans, is today one of the most grown crops in the Americas.

Two other plants joined maize in the Mesoamerican agricultural complex, squash and climbing beans, known as the "three sisters." The three plants were most often planted together in small mounds in a practice known as *companion agriculture*. This technique developed over several thousand years, spreading from southern Mexico south into South America and the Andes and north as far away as the Iroquoian and Algonquian territories in the American northeast. The agricultural complex often joined local plants as well. Like other world-systems, the rise of social complexity in the Americas was rooted in an underlying agricultural regime, but the specifics of that regime were specific to each system.

As discussed in previous chapters, one way of examining the spread of culture is as a wave that spreads and takes root in appropriate environments. In the case of the Fertile Crescent, the agricultural regime of the western arm of the crescent—from the Levant north through Syria and southern Turkey—spread south through the Euphrates and Tigris Valleys to the Uruk Civilization while also traveling southwest from the Levant to the Nile Delta and Valley. The result was near-simultaneous evolutions of urban societies rooted in an earlier agricultural regime and quite distinct. The Americas offer a similar dynamic writ large: from an agricultural regime with an initial development in south-central Mexico, the technology spread throughout the Americas but took root in very different expressions of social complexity.

In South America, the agrarian economic complex met with dry conditions in the Andes of Peru. The successful agricultural practices led to population growth and the earliest urban-rural systems: the Norte-Chico. Centered on the river valleys, the agricultural complex included maize, sweet potatoes, and a dozen other domesticated plants (Haas et al., 2013). The largest town, Caral on the Supe River, was home to about 3,000 residents and functioned as the regional trade center for smaller agricultural villages in the Supe Valley. Trade links appear to have stretched to the Pacific Coast and the Amazon (Shady et al., 2001). Self-similar communities were found in the region, with

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

each village home to temples and plazas that served as forerunners to those found in later Andean and Mesoamerican cities.

In Mesoamerica, the earliest urban society was that of the Olmec. They emerged during the mid-second millennium BCE, and by 1200 BCE, the site of La Venta hosted a city that controlled much of southern Mexico. La Venta was, like other Olmec and later Mayan cities, centered on a ceremonial complex that included a "pyramid," structurally more similar to a Mesopotamian Ziggurat than an Egyptian tomb, and low-density urbanization in which settlement and farmland intermingled (Pool, 2007). At La Venta and the earlier city of San Lorenzo, enormous heads with a superficial resemblance to Africans have given rise to pseudoscientific claims of earlier African influence (e.g., Van Sertima, 2003; for a critique, see Haslip-Viera et al., 1997). Not only were the local populations quite capable of developing social complexity without Old World help, but the genetic evidence and devastation wrought by epidemics when contact was finally made also debunks notions of previous contact with Africa or Europe. The Olmec were followed by the various Maya city-states such as Chichen Itza, centered on central religio-administrative complexes and surrounded by low-density urbanization. By the time of the Spanish conquest, the Aztec Empire centered at Tenochtitlan, now Mexico City continued much of the cultural, technological, and architectural traditions (Carmack et al., 2006).

In the Andes of South America, a similar agricultural regime was blended with local plants, perhaps most famously the potato. By 900 BCE, the Chavin Culture had developed irrigation canals and towns capable of supporting agricultural and temple complexes (Burger & Van der Merwe, 1990). A 1,000 years later, the Moche Culture had developed larger settlements and sophisticated political institutions (Benson, 2012). They gave way to the Wari, who struggled with the southern neighbors: the Tiwanaku culture. Both cultures developed advanced states with elaborate monumental architecture and evidence of subjugation of rural subjects for the feeding of the cities. As these states declined after 1000, the region fell back into its constituent urban-rural systems. One in particular, the city-state of Cuzco, became quite adept at warfare and reconquered the Wari and Tiwanaku homelands. We know them today as the Inca Empire (Glowacki & McEwan, 2020).

North of Mexico, there was considerable land and subsequently less risk of running afoul of the environment's carrying capacity. The urban states of Mesoamerica and South America were thus unmatched in the north, although some significant levels of social complexity occurred. In the central United States, the Mississippian culture developed some very large towns with monumental architecture in the form of large dirt mounds constructed into ceremonial plazas reminiscent of the Mesoamerican cultures (Pauketat, 2003). In the Four Corners Region of the United States, pre-Puebloan cultures

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

developed towns of up to 5,000 people dependent upon irrigation and the three sisters agricultural complex. They had local resources as well, including domesticated turkeys. The culture survived for hundreds of years before a drying climate resulted in the abandonment of the largest towns around 1100; this drying also led to the collapse of Tiwanaku in South America and the Mississippian Culture (Pauketat, 2003; Carmack et al., 2006). There is evidence of warfare as the drier climate increased competition among towns, and oral traditions from the Hopi suggest that remaining populations migrated to better climates, abandoning such sites as Chaco Canyon (Lekson, 2009; Stuart, 2000). They may have migrated south, joining the Maya with whom they had established trade relations.

Each of the zones presented urban-rural systems that traded internally as well as with neighboring regions. Cultural exchange spans the continent, with mound-building cultures found as far east as New York State and trade relations between the American southwest and the Mayans and Aztecs. A 700-year dry period in the early second millennium resulted in renewed attempts at social complexity after rains became more stable as the Inca and Aztecs' rise can attest. The artistry of the most advanced civilizations of Mesoamerica and the Inca included intricate cotton cloth, spectacular architecture, and beautiful works of jade, silver, and gold. When the Spanish explored the "New World," they first turned to plantation agriculture as a source of wealth. When they discovered what great cities like Tenochtitlan and Cuzco hid in their palaces and temples, it was only a matter of time before the conquistadors would find their way inland to sack the capitals. The results are a matter for historians to debate.

INTEGRATION

The European expansion to the New World was the event that culminated in the world-system in which we now live. The "Age of Discovery" in the Western Hemisphere began with Columbus's first voyage to the Caribbean. Burkert (2015) notes:

> That journey set off the world's greatest land grab, with Hernan Cortes attacking the Aztec Empire in 1518 and establishing vast territorial claims for the Spanish in America, spreading into South America and also further north. By the mid-sixteenth century, Portugal had followed suit and acquired what is today Brazil. The French set out to the Americas in 1605 and acquired Quebec; parts of the modern-day midwestern and southern United States, which were grouped into a French administrative unit called Louisiana; and a number of Caribbean islands, including, in 1695, Saint-Domingue, the western third of Hispaniola. England

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

> established its first successful settlement in Jamestown, which became part of the colony of Virginia, in 1607, soon to be expanded with further colonies in North America and also the Caribbean. (31)

Even the Dutch, who had more investment in the East, especially in Indonesia, created a Western presence in South America, the Caribbean, and later established New Netherland in modern-day New York and Delaware. Perhaps the first devastating effect of this high level of contact was the wave of epidemics that resulted in over 90 percent of the population of the Americas dying and the concomitant collapse of societies (Mann, 2006). However, as the New World System evolved, it integrated economic circuits throughout the world and shifted the balance of power from the Indian Ocean to the Atlantic. The former periphery of Western Europe found itself increasingly central in a manner never before seen.

ORIGINS OF THE MODERN WORLD-SYSTEM?

It is worth noting at this point that for many scholars of world-systems, the analysis begins at the end of this chapter. World-Systems theory has spent considerable print discussing the rise of the capitalist world-system during the sixteenth century. Wallerstein (1974, 1979) argued that the transformation of the global economy into a capitalist world-system during and after the sixteenth century was the dawn of what we know as the "world-system." Braudel (1992, 1992b, 1992c), in his three-volume *Civilization and Capitalism*, argued for the long sixteenth century as foundational for the modern world as the European powers expanded out into the Atlantic and grew to dominate world commerce. This later dating for the emergence of the world-system is in direct contradiction with those who, as mentioned in chapter 6, argued for a 5,000-year-old system (e.g., Frank & Gills, 1996; Chew, 2001; Chase-Dunn & Hall, 1997).

We are in general agreement, at least in broad brushstrokes, with both of these perspectives, but we see each period as part of a continuous evolution of urban-rural systems rooted in the dynamics of urban dependency. This deep structural logic explains continuous expansion and, through urbanormativity, a gradual obfuscation of the dependency of cities on rural resources and people—achieved largely through different circuits of trade placing vast distance between urban and rural populations.

The dynamics underlying this integration were (and are) rooted in urban-rural dynamics, and the modern world-system is composed of its constituent parts—ultimately, urban-rural systems. As agents in Complex Adaptive Systems, individuals and corporate units, whether in joint-stock corporations

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

such as the Dutch East India Company or the central government of a particular state, adapted to the political-economic circumstances with which they were presented. Western European merchants and states behaved in a way consistent with being in the periphery. They sought out new routes to cut out intermediaries in their desired trade, leading them to the Americas. In their dealings with Asian merchants, many of whom had previously established and preferred contacts, Europeans used military power to force their way into the trade and then into preferable terms; once this pattern was established, it led ultimately to outright colonization. European governments pursued this trade through the granting of monopolies to corporations but, as the trade expanded and new elite players desired their own trade, there was a turn to free trade ideologies that would later be foisted upon their colonies. Through all of this was an attempt to extract labor at low cost, and often this labor was in rural contexts, not an urban proletariat. It was often rural slavery.

Consider the earlier description of the Indian cotton industry. "Factories" in the cities dispatched agents into the rural areas to contract with rural labor for the cloth—this included the cultivation and harvest of cotton, the spinning of the yarn, and the weaving of the final product. Beckert (2014) points out that this system allowed for considerable economic power for the rural laborers, including how much production for which to commit and the price for which the product would be turned over. The increasing British monopoly over production near Dhaka limited this power, but the factory itself was not a manufacturing facility—it is better described as a collection point or warehouse. This system is similar to the woolen industry in the region near Ghent and Bruges in the thirteenth century. In response to the costs associated with rural-based craft production in industries like cotton, British tinkerers in the woolen industry sought to improve the productivity of rural textile workers by adapting existing water-powered technologies to spinning and weaving both wool and cotton.

By the early eighteenth century, the British coalfields finalized what was becoming an industrial gulf between Europe and Asia by allowing for the use of coal-fired steam engines in place of water turbine technologies. At each stage of the British Industrial Revolution, the manufacturing technology favored centralized crafts powered by the turbine or steam engine, but the capitalist drive for profit drove increasing scales of manufacture. The sheer number of workers needed to operate such mills required the relocation of rural laborers to growing cities. In effect, the growth of British industrial cities was a logical outcome of the alienation of rural labor: proletarianization.

The drive for low-cost rural labor was, of course, not merely in manufacturing. To the extent that the British cotton industry, for example, was dependent upon Indian farmers, the capitalists found it necessary to secure a more stable and lower-cost supply of raw cotton. The model for this low-cost

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

supply had been pioneered earlier by the Portuguese, who, as early as the fifteenth century, were using slave labor on sugar plantations in the Madeira and Azores Islands and by the sixteenth century in Brazil. By the sixteenth century, the British too had sugar plantations in the Caribbean and, as we shall see in chapter 10, other colonial interests. Throughout the eighteenth and early nineteenth centuries, the plantation system was turned to secure cotton at a price that undercut the Indian market. This was made possible by an increasing reliance on slave labor.

The slave trade did not come into existence because of sugar, tobacco, and cotton plantations in the Americas—it existed for centuries before. However, the Atlantic trade was expanded to despicable dimensions by the American plantations that were, in turn, feeding elite European markets for exotic goods. Cotton cloth was obtained from India, and while a portion was sent to Europe, much of the Indian cloth was traded with kingdoms along the West African coast (Beckert, 2014). Ironically, most British subjects were limited to lower-quality British cotton cloth through much of the eighteenth century due to the policies designed to protect and grow a domestic cotton manufacturing sector. As British cloth attained higher qualities acceptable to African elites, the Indian cotton industry was increasingly undermined and compelled to export raw cotton rather than finished products. African kingdoms traded in a number of products, but as the eighteenth century unfolded around New World plantations, the principal trade item became slaves. Moreover, as the slave trade was increasingly centered on the Atlantic and not the Mediterranean, and as the slaves were increasingly Africans who were victims of coastal raiders stealing people from the interior, in Europe and the Americas, their perpetual bondage was justified by their race. Slaves had always been at the bottom of the social hierarchy no matter the society, in effect considered a lower class of human; now, they were seen as inhuman livestock.

The New World provided a wealth of resources to Western Europe that cannot be understated. Lands in the Caribbean and the mainland, inhabited by populations culled by disease and warfare, were turned into the plantations that provided raw materials. The great states provided even more. Artisans in Mesoamerica, dominated by the Aztecs, had generations of artworks in jade and gold. The Spanish invasion was aided by the residents of constituent states who, tired of Aztec oppression, led the conquistadors to the capital in the middle of Lake Titicaca. The city and the empire were destroyed, a cathedral built on the Temple of the Sun's foundations. A similar fate was inflicted on the residents of Cuzco, the Inca Empire's capital, whose main thoroughfare gleamed with buildings clad in gold sheeting. Warfare and conquest were nothing new in the Americas—the empires were forged the same way Old World empires had been—but the destruction of artistry for the raw material must have perplexed Native elites. Gold statues, temple

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

paraphernalia, and luxuries were melted into bars and shipped away, as was silver and any other metal deemed to have value. Items of jade were often simply destroyed as they lacked the fiduciary value of precious metals. The impact of this newfound wealth for European powers was the ability to buy any number of trade items from merchants in East Africa, India, China, and anywhere else served by the Indian Ocean world-system. The overabundance of silver caused rapid inflation in luxury markets throughout the basin, an erosion in the main currencies of the former strongholds in the system. It was the global equivalent of walking into a store with someone else's credit card, buying whatever toys and trinkets your heart desires without the concern of where the money came from or how to pay the debt. Western European powers increasingly pulled ahead of countries and regions that had as late as the thirteenth century been clearly ahead. Pomeranz (2000) notes that even as late as the sixteenth century, Western Europe, China, and India had standards of living, economic productivity, and cultural sophistication that were roughly equivalent. By 1800, the discovery of the New World had indeed created a New World.

CONCLUSION

For most of human history, the nomadic and agrarian systems revolved around meeting the immediate energy needs of the population: food, and the energy to grow, gather, and distribute the food from the local environment. The rise of urban-rural systems led inexorably to a separation and distancing between the large dependent urban populations and sparse rural populations working in the energy economy, linked together by complex trade circuits. The rise of the industrial capitalists of the late eighteenth century, the motivation for economic activity had seemingly little to do with providing basic resources. It was about profit, and it was driven by the exoticism of the elite.

As early as the turn of the Common Era, the desire for exotic goods, be they food or fabrics or works of art, became a mark of refinement and of power. Roman emperors, for example, displayed their power and that of the state by importing animals from throughout the empire to be slaughtered in the Colosseum. Since the tenth century, Chinese elites indulged in something like a modern spa treatment, breathing in the imported fragrant wood smoke imported from Africa in specially built smoke rooms. The choicest goods were reserved for the elite, if not by law, then by price. As today, however, the desire on the part of the middle classes to appear elite drove an expanding trade in such goods. Enterprising merchants explored new markets, both those for sale of exotic products internally and abroad as a source of such

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

goods. The state was a key partner in these efforts as it was a driver in imperial expansion into the early empire.

The spreading of the trade system that integrated the Mediterranean and Chinese systems brought to Rome such luxuries as new spices and, of course, silk. This integrated Eurasian world-system ultimately survived both the Roman and Han states that produced it, and the continued coalescence of the system around the Indian Ocean basin survived and absorbed even more challenges, including the rise of the Islamic World as a competitor, repeated invasion from Central Asia, and even the Black Death. The trade for luxuries for elites led to markets in such goods that allowed them to filter down the social hierarchy. By the medieval period, such items as sugar and other spices were regular items in middle-class European cooking. It was this trade that drove the desire for cotton over wool, and porcelain over terra cotta, and ultimately for gold and silver over copper and tin. The world-system spawned fads around the world, and the more exotic, the better.

The discovery of the Americas provided even more luxuries. More gold, more silver, more profit. Landscapes on which to grow sugar, cotton, and tobacco. Business opportunities, protected by states willing to grant trade monopolies and sponsor war if necessary, abounded to provide luxuries to ever-larger portions of the population and, when too many had access, to locate the latest and the newest luxury affordable only to the elite. By 1800, the economic and social world looked more like our own than that of our ancestors.

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

Part III

NEW YORK'S URBAN-RURAL SYSTEM

In the previous section, we traced the evolution of urban-rural systems from their earliest occurrence during the Neolithic or, depending on how one interprets earlier sedentary villages such as Ohalo II (Kislev et al., 2002) and Abu Hureyra (Moore et al., 2000), the Late Paleolithic. This is a good opportunity to examine how the model has performed thus far and to consider what further insights can be gained by examining a more recent evolution in the New World: New York. As New York has evolved from a colonial trading port to the preeminent global city in only 400 years, it offers a level of detail not enjoyed thus far. To reiterate: human communities are Complex Adaptive Systems, and we anticipated that our foray into human societal evolution would reveal aspects of their functioning rooted in how Complex Adaptive Systems behave. We return to our hypotheses from part II:

> **Hypothesis 1:** *Humans are agents, and more agents in interaction involves more energy in terms of consumption and requirements.*

It seems almost self-evident that as the population grew, so too did the level of social complexity. We should recall that there was over 10,000 years between the settlement at Ohalo II and the first agrarian villages during the PPNA. Population growth alone cannot explain sedentism. As an adjunct of the slowly unfolding broad spectrum revolution—decidedly not on a revolutionary timescale—the rise of sedentism can be understood as part of a dialectical dance between increases in population, innovation in the energy economy to create balance with the environment, and subsequent population growth. Due to the length of time required to accomplish this, we find the term *Agricultural Revolution* to be misleading. The earliest agrarian village of the PPNA was only a brief stage in anticipation of the next innovation that

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

ushered in what most scientists consider a complete agricultural village: the domestication of sheep and goats during the PPNB. Pastoral nomads were a vestige of earlier nomadic foraging that became specialized in the trade of domestic animal species. The first sedentary agrarian farmers relied on them for sources of protein and other animal byproducts, and they, in turn, gained access to grains and other fruits, nuts, and vegetables. *Agrarianis*m—defined as a self-sufficient environmental demographic system—evolved when reliance on pastoral nomads was gradually replaced with raising livestock locally. This did not lead to the demise of pastoral nomads, many of which would go on to form "shadow empires" such as the Mongols under Genghis Kahn. They successfully leveraged their nomadism to conquer large swathes of territories and usurp resources from the urban-rural systems contained within. The Mongols were aided by horses in moving large armies over great distances, eventually reaching and conquering Mesopotamia—ironically, the birthplace of urban-rural systems.

Successful agrarian villages grew, and population growth encouraged migration as a release valve on scarce environmental resources. One culture—the Samarra—traversed southward onto the alluvial plains of southern Mesopotamia they innovated further, learning to irrigate fields near the river (Maisels, 1990). By the time the population reached the southern marshes, irrigation technology and the mechanisms of agricultural administration had transformed into the Ubaid. The Ubaid spread back through the Mesopotamian heartland, more populous, stratified, and complex than their forebears. The Ubaid introduced the first hierarchies of settlements in an emerging urban-rural system—a simple two-tier system of an urban temple market town and rural agricultural satellites. Crafts were traded for meat and crops, and trade expeditions brought Ubaid pottery to the Persian Gulf to exchange for pearls.

The Ubaid accelerated over time, culminating in the first cities during the Uruk period. Southern Mesopotamia exhibited a regionalized urban dependency, and the pressure was on to expand and control adjoining rural regions—particularly to the north and east. This pattern of regionalized urban dependency drove expansion and coalescence that, in time, led to the modern world-system. Egypt experienced long periods of alternating coalescence and collapse back into constituent urban-rural systems. External threats, such as those posed by the Akkadian Empire, helped unify the city-states in Egypt. In the Roman Empire, there were wars on several fronts, seeking control over German, Celtic (Gaul), and North African lands (modern Egypt, Tunisia, Libya, and Morocco).

The modern world-system is the latest iteration of this evolution, but not its end result. The world-system in its current form is a period of high integration, but there are no guarantees that the dynamics favoring integration will

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

continue to accelerate. The complexity of the system revolves around a comparatively small number of preeminent centers, of which New York is one.

Hypothesis 2: *The pattern of settlements reflects the efficiencies as discussed with the "caloric well."*

As noted above, the first settlement hierarchies appeared during the Ubaid period, and with increases in population accelerated over time. During this early stage, there was a distinction between first-order and second-order functions. First-order centers housed the temple—responsible for administration, learning, and ritual—and were the primary trade centers. Second-order centers were for coordinating the rural farmers and non-elite craft production. As the Ubaid turned to the Uruk, the settlement hierarchies grew more complex to support a deeper caloric well. Considerable warfare during the Uruk consolidated the number of settlements into fewer better-defended cities. By the third millennium, Sumerian cities competed for dominance with each other and for control over lower-level centers. The system was growing more complex. The Roman system, with its reliance on the Egyptian breadbasket, is illustrative. And the more complex the system became, the more difficult it was to maintain stability. The Roman Cities' energy demands were substantial, and without the caloric supply in Egypt would struggle to survive. This was one of the precipitating factors that led to the collapse of the Western Roman Empire and the rise of the Islamic World's Caliphates.

The modern world-system was spawned of the continual expansion necessitated by deepening caloric wells. It was this dynamic that witnessed Rome and China reach out across Eurasia, and later iterations of these same dynamics that forced a downtrodden Western Europe to the Americas. Without these events, there would be no world-system with New York at its helm.

Hypothesis 3: *The system as-a-whole exhibits scaling and self-similarity.*

At each stage of social evolution, the effects of scale are evident. As early as the Neolithic, a common cultural tradition found in a particular region ensured that even when the scales of settlement were relatively low, self-similarity was nevertheless found. The skull cult was not found in one location, after all, but across the entire Fertile Crescent by the sixth millennium BCE. Similarly, when Ubaid towns began to build temples, the fact of their existence—sociocultural artifacts reflective of a similar cultural pattern across differing urban-rural systems—is again self-similarity. The effects of scale on cultural phenomena are evident. Large cities built larger temples, and as various cults spread throughout the region, the individual temples of a god or set of gods could be found in locally based temples that lacked the

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

magnificence of the main temple. This was true even in Jerusalem prior to the destruction of the First Temple, much to the disgust of the Biblical writers of I and 2 Kings. In each stage, the larger cultural pattern reflects what is happening at the micro level. Household shrines were evident across all time periods, from PPNA Jericho through Pottery Neolithic Çatalhöyük, to fourth-millennium Uruk and sixth-century Jerusalem. At higher levels of community were found increasingly important holy places, from neighborhood shrines to city temples to the empire-wide temples found in every capital city, from Jerusalem to Nineveh to Athens to Rome. This pattern was found in other matters as well, including marketplaces, water systems, and other cultural and logistically necessary infrastructure. In the early Greek civilization, only first-order cities like Athens would get a temple as grand as the Parthenon. Secondary city-states would have more humble temples devoted to their respective deities. The size of the temple mirrored the importance of the city in the regional empire.

Scaling and self-similarity can manifest in culture and its impact on the environment, but is not limited to it. The proliferation of technology, whether Neolithic pottery or modern cell phones, is a function of scaling. Today, a cell phone can be bought in any third-order center, but a wider variety of outlets and larger stores are typically found in second-order centers, including mall Apple stores, for example. It is in first-order cities that high-status shops can be found, such as the cubic Apple store on Fifth Avenue in New York City.

Hypothesis 4: *Stability in the system parameters at a particular scale will result in stability at the said scale.*

There was continual activity and change occurring at the micro-level in ancient cities and market towns just as there is today, but as long as these changes did not impact higher levels of organization, the system as a whole remained stable. This resulted in long periods of seeming stability, even stagnation, and particularly so in rural areas—less people, less interactions, less energy. Egyptian Kingdoms and the Roman Empire each spanned several centuries—even millennia depending on definition (the Byzantine Empire was an extension of the Roman Empire). Even so, minute political changes could bubble up to the surface. An illegitimate soldier takes command of an army, the army takes control of a city, and the city and its armies conquer surrounding cities to form a new empire. More likely, however, are clusters of reinforcing events. For example, it is evident that, culturally, the YHWH Alone Movement existed for decades before the Babylonian exile, as noted by Friedman (1997). The books of 1 and 2 Kings celebrate the successes of their favored kings, Hezekiah and later Josiah, in destroying the artifacts (although not worship) of other deities. This movement appeared

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

among the priesthood but was not dominant. With the ripple of events in other parts of the world, specifically the ascendancy of the Babylonian Empire, the fall of Jerusalem and subsequent exile of the elite paved the way for the movement to forge theological arguments based on their YHWH alone premises, resulting in the formation of Judaism in the centuries that followed. The change would have appeared rapid because the macro-level theological changes took place after macro-level stability that came to an end after a confluence of events that had been building at the micro-level for decades.

The modern world presents the same dynamics. There are continual undercurrents of conflict and dissent in any society, but it is only in certain periods that this escalates to instability, and even less common for collapse.

Hypothesis 5: *Changes in system parameters will result in changes in dynamics*.

Although change is possible due to micro-level variations coming to the fore at a higher level of organization, changes in system parameters also bring about change. This is most dramatic in the fates of the highly complex urban-rural systems that developed as the result of urbanization. The demise of the Bronze Age around 1200 BCE took place after a series of disjointed events weakened the system as a whole. Similarly, the "fall" of the Western Roman Empire took place due to multiple changes in the parameters affecting the system. Demographic shocks resulting from epidemic disease, themselves the result of economic changes (trade with China) and environmental changes (end of the Roman Climatic Optimum), sent the entire Mediterranean world-system into chaotic fits of contraction and expansion, warfare and peace, from which the West could not recover. The "fall" was dramatic but ultimately regionalized: the Eastern empire continued on, and the Mediterranean world-system coalesced into a broader Indian Ocean world-system. For Western Europe, they were now in the periphery once again, as most trade occurred to the east. The "discovery" of the Americas would begin to alter this trajectory.

The development of the New York urban-rural system is the consequence of changes to system parameters. As Western Europe was relegated to the periphery of the Indian Ocean trade, explorers sought to find alternate routes to China and India. The presence of Europeans in the Americas was a change in environmental parameters, and the influx of American silver into the Old World trade was a change to economic parameters. The alteration in one parameter did not affect one aspect of the system but the system as a whole.

Hypothesis 6: *Continual contact between adjoining systems results in the system coalescing into a new and higher-order system.*

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

As Rome and Han China met in Central Asia, the world as both societies understood it, did, in fact, change. The ascendant Islamic World would function as a critical intermediary. The moment of contact and increased trade ensured that the two systems would grow into one, and the new system would exhibit a higher-level organization (we should remember that the former systems continued to exist) that had its own emergent characteristics. This was not the first time coalescence had occurred: the Mediterranean world-system itself was a combination of spreading populations from a core in the Fertile Crescent into adjoining areas and the absorption of neighboring systems. These instances of coalescence brought with them a logic stemming from a higher level of complexity. In the eighth century BCE, Rome was peripheral to the Mediterranean system; 1,000 years later, it was at its heart. The opportunities for trade and cultural exchange are often drivers for system coalescence, but such increased integration has often been met with new waves of epidemic disease and military conquest.

The modern world-system is the result of coalescence on a global scale. This coalescence has, since the nineteenth century, been aided by advisors in communities and transportation technology that enables seemingly instant organization around the world. It is led by New York, a city spawned by the Old World system expansion into the New World. The world-system emerged, but not in a manner imagined by earlier generations; it is doubtful that anyone alive in 1500 would have imagined a world economy dominated by the mouth of the Hudson River.

The city at the mouth of the Hudson River began as a mere trading post on the tip of Manhattan Island. Surrounded by saltwater and having relatively little fresh water on the island itself, Manhattan was not the first choice of colony for the Dutch explorers; they preferred Albany. In this part, we examine the development of the New York urban-rural system from its initial settlement by the Dutch until today. Curiously, we will examine New York City from a perspective that few have utilized: from the view outside the great city. There are numerous great books that examine the city's development (see, for example, Lankevich, 1998; Burrows & Wallace, 1999; Shorto, 2005), but no city can develop without its hinterland. This part of the book is the story of New York City's caloric well and its impact on its hinterland; it is also the story of a fabulously rich hinterland that allowed for such a great city to grow.

The context for this story emerges from the previously discussed period of Western European colonization of the Americas. This was first pioneered by the Portuguese and Spanish, who were joined later by the French, Dutch, and British Empires. Even smaller states, such as Sweden, were drawn to the prospects of American wealth. The great Western European powers were greatly enriched by their new colonies—beginning in South American and

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

the Caribbean—and were embroiled in a state of perpetual war and piracy as each sought to stake its claim. The Dutch and Spanish war persisted for eighty years. These were the two dominant powers in the early part of the seventeenth century. Eventually, the Dutch would prevail, only to be challenged by the ascendant British Empire, who would battle the French for control over North American resources. The period of European colonialism can be explored through many different avenues, but the significance of New York is often overlooked through a historical lens that has been heavily framed through British histories that emphasize the Virginia and Massachusetts Bay colonies. Neither of these is today as central to the modern world-system as New York. The story of New York is an unlikely one and serves to illustrate some important features of urban-rural systems and the overall world-system that would develop around the Atlantic Ocean, providing us with a bridge between the past and present.

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

Chapter 10

Fur

It is New York, so it is likely that the story extends well beyond the city or state line. It goes something like this: a mature world-system based in Europe, the late efflorescence of the urban-rural systems that developed in the Fertile Crescent thousands of years earlier, spawned new iterations, and merged with independent systems to become a system that spanned the Old World, sent out explorers in search of gold and land. One such explorer Henry Hudson in 1609 sailed into modern-day New York Harbor and up the river that today bears his name. New York was such a fabulous harbor and obvious point of trade that the city was destined for the greatness it today enjoys (Jacobs, 2009).

Like many creation myths, the story is a blend of truth and falsity. It was the Englishman Henry Hudson who "discovered" the river, but he sailed for the Dutch East India Company—competitors against the British interests for whom he had sailed the year before. New York is perhaps the best natural harbor on the East Coast, but he sailed through it as far as the Hudson is tidal—near modern Albany. Indeed, the Hudson is perhaps better described as a tidal fjord for the southern 150 miles, a sea-level cut through the Appalachian Mountains. Rather than virgin territory, tribes of Algonquian and Iroquoian language speakers not only lived in the region but fought each other for dominance.

Baseball was played in Cooperstown in 1839, but nobody invented it, and it is unlikely that any one boy in the pasture remembered a game a year later. So it is with the growth of what is arguably the world's most important city, at least as of this writing. New York's harbor is spectacular, but without interior agricultural and trade markets, it was nearly without commercial value. There were streams and even a pond near the initial Dutch settlement, but hardly enough water for a growing metropolis (Koeppel, 2000). And New York

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

was not alone: its earliest competition included the city of Philadelphia, well inland and more populous than New York, as well as such obvious contenders as Boston and Baltimore. Such smaller cities today as Norfolk, Charleston, and Providence were serious threats to New York's presumed hegemony as the American Revolution broke out, as were nearby cities such as New Haven and Newark (Burrows & Wallace, 1999). Indeed, the earliest start to New York's rise began not on Manhattan Island, but on Westerlo Island, in Albany.

The Dutch attempt at settlement in the colony known as New Netherlands was hardly one of continuous progress. The Dutch were, likely their French competitors to the north, in search of beaver pelts. The furs were fashionable among the European elite in hats, and so the fur trade was quite profitable. The site on Westerlo Island (later known as Castle Island) had the advantage of being in the middle of the Hudson, a good defensive position against potential attack by either their Algonquian or Mohawk neighbors. The two tribes were locked at the time in conflict, the Mohawk having the backing of the larger Iroquois Confederacy: a league of culturally related tribes united around defense that stretched from the Hudson west to Lake Erie. The Iroquois were the dominant power in upstate New York, a fact not readily apparent from Dutch claims or maps from the period. The island location of the settlement, known as Fort Nassau, was also useful for landing trading vessels, loading them, and sending them back across the ocean toward Europe. This was important for the Dutch interests in the Caribbean, as New York served as a stopping point between the Netherlands and the Caribbean. But the island was downstream of the Hudson and Mohawk Rivers, both of which rise in the snow-prone Adirondack Mountains and are prone to flooding. After building the initial fort in 1614, by 1617, they had given up on the site and moved south to the mouth of Norman's Kill (*kil* being the Middle Dutch word for a creek or inlet), only to abandon that site and build Fort Orange to the north of Westerlo Island in 1624, following the creation of the Dutch West India Trading Company in 1621. If choosing a less flood-prone site were not tricky enough, the Dutch had settled the area with the local Mohicans' goodwill—the tribe with whom the nearby (and more powerful) Mohawks were at war. The Mohicans recruited some of the Dutch to aid them in battle against the Mohawk, a few miles to the west. All of the Dutch and Mohican warriors were killed in an ambush—one of the Dutch soldiers was roasted and eaten by the Mohawk warriors. In 1625, the Dutch moved most settlers to the tip of Manhattan Island for their own safety, leaving only traders and no families in the vicinity of Albany (Jacobs, 2009). Eventually, the Mohawk would drive the Mohican east, with many retreating to Connecticut. After this, Fort Orange resumed trade with the Mohawk to obtain inland fur, as much of the coastal beaver population was already decimated.

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

The Dutch claimed the territory between the Connecticut River in the east to the Susquehanna River in the west, considering Chesapeake Bay the proper boundary between them and British Virginia. The lofty claims on the maps were more questionable on the ground as numerous native societies claimed and, in fact, lived on the land. These societies included the Iroquois themselves, the confederation being in contact with the Dutch in the east and the French in the west. Knowing the European thirst for fur, the Iroquois played the various powers against one another, pitting French against British, British against Dutch, and Dutch against Swedes. Along the southern reaches of the Delaware River, roughly between Wilmington and Philadelphia, the colony of New Sweden was founded in 1638 and, in perhaps the only impressive military campaign in New Netherlands, conquered by the Dutch in 1655! But in reality, New Netherlands existed solely in the Hudson Valley and national pride.

During the seventeenth century, the Netherlands was perhaps the wealthiest society in Europe. Having thrown off the yoke of Spanish overlords, the Dutch expanded their territory through the skillful use of dikes and land reclamation, growing the lands into the sea. Their textile industry was the most advanced in Europe, and their mercantile and trade system was sending tentacles around the world. Simply stated, for many Dutch citizens, there was little reason to leave and many reasons to be wary of a strange land surrounded by potentially hostile natives while huddled in palisaded cities known primarily for their access to beavers. Indeed, Albany itself was informally called *Beverwyck* by the Dutch traders, the equivalent of Beaverville in English. The Dutch attempted agricultural settlements under the patroon system—notably under Kilean van Rensselaer, who established Rensselaerwyck in 1629. This was the Dutch feudalistic land system wherein elite landowners owned large tracts of land. Even before the inevitable arrival of the English military, the patroons recruited Protestant settlers from France and England to settle the Hudson Valley lands between Albany and New York. Dutch dreams of settling the Connecticut and Susquehanna lands were just that.

The Dutch ruled the colony until 1664 when a small British fleet took New Amsterdam without a shot. In 1673, renewed warfare between England and the Netherlands resulted in a large Dutch fleet retaking New Netherlands, but the home country was in turmoil by then. Three wars against the English and the French, a period of economic stagnation, and the weight of a small country playing a global power took their toll. At the Treaty of Westminster ending the Third English War in 1674, the Dutch ceded their claims in North America to the English, who had long sought to unite their North American colonies and would turn next to the French in Canada. New Netherland became New York, the patroons became manors, and the diverse population became English (Shorto, 2005).

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

FEUDAL MANORS

A lasting legacy of the Dutch colony was the formation of patroons, large estates administered as feudal estates by members of the upper class. The largest was the above mentioned Rensselaerwyck, which included large portions of four modern counties. The rural lands along the Hudson were divided into other such estates, their Dutch families laying the groundwork of political-economic dynasties that would stretch into the nineteenth century. Upon the transferal of the colony to England, the patroons fell under British Manor Law. Indeed, all of New York was conceptualized under the law as a manor belonging to the Duke of York—the only legally defined member of the aristocracy. The lords of the manors in New York thus were not officially feudal lords, but they nevertheless functioned as such within the land system of the New York colony (Ganshof, 1996; Thomas, 2005). Notably, neither the Patroon van Rensselaer nor the Duke of York would set foot in this land.

We might recall that thousands of years ago, during the Ubaid at the earliest and the Uruk at the latest, the coordination of a mass labor force toiling in the fields required a level of organization that was far beyond that of the earliest Neolithic villages. The Ubaid period witnessed the birth of the Near Eastern Temple in Mesopotamia, and by the Uruk period the agricultural system was arranged around long furrows that maximized production for the community as opposed to an individual household (Liverani, 2006). In order to administer such a society, particularly one with secondary hamlets in a two-tier urban-rural system, the earliest temples released sages from agricultural labor. Their role was to study the environment in order to coordinate social activities, including planting, harvest, and the maintenance of irrigation canals. By the earliest writing late in the Uruk period, it is evident that the urban-rural system was organized around the metaphor of the family. The chief deities of the city, Anu and Inanna in ancient Uruk, were conceptualized as the progenitors of the city. The earthly king ruled on behalf of Anu, and all lands belonged to him. In Babylon, the chief deity was Marduk, and it was for him that the king ruled. In Rome, it was Sol Invictus. As the god's agent on earth, the king allotted lands to the various "owners," but in concept all land belonged to the gods and, by extension, the state.

Just as the writing of *Enuma Elish* to justify the ascendancy of Babylon through the story of the rise of Marduk to the head of the pantheon did not fundamentally alter this pattern, neither did the conversion of Rome to Christianity. Medieval kings ruled their realms by the decree of God, their wins and losses in battle deemed earthly evidence of God's will, of his satisfaction or displeasure with the people. In this idea the Christians had ample precedent: it is a common, even dominant, theme in the Hebrew Bible (Christian Old Testament). It is also found in writings from Ugarit,

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

Mesopotamia, and Egypt, as we noted earlier. It is even at the center of religious ritual both in the temple and with the household gods: prayer and sacrifice intended to win the favor of a god or, in a perhaps more frantic practice, to negate the insult of sin. Like their ancient forebears, the medieval kings ruled the realm for God but did so by doling out territories to underlings and vassals (Ganshof, 1996). No two periods of history are identical, however. A structural problem—how to allocate land and organize labor in an agricultural society—not surprisingly yields a similar structural solution.

At issue in the ancient world and the modern is the central fact of urban dependency, and urban dependency relies on the extraction of surplus from rural producers to feed the appetites and workshops of urban society. This is a structural issue, not cultural, and not easily wished out of existence. The medieval legal patterns called "feudalism" lead to similar structural outcomes because they were based on similar structural needs. As practiced in the colony of New York, the Manor Law was rooted in the 1066 victory of William the Conqueror in England, the vast fiefdoms being rewards for his supporters (Cannon & Griffiths, 2000). The Baron, addressed as Lord, was the lowest rank of the nobility, and the king granted each member of the nobility a fiefdom in exchange for certain obligations, including a portion of the agricultural proceeds, the provision of knights and other military personnel, and by the seventeenth century, taxes paid in money. As in more ancient times, the king distributed his realm as part of his obligation to rule the realm on behalf of God who, as a rule, did not bother himself with such trivia. In New York, the realm was given to the Duke of New York who, in turn, distributed the manors to Lords of the Manor who, under British Manor Law, were considered to be part of the landed gentry but not of the Nobility (Reynolds, 1996). Throughout the seventeenth century, large tracts of land were granted as Manors (or Patents) in interior New York State, first in the Hudson and Mohawk Valleys and eventually further from the rivers.

The manors in New York had a mixed record of success. They are significant today primarily as place names, such as Pelham Manor and Briarcliff Manor. The most successful was Rensselaerwyck, descended from the Dutch patroon and as late as the 1840s still in the van Rensselaer family. Nevertheless, the system in Europe was founded on the same principle as extractive rural production systems dating back millennia: the need to feed cities. New York, however, had an excess of farmland when compared to its urban population. At the nation's first census in 1790, New York City was home to 33,131 residents, already the largest single city in the newly formed United States (although Philadelphia was larger when combined with its suburbs). Albany was the state's second largest city and nineteenth in the nation but was home to only 3,498 residents and little larger than the state's third largest city, the 2,584 residents of Hudson. For support of this

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

comparatively meager urban population was the entire Hudson Valley, all of Long Island, and land in adjoining states. Simply stated, seventeenth-century New York was quite capable of feeding itself with a relatively small resource horizon.

The result of a comparatively lush and well-watered rural landscape combined with a relatively low urban population was that many land grants were pursued for reasons other than creating a fiefdom. One example was the creation of the Hartwick Patent 25 miles south of the Mohawk Valley in 1761. John Christopher Hartwick was a Lutheran minister who arrived in the New World in 1746, intent on preaching to fellow Germans in the Hudson and Mohawk Valleys. He preached much of his life in modern Rhinebeck, across the Hudson from Kingston, and in the middle Mohawk Valley near Fort Plain and Canajoharie. Hartwick was disappointed in his flock, however, as he worried that the low-density farmsteads resulted in too little social control to ward off sinful impulses. In 1761, he received a patent for 21,500 acres on the western shore of the Susquehanna River just south of Otsego Lake with the intent to build a New Jerusalem (Arndt, 1937). Modeled on a medieval German village, the village would have a gymnasium at its center, in its classical form a combination of church, school, and activity center. The homes would be densely settled, and villagers would work the fields surrounding the hamlet. As was common in feudalism, residents would lease their lands and look to Hartwick himself as their leader (typical for lords of the manner) and spiritual minister (less common). To modern sensibilities, his lease reads as a tad intrusive:

> That the grantee, be or become, within a year's time from the date of these presents, a Parishner to all intents and purposes; which consists in the following particulars, viz:
>
> 1) To acknowledge the grantor, or his substitute, for his Pastor, Teacher, and Spiritual Counsellor.
> 2) To behave himself to him, with his family, and dependents, agreeably to this relation.
> 3) To attend regularly, decently, attentively and devoutly, Divine Service, and instruction performed and given, by the said John Christopher Hardwick.
> 4) To aid and assist, according to his ability, in building and repairing Church- Parish- and School- Houses.
> 5) To keep children and servants to school, and catechisation, until they are fit to be confirmed, if baptized, in fancy- and if not, until they are fit to be baptized, and admitted to the Sacrament of the Lord's Supper. (Arndt, 1937, 295)

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

It was too intrusive to potential lessees, and the Hartwick Patent failed to grow until well after the American Revolution.

Other landowners, finding no need to feed the urban masses nor build a religious utopia, saw in the vast lands an investment for future gain through sale. One such land speculator was William Cooper, who, in 1785, bought the Croghan Patent immediately north of the Hartwick Patent. However, Cooper was not interested in being a landed aristocrat: he intended to sell the lands as quickly as possible, reinvest the proceeds in another patent, and reap the profits. In other words, Cooper saw land as a source of short-term profit, not long-term security from agricultural production and rents. Unlike Hartwick, whose adherence to the feudalistic land-lease system was evident, Cooper's adherence to a freehold system was more in keeping with the emergent capitalism in the newly liberated state (Thomas, 2003).

The freehold system was advantageous for Cooper and others for the same reason the land-lease system practiced by Hartwick and van Rensselaer was not: in a state with few cities, urban dependency was low, and the market for agricultural yields more limited than in Europe. Farmers migrating to upstate New York after the American Revolution were primarily from southern New England, particularly Connecticut, Rhode Island, and Eastern Massachusetts, areas in which the available farmland was in tight supply due to a century and a half of population growth. In Europe, as in earlier periods where population increased, this created a structural imbalance in which there were too many farmers for the available land. In time, available land could not be further subdivided without jeopardizing agricultural production, and often surplus population found its way into the cities and urban occupations. This included the clergy, the military, and potentially trade, but often in Europe at the time, the surplus found itself as a desperately poor urban underclass. Throughout the period of European colonization in both the Americas and elsewhere, the surplus population was simply sent abroad. In New England in the late eighteenth and early nineteenth centuries, this was not an option, but the western frontier was, and at this time, the frontier was in upstate New York.

For many of the Yankees migrating to New York's frontier, the goal was not to find themselves as serfs on a manor but to be independent farmers. This goal led to a lifestyle that defied an existence centered around the payment of rents to a landlord, usually a portion of the agricultural production, and even to a large extent, the use of money. Sheriff (1997) explained that:

> (When) farmers did exchange goods and services with neighbors, those transactions rarely involved cash—not because cash was in short supply, but rather because they saw no use for assigning monetary values. Instead, they calculated value in terms of social worth, and simply kept accounts of what they owed and were owed. A farmer, for example, might work two days in his neighbor's

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

> cornfield in exchange for two chickens, since that was what it would take to feed his family during the time he spent away from his own farm duties. Or he might simply hold the neighbor accountable for two days' labor at some later time. These farmers sought, not to accumulate wealth, but to secure a "competency" that would allow their families to live a comfortable and independent existence in a community limited in geographic reach. (11)

The cultural emphasis was to "own" one's land, not rent, and although the land system's basic assumptions remained the same, they were obscured behind the rhetoric of revolution and liberty. The divine right of kings to rule was replaced by eminent domain—the state retained ultimate authority over land but refrained from controlling it. The lords of the manor were never true aristocrats under British law, but their own pretensions and wealth let them behave as such. However, land was abundant, and those owners of large patents willing to sell found an eager population of migrants seeking their own miniature fiefs.

The cultural ethic of independent farmers and the lack of a market combined with a third trait—the fact that it was considered an affront to demand payment of a would-be aristocrat—to create the precipitating event that would lead to the downfall of New York's feudal system. The Anti-Rent Wars began with the death of Stephen van Rensselaer in January of 1839. Upon his death, creditors descended upon his estate in anticipation of being paid, and the back rents of his tenants represented a significant portion of his estate. In addition, van Rensselaer desired to divide his holdings between his two sons, and this required a clear title to the estate. The tenants' debts were thus called in, in some cases amounting to decades of back rent, and the tenant farmers with a freehold mentality were by and large unable to pay (Christman, 1945). Thomas (2005) summarized that

> By the fall of 1839, discontent rumbled throughout eastern New York as tenant farmers decried the high rents due the landlords, the taxes due the state and county, and the perceived minimization of their own labor during the preceding generations. Much had changed since poor farmers in search of land came to the region. The tenant farmers had transformed the wilderness into a checkerboard of field and pasture, interspersed with forests and small market towns. They had cleared the land without the efforts or assistance of the landlords yet paid his taxes on the land and paid him for the privilege of remaining on what most considered their own land. Many had no rights of sale, and those who did were required to cede up to a third or even half of the proceeds to the landlord. From the perspective of the tenants, the landlord was nothing more than a middleman between themselves and the government, a leach that grew wealthy because of the efforts of the farmers. The settlers of the 1790s and early 1800s may have

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

> considered tenancy a fair, albeit undesirable, option. Their children, now subject to two and three-lifetime leases signed by their fathers, perceived it as an old-world remnant that lost its purpose at the close of the Revolution. (48)

By the summer of 1839, the courts had ordered payment, and the spirit of resistance rippled through the Catskills. The growing rebellion spread to other estates throughout upstate New York and spawned a political party called the Anti-Renter Party. In 1839, a contingent of tenants from Albany County went to speak to the Stephen van Rensselaer (the son), but

> Mr. Van Rensselaer . . . refused to speak to them or to acknowledge their presence, even by a nod. He went, instead, into an inner office, occupied by his agent, Mr. D. B. Lansing, and held a long and confidential conversation with him. The latter then came out and said that Mr. Van Rensselaer would communicate with them in writing. (Cheyney, 1887)

In response, many tenants throughout the state organized themselves into paramilitary organizations, and:

> As the months went on, it became increasingly difficult for the sheriff's department to serve papers as the farmers and their sympathizers turned out in greater numbers, setting tar barrels afire in the road and generally making the sheriff's life miserable. On December 2, 1839, the sheriff finally resorted to forming a posse of about 500 men only to be turned back by an even greater number of rioters at Reidsville. (Thomas, 2005, 48–49)

Such incidents continued well into the 1840s.

The result of the Anti-Rent Wars and the formation of the Anti-Renter Party was land reform. Anti-Rent Leagues sponsored candidates for public office throughout the 1840s, and so by 1845, the state legislature was home to enough members willing to work against the interests of the landed elite. In 1846, a state Constitutional Convention rewrote property law by abolishing feudal tenures, setting a limit of twelve years on all leases, and making the taxes due on all land the responsibility of the landowner, not the tenant. The reforms were a blow to New York's fledgling feudalism, and within twenty years, the majority of land in the manors had been transferred to local farmers (Cheyney, 1887; Christman, 1945). A political solution dramatically altered the economic parameters of the state.

NEW YORK CITIES

A paradox of New York's history is that the land reforms that ended feudalism occurred as urban dependency in the state increased, and with it, the

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

potential profitability of the agricultural market. As the nineteenth century continued, New York's cities connected the Atlantic to the Great Lakes, manufactured a diverse array of goods and processed the fruits of one of the largest agricultural economies in the world, and drove the frenetic economic pace that turned New York City into the nation's preeminent port and the world's financier. The nineteenth century witnessed extraordinary growth in the state's cities, but the roots of urban New York were in the Netherlands and England and present in the region from the beginning of European settlement.

As noted, the earliest settlements in Albany and New York were walled villages modeled loosely on Dutch cities. Like the English, the Dutch were an urban society with urbanormative assumptions about the superiority of town life and a power structure located in urban centers. In establishing New Netherlands, they sought to replicate this model—a difficult task given the lack of population in the seventeenth century. The English were similar in their own assumptions, and the power structure of the state-centered in the cities early despite the presence of a landed aristocracy. When John Christopher Hartwick was granted the Hartwick Patent, his goal was to build a densely settled urban settlement in stark contrast to the sparse settlement pattern of the Palatine Germans in the Mohawk Valley that he suspected caused immorality (Arndt, 1937). Even the administrative settlements of each of the Iroquois tribes were referred to in urban terms. They were called castles, such as the still-extant community of Oneida Castle halfway between Syracuse and Utica today.

The arrival of settlers from New England after the American Revolution secured an urban-centered future. The Yankees built an untold number of farms, but the power structure of their realm was in the villages. Villages were typically built in relation to a common or green, often rounded by important public buildings such as the church, the inn, local craftsmen, and other businesses. Houses spread from this core, and the farms surrounded the entire settlement. As they spread west, they brought this basic structure with them, with many Yankee settlements today still marked by their village commons. Not all villages were laid out by Yankees, however, but the urban-centric ethic nevertheless held in such communities as well. Cooperstown, settled by William Cooper, a Quaker from the Philadelphia area, was designed around a grid-iron pattern to encourage dense development. Cooper gave property to an Anglican and a Presbyterian Church to reinforce the centrality of the village in the local region, although, in lieu of a village green, he set aside land for his home and adjoining grounds—today's Cooper Grounds (Thomas, 2020). Throughout the late eighteenth and nineteenth centuries, villages were built as smaller versions of cities. Of course, most cities in the earlier part of this period were not much larger than small towns. The network of villages that served central place functions for the agricultural landscape ultimately

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

enabled the growth of larger cities by functioning as transit points between the hinterland and the cities. Ultimately, this emerging network of villages fed into New York harbor and accessed global markets, both for sale of trade goods and import of manufactured goods. There were many such goods, but textiles from both Europe and Asia were among the most sought after, and it was textiles that would set upstate villages on a path to urbanization that provided the Port of New York with trade goods more lucrative than beaver pelts.

THE FIRST AMERICAN INDUSTRIAL REVOLUTION

The American Industrial Revolution did not begin in America, and we had discussed the dynamics of the coalescing world-system that fertilized American soil for its flowering in chapter 9. Because a market for woolens had existed as early as the bazaars of Flanders even before the Modern Period, there were sheep in the New World brought here by English settlers who relied on the wool. Because there was a high demand for Indian cotton, there was a steady supply of English cotton products—the superior Indian supplies were traded abroad for slaves and other goods while the home country and the colonies made do with English attempts at mimicry (Beckert, 2014). Moreover, because the wages paid English workers were higher than those paid in India and China, there was pressure on the English manufacturer to innovate (Hobsbawn, 1999 [1968]). The economic parameters would grow the population, an environmental parameter, and deepen the caloric wells still further.

The innovations that led to the Industrial Revolution were something more than an acceleration of economic growth, but also something unique in world history. The emergence of the world-system during the long sixteenth century culminated in the eighteenth century during which manufacturers of northwestern Europe, particularly the Netherlands and England, strove to compete with the East. To no small extent, this competition took the form of military offenses carried out against the competition in India and Southeast Asia (Beckett, 2014). Domestically, however, legal protections guarding local producers against foreign competition worked to insulate English manufacturers during their infancy. However, there was no one single factor that resulted in the innovations occurring when and where they did. Hobsbawm (1999 [1968]) noted:

> This is true of theories which attempt to account for the Industrial Revolution in terms of climate, geography, biological change in the population or other exogenous factors. If (as has been held) the stimulus for the revolution came from,

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

> say, the unusually long period of good harvests in the earlier eighteenth century, then we have to explain why similar periods before this date (and they have occurred from time to time throughout history) had not similar consequences. If Britain's ample reserved of coal explain her priority, then we may well wonder why her comparatively scant natural supplies of most other industrial raw materials (for example iron ore) did not hamper her just as much, or alternatively why the great Silesian coalfields did not produce an equally early industrial start. If the moist climate of Lancashire is to explain the concentration of the cotton industry there, then we ought to ask why the many other equally damp regions of the British Isles did not also attract or hold it . . . . Climactic factors, geography, the distribution of natural resources operate not on their own, but only within a given economic, social and institutional framework. (14–15)

Environmental factors were part of a wider set of political, economic, and cultural influences that, in turn, fostered an environment for industrial innovation.

The first of these British innovations was the 1733 invention of the flying shuttle by John Kay. A torpedo-shaped piece of wood, the flying shuttle was attached to a piece of yarn set to a loom. The weaver attached weights to the yarn strung in one direction, thus enabling the flying shuttle to be "flown" across the loom; this idea approximately doubled British weavers' productivity. The increased productivity created a bottleneck for the supply of yarn—it took four spinners to supply one weaver. It was John Hargreaves, who in the 1760s perfected the spinning Jenny, a "hand-operated wheel that would rotate a number of spindles within a frame, while the spinner would use her other hand to move a bar back and forth to extend the thread and then to wind it on the spindles themselves" (Becker, 2014, 65).

The innovations of the mid-eighteenth century were aimed at increasing the productivity of the (primarily) women do such work in their homes, and by 1769 the industry was set for more dramatic improvements. In 1771, Richard Arkwright built the world's first water-powered textile mill in Cromford, England. It incorporated a 1769 patent for the water-frame, a machine that utilized wooden and metal cylinders for fingers during the spinning. The design would dramatically increase productivity but also relied on substantial waterpower to operate. The mill at Cromford relied on a basic design followed by most water-powered mills: the presence of an artificial stream (or headrace) to a pond, the use of the stored water to turn water wheels, and the return of the now-used water to the original stream via a tailrace. If there was a significant difference between this and other mills, it was the scale: by the end of 1772, he was employing 200 workers in two 12-hour shifts, and the output of the factory was far in excess of traditional textile methods (Fitton, 1989). With the addition of housing for the families employed at the mill,

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

the basic pattern of early American "mill villages" was established (Rivard, 2002).

As the eighteenth century continued, English tinkerers continued to improve industrial technology, including a water-powered loom invented by Edmund Cartwright in 1785 that took advantage of the increased productivity in spinning. With the new technologies, the British could increasingly dominate the world cotton trade. Beckett (2014) noted:

> In eighteenth-century India, spinners required 50,000 hours to spin a hundred pounds of raw cotton; their cohorts in 1790 Britain, using a hundred-spindle mule [machine], could spin the same amount in just 1,000 hours. By 1795 they needed just over 300 hours with the water frame, or, with Robert's automated mule after 1825, only 135 hours. In just three decades, productivity had increased 370 times. (66–67)

The use of these technologies also shifted the locations of such production from homes spread throughout the countryside to factories in mill villages and growing cities. Wealth amassed to the British bourgeoisie and into government coffers, and the Crown decreed that textile technology could not be legally taken from England. But someone did.

Samuel Slater arrived in New York City in 1789, having memorized as much as he could about the British designs. Attempts to replicate the English systems had not met with success, and so the young engineer quickly found employment with the firm of Almy and Brown in Pawtucket, Rhode Island. Almy and Brown had installed an "Arkwright design" machine at an old fulling mill (for wool) but had failed to get it to work. Slater incorporated the newer English designs and created the first functional water-powered cotton mill in the United States. From Pawtucket, the technologies spread rapidly, not only the mechanical designs of the mills themselves but also the mill villages' structure that supported them. By 1800 there were similar mill villages in Massachusetts and Connecticut, and the technology continued its spread.

The spread of the mill technology throughout New England followed the settlers into central New York. In 1808, the first cotton mill in New York State opened in the appropriately named village of New York Mills. The mill was designed by Benjamin Walcott, an engineer who had built similar mills throughout New England, and his arrival in New York would have seemed at the time a logical extension. The initial mill was humble, "from a single, small wooded structure, the business grew steadily, adding factories until annual production rose to 312,000 yards of shirting by 1828, then skyrocketed to 1.8 million yards in 1831" (Dziedzic & Pula, 2013, 11).

The mill took advantage of the energy potential provided by the small but rapid Sauquoit Creek a mile south of its terminus into the Mohawk River.

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

The Sauquoit Creek begins its trek toward the Mohawk at the top of the Appalachian Plateau that forms the Mohawk Valley's south rim, a region of low rolling hills from which flow streams north to the Mohawk and eventually to New York Harbor or south to the Susquehanna and Chesapeake Bay. The Sauquoit passes within a mile of a southward branch of the Unadilla River before turning north through a deep gorge. The creek drops over 1,100 feet in 15 miles, creating an ideal valley for water-powered industry. The New York Mills was only the first of many such mills.

New York Mills was located a mile east of Whitesboro, a classic Yankee town organized around a village green, and 4 miles west of Utica, the growing commercial center located at a fording spot in the Mohawk River. Located so close to the central place functions of those settlements, the mills had ready access to raw materials and export merchants, and so the village grew in relation to the mills and the stream. The original mill was joined by an expanded mill race, and additional mills were built upstream. The nature of waterpower is that the water can be used again and again, and New York Mills took full advantage of this fact. Two miles upstream, the village of New Hartford, another Yankee village organized around a green, similarly took advantage of the Sauquoit. Another mile upstream were the Washington Mills, and another mile was Willowvale, then Chadwicks Mills, Sauquoit, and near the southern rim of the gorge was Clayville—a village that by 1870 had six mill ponds plus other hydraulic works that served a thriving mill village. Even the southern-most hamlet on the creek, Cassville, had two ponds to serve industrial functions. By 1825 the valley was likely among the most industrialized regions on earth, and today is a contiguously urbanized corridor that serves as Utica's western and southern suburbs. Other nearby valleys also industrialized, the Oriskany Valley west of Utica developing a similar set of mill villages, and the gorges descending toward the Mohawk east of Utica doing the same, along Moyer Creek in Frankfort and Steele Creek in Ilion, now home to Remington Arms and descended from one of the earliest forges in the state. Each community functioned on its own but relied on the growing town of Utica for higher-order economic functions such as banking.

The movement of the textile industry and water-powered technologies were not unique to the Utica area. Thirty-five miles away, a woolen mill was built along Oaks Creek in Toddsville, two miles from Cooperstown. In time, a similar complex of mills developed along the Oaks Creek and Susquehanna River into which it flows, with textile mills processing both wool and cotton on an industrial scale; even the Toddsville Mill had converted to cotton by 1820. Toddsville was home to a paper mill as well, utilizing the water in the pond awaiting the chance to power the textile mill. A mile upstream was an agricultural implements factory, and a mile upstream from there a cotton mill in Oaksville. Downstream, a cotton and industrial grist mill complex

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

was built two miles away in Index, and three miles south of there was the Clintonville cotton mill. In nearby Hartwick, a cottonseed oil factory was located in the Otego Creek Valley, itself lined with smaller mills in South Hartwick, Mount Vision, Blood Mills, and Laurens. The furthest cotton mill in the "Cooperstown Complex" was in Morris 25 miles from Cooperstown. As in the "Utica Complex," Cooperstown served the functions William Cooper had worked to create for the village, in time becoming the county seat, the banking center, and generally speaking the principal wholesale and retail trade center south of the Mohawk Valley.

The growth of the local textile workforce was similar to that found in New England. The early industry in New York Mills mimicked the practices of the "Rhode Island System" (Bohls, 1991). Mills were built at a favorable location, and mill owners hired entire families to work in the mill operation. As there was infrequently housing at the site, the mill owners built housing that was rented to each family. Much of this housing in the Sauquoit Valley was in a Cape Cod style, but often with two families in each duplex house. The older areas of each mill village are typically marked by such housing—it is common in New York Mills and Clayville in the Utica Complex, and often such areas today have lower socioeconomic levels than springs to mind when people think "suburbia." It was also found in the Cooperstown Complex, with some examples surviving in Oaksville and Phoenix Mills. In some villages, workers lived in single-family homes, although much of this was also factory owned. This was the predominant pattern in Sauquoit and Chadwicks in the Utica Complex and Toddsville in the Cooperstown Complex. In other older mill villages such as Washington Mills, much of their housing has been replaced by newer development such as fast-food restaurants and other businesses.

By the mid-nineteenth century, mill owners turned to teenage girls as employees, mirroring similar trends in Lowell, Massachusetts. For the girls, this was frequently an empowering time, the first time away from home, working for money, and involved living in boarding houses. There are several such examples of boarding houses in New York Mills. This seems more common in the Utica Complex, although Bohls (1991) notes a similar practice in the Cooperstown Complex. However, there was more reliance on local farmers looking for employment during slow seasons in Cooperstown, a source of labor increasingly scarce in the Utica Complex as the region urbanized. This introduced a liability for the Cooperstown Complex, however: the seasonality of available labor fluctuated too much with the growing season, and a mill could be shut down during planting and harvest season.

By the late nineteenth century, mill owners in the Utica area recruited recent immigrants to work the mills, sometimes even traveling to New York to make their plea. Immigrants not only needed the employment but were

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

also a captive workforce as they typically lived in factory housing, had little access to alternative employment, and frequently had little or no social connections to those outside the mill village or neighborhood. By the late nineteenth century, the Cooperstown Complex was in decline, a function of the newer transportation infrastructure largely bypassing the area, the weight of competing against firms of vastly larger scales such as those in Utica and New England, and newer steam technologies supplanting water power and its fickle schedule dictated by rainfall and flood.

Of course, the textile industry could not rely simply on local labor. The transportation system required considerable laborers at every stage, and various support services such as finance, retail, and law all attracted additional population to the centers of Utica and Cooperstown. Often not considered as part of the industry, however, is the alienated rural labor where the cotton was grown. In chapter 9, we noted that the slave trade of the Mediterranean expanded to include that of Western Africa, and this, in turn, expanded dramatically as the Americas were colonized. Every European power of the time participated in the system, and the British created a number of plantation colonies in the West Indies that expanded to the Carolinas on the mainland. It was this plantation economy that turned from sugar cane and tobacco to cotton that fed northern cotton mills, and it was the enslavement of humans that enabled the northern mills to function at a profit so far from a source of cotton. By the outbreak of the American Civil War, in the industrialized cities of New England and upstate New York, the economic interests of the mill owners was to keep the Confederacy as part of the Union no matter what—a failure to do so would enable southern growers to sell freely to England, and Northern industrialists would lose preferential access to southern cotton (Baptist, 2016). This is not to say that abolitionism was not a factor in the war, but not to the extent so often claimed by many Americans today. The Emancipation Proclamation freeing the slaves was issued in 1863, and Northern factories relied on southern cotton long before.

BREAKS IN THE TRANSPORTATION NETWORK

The Mohawk-Susquehanna Region is over a 1,000 miles from a climate suitable for cotton, and so it was by necessity imported. Neither Utica nor Cooperstown had ready access to the Atlantic Ocean, however, so transportation could add considerable costs to the process. The nearest source of raw cotton was in the American South, and it is safe to assume that much cotton left the region by way of the port cities of New Orleans, Savannah, and Charleston. Once in the Northeast, however, the trail can be reconstructed but with some caution. In some cases, cotton likely was off-loaded at the Port

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

of New York before being shipped inland, but cotton could also have been transported directly to Albany as it was (and is) a deep-water port. North of Albany, however, the Hudson became less navigable, and the junction with the Mohawk was met with a series of high falls as the river descended to the Hudson. As such, trade goods were best off-loaded at Albany and transported overland 15 miles west to the Mohawk River port of Schenectady. In Schenectady, small boats called "bateau," somewhat larger than a modern canoe, transported goods upstream 40 miles to Fort Plain, a small Palatine settlement downstream of another set of rapids at Little Falls. Fort Plain's significance as a river port would be recognized by building a basin in the Erie Canal when it opened in 1825. At Fort Plain, goods bound for Utica or Cooperstown were unloaded and transported overland, but for differing reasons. On the way to Utica, the Mohawk is still navigable until Little Falls, but a traverse around the rapids that drop the river nearly 50 feet in less than a mile was necessary. Once at the top, the river flows through a flat that is an extension of the Great Lakes plain, meandering to and fro, consuming countless hours on the way to Utica. For cargo bound for Cooperstown, a trail extended from Fort Plain through the Otsquago Creek Valley that led to the top of the plateau, thus slowly but steadily provided a route through the escarpment. At the top of the plateau was Springfield Landing on Otsego Lake, from where cargo could be floated 9 miles south to Cooperstown. From both Utica and Cooperstown, raw cotton was distributed out to the mill villages, the final products finding their way to national and international markets by a reverse route.

Transportation in the interior was heavily reliant on waterways, and the further from the Hudson, the more difficult this became. A particular concern was the ability to use ships larger than bateau, and the various rapids and falls in many inland waterways were a challenge even for them. As early as the 1780s, there were calls for improved navigation between the Hudson and Lake Ontario. A natural route offered itself. At Fort Stanwix in modern Rome, the Mohawk turned east and followed the gently sloping valley off the Lake Ontario Plain, whereas Woods Creek turned west from nearly the same point to flow into Oneida Lake, the Oswego River, and eventually Lake Ontario. A series of canals and improved natural waterways could, in theory, create a navigable waterway between Schenectady and Oswego (on Lake Ontario). In 1792, the Western Inland Lock Navigation Company formed to improve river navigation, including the construction of canals to bypass Little Falls and connect the Mohawk to Woods Creek. Thus, by the time of the earliest cotton mills, there was some improvement to transport but more could be done. Early in the nineteenth century, there were calls for a canal to connect the Hudson at Albany to Lake Erie, a route that would use locks to bypass even the Cohoes Falls near Albany, the Little Falls, and bypassing the

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

meandering rivers in a route to what is now Buffalo. In 1807, the state commissioned a survey, but the War of 1812 forestalled any action. The war did, however, spur additional industrialization, and by its end in early 1815, the calls for improved inland transport became even more earnest.

The canal was started in 1817, the first length to open a relatively flat portion between Rome and Utica—the rapid progress seen by many as a positive omen rather than a consequence of digging along the plain. The full opening in 1825 involved lavish ceremony, not in Albany or Buffalo, but New York City: the project was perceived as necessary not only for upstate farmers and manufacturers but also for Manhattan bankers and traders. Even as the canal opened, boosters began raising funds for the Mohawk and Hudson Railroad, intended to bypass the Cohoes Falls Locks on the Erie Canal, and save a full day of travel. Opening in 1831, just four years after the nation's first (the Baltimore and Ohio), it was the first railroad in New York State. By 1836, the Schenectady and Utica Railroad was also open and competing against the canal.

Industry and trade called for improved transportation between New York City and the interior, and improved transportation made possible increased industrialization. In the Mohawk-Susquehanna Region in central New York, the Erie Canal's arrival and then the railroad solidified Utica's place as the region's major transit point. Over the next 200 years, the city and its suburbs would serve to distribute goods from the world economy, often imported into New York Harbor, to the rural hinterlands while the hinterlands' agricultural and industrial goods filtered through Utica to New York City and the world. Utica's location on the Mohawk River just as a westward traveler would see the mountains recede from the Great Lakes plain gave it an advantage that today seems obvious, but William Cooper (1810) compared the fate of his own Cooperstown favorably to Utica and the mouth of the Buffalo River on Lake Erie. What today seems far-fetched—that Cooperstown would emerge as a city as important as Buffalo or Utica—was less so in the early nineteenth century. Cooperstown's location at the top of the Appalachian Plateau and source of the Susquehanna was the reason for Cooper's optimism. A potential traveler could ascend the escarpment from Fort Plain and then travel downstream from Cooperstown as far west as Sayre, Pennsylvania, from where the Chemung and Tioga Rivers could be traveled even further west. Thus, as a point of departure, Cooperstown offered a westward and a southward route. However, with the building of the Erie Canal and the railroad, Cooperstown was increasingly shut out of the emerging transportation network. Cooperstown merchants argued for constructing a canal between Fort Plain and Otsego Lake and then south along the Susquehanna to improve navigation and access the newly found Pennsylvania coalfields. However, the construction of the Chenango Canal between Utica and Binghamton did much the same and effectively closed Cooperstown's options (Birdsall, 1925).

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

THE UTICA URBAN-RURAL SYSTEM

The result in central New York was an urban-rural system subordinate to New York City centered on Utica, one in which communities such as Cooperstown centered tertiary systems that fed into New York's trade economy and distributed its wares to the surrounding countryside. We can refer to New York as the first-order urban-rural system as it interacts directly with the global economy, itself functioning as a network of global cities (Smith & Timberlake, 1995). As a secondary center integrating New York with its hinterland, we can refer to Utica as a second-order urban-rural system. As will be discussed, Cooperstown integrated with Utica and its own hinterland, making it a third-order system. As in earlier urban-rural systems, the network of various centers functioned to transport goods and capital from the hinterlands to urban centers and back again. The New York urban-rural system was, and is, composed of numerous second-order systems such as Utica, and we can learn about the wider system by examining the structure of the smaller thanks to scaling.

In figure 10.1, we see a series of townships (minor civil divisions in census-speak) surrounding Utica in a region that includes the following nine counties: Oneida, Herkimer, Madison, Chenango, Otsego, Schoharie, Montgomery, Delaware, and Fulton. Not all of the towns in the region are strongly connected to Utica, and so the map shows a number of zones. Surrounding Utica are a number of contiguously urbanized suburban towns. This is not to say that the entirety of each town is urbanized but rather that areas of urbanization extend between them, often in corridors along major waterways and historic transportation routes. Surrounding the suburbs are a number of predominantly rural townships that experienced population dependence on the metropolitan area. West of Utica, a zone of suburban towns is shared with Syracuse, a larger city 45 miles west of Utica. We refer to these as *population-related municipalities*, and have assembled this list by use of Concentric Zone theory (Burgess, 1925).

A corollary of Concentric Zone theory is that the settlement grows from the center (the older area) to the periphery (the newer area, and normally outside the city limits in most American metropolitan areas). The population related municipalities are those townships that grew as a band during the metropolitan area's period of peak population circa 1970. The exurban band represents rural townships that experienced growth due to the expansion of the metropolitan population, even as the urban core and inner suburbs lost population during the late twentieth century. Municipalities within this band grew or declined in connection with the city, whereas those outside the band did not necessarily do so. For example, municipalities in the caloric well (see below), such as Cooperstown and Boonville—a center 30 miles north

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

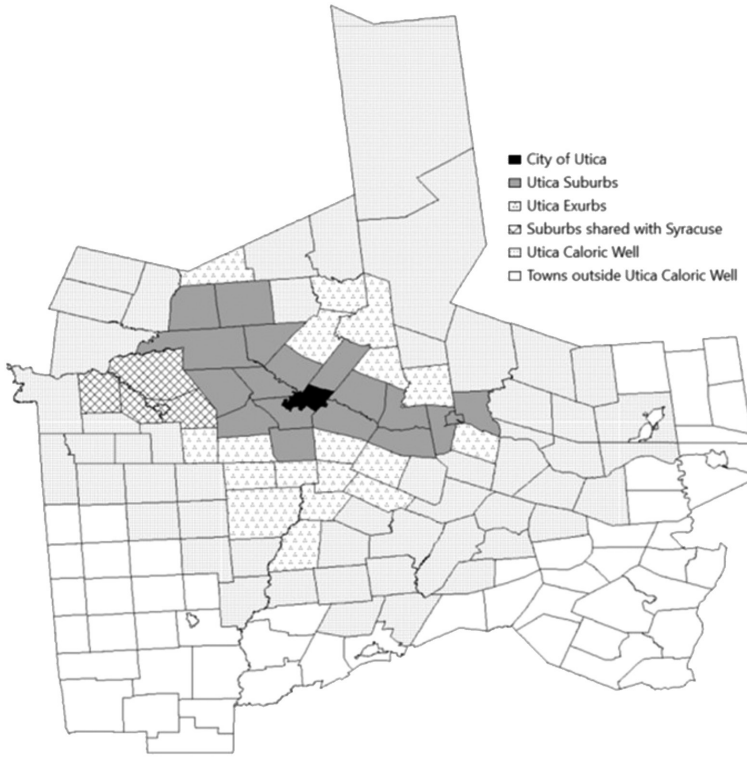


Figure 10.1 Greater Utica Region and Zones of Influence, 2010. Created by author.

of Utica—exhibited population growth independent of the city, even as the agricultural economy was structured by it. By examining the fortunes of the population related municipalities (PRMs), we can learn something of the dynamics between the city and its hinterland. We can further surmise that aspects of these urban-rural dynamics spread into the hinterland in weakening bands of urban influence. Of the 170 municipalities in the region, only 42 are PRMs, or 24.7 percent of the total.

The caloric well, the townships required by the metropolitan area to feed itself, extends well beyond the PRMs. The caloric well for the metropolitan was explored in detail in *Urban Dependency* (Fulkerson & Thomas, 2020), and the methodology for calculating the well is found in Appendix A. Although, like other cities, Utica received food from the global trade network, the caloric well represents the area necessary for the metropolitan area to be self-sufficient. For the most part, in practice, the communities within the caloric well are part of the second-order retail market for the metropolitan area, and as such, stores and other such functions rely on the population of such distant communities as Cooperstown and Boonville to augment the local

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

market. Unshaded townships in the region are less tied to Utica, with some communities aligned more closely with Syracuse and Albany to the west and east or Binghamton to the south. However, some such towns have historically developed in relation to Utica even at such a distance.

In figure 10.2, we see a series of maps of the Utica region in 1870. The towns in the region had relatively similar populations, with a series of larger communities located along the Erie Canal corridor, and Utica itself was the

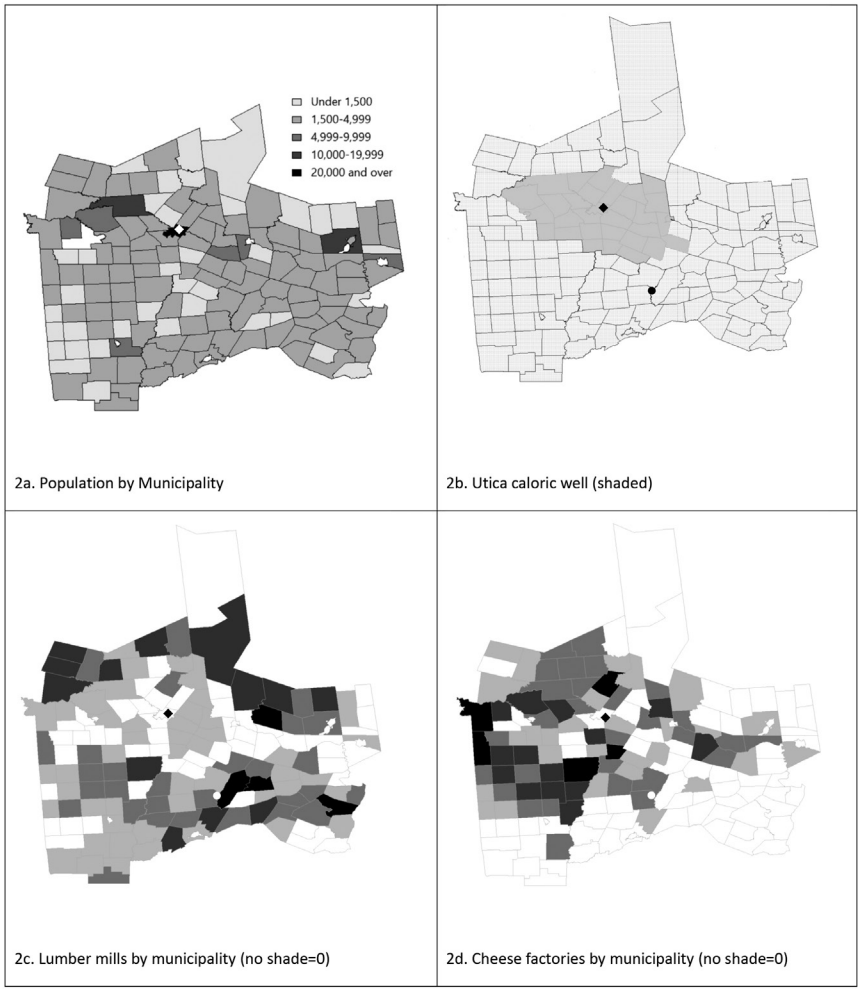


Figure 10.2 Population and Economic Activities in Utica region, 1870. (The diamond in the center is the location of Utica, and the circle in the periphery is the town of Cooperstown 35 miles south.) Created by author.

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

largest (2a). The caloric well for Utica is considerably smaller due to the lower population (2b), but the wider region nevertheless was influenced by the growing city and its suburbs. In this instance, the caloric well approximates the area needed to feed itself under ideal circumstances, but farms then as now produced for a mixture of local consumption, traded goods, and fuel. We compare the caloric well to actual data from 1870 in figures 2c and 2d. In figure 2c, we can see the contours of the Utica system by examining the location of the timber range. According to von Thünen (1826), crops that are more easily transportable and not subject to decay (and wood certainly applies) are grown further from urban centers. Utilizing this concentric zone as an outer limit of the city's influence, we can see a band of timber range extending up to 60 miles away in 1870. Timber was useful for both building material and fuel, and it was both traded and used locally. In figure 2d, we see a similar von Thünen band closer to the city—this was the dairy band, demarcated on 1870 maps by the presence of cheese factories. These extended up to 40 miles from the city and included Cooperstown to the southeast of Utica. Closer to the city was a zone dedicated to less transportable crops such as fresh vegetables, and of course, urbanized areas cannot be farmed.

The nine-county region had grown rapidly during the Yankee Expansion, from 20,803 in the 1790 census to 337,676 in 1830 (Shupe et al., 1987). Growth was slower but continuous between 1830 and 1860 (table 10.1) when the census recorded 406,034 in the region and 137,563 in the PRMs, reflective of a pattern in which migration to the region continued but was met with others leaving in search of new lands to the west. Local farmland was largely inhabited by 1830. The data for industry and farming reported above reflects conditions at the end of this period (circa 1868–1873). After 1860, nearly all growth was concentrated in urban communities, most communities in the dairy and timber zones experienced population decline as the city and its suburbs gained population. This is partly due to residents of rural communities moving to the city: only so much agricultural land was available, and once claimed surplus children by necessity needed to find new occupations—these

Table 10.1 PRM Population by Zone, 1830–1860

				Percent of Region	
	1830	*1860*	*Change 1830–1860 (%)*	*1830*	*1860*
Utica	8,323	22,529	14,206 (170.7)	7.9	16.4
All Cities	12,683	32,359	19,676 (155.0)	12.1	23.5
Suburbs	41,578	50,107	8,529 (20.5)	39.5	36.4
Exurbs	37,319	36,738	−581 (−1.6)	35.5	26.7
Shared Suburbs	11,823	16,499	4,676 (39.6)	11.2	12.0
TOTALS	105,233	137,563	32,300 (30.7)		

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

opportunities were typically in the cities. This pattern was evident not only region-wide but within the PRMs as well. Table 10.1 shows that the cities of the region, specifically Utica but also Rome, Oneida, and Little Falls, grew by 155 percent, whereas the suburbs grew by 20.5 percent; the MCDs destined to be suburbs shared by Utica and Syracuse grew by nearly 40 percent. However, the MCDs that would one day be exurbs were part of the rural "Cheese Zone" and exhibited similar population trends, declining slightly. Even as early as 1830, the 24.7 percent of municipalities that were PRMs (i.e., connected to the metropolitan area) accounted for 31.2 percent of the region's population—a figure that would grow.

During the period when the Cheese and Timber Zones discussed above were evident, the urban population of the region increased dramatically (table 10.2). The populations of Utica and Rome nearly doubled, and the suburban towns grew as well. The impact of the canals and the railroads, a system that had grown since earlier in the century, continued to favor transit points in the network—particularly the cities—as well as steam power over older water-powered technologies. However, water-powered technologies did not go away, and there were water-powered mills built or expanded in the late nineteenth century in suburban locales such as Sauquoit, Clayville, and Clark Mills, at times approaching scales found in the cities. Nevertheless, the scale of the steam-powered mills in Utica, fed by the Erie and Chenango Canals and the railroads, grew to previously unheard-of levels. The Mohawk Valley Cotton Mills stretched nearly half a mile along the Erie Canal, and the banks of the Chenango Canal were lined with one industrial facility after another from the massive mill complexes near downtown to the city limits. As noted earlier, to staff such massive factories required not only the labor of the countryside but the recently arrived immigrants from the European countryside as well (Pula & Dziedzic, 1990).

The pattern outside the cities and suburbs was starkly different. In the PRMs destined to be exurbs, the rural landscape and economy reflected the surrounding zones, and like the Cheese Belt, lost population throughout the late nineteenth century. The Shared Suburbs, with the exception of the city

Table 10.2 PRM Population by Zone, 1860–1890

				Percent of Region	
	1860	*1890*	*Change 1830–1860 (%)*	*1860*	*1890*
Utica	22,529	44,007	21,478 (95.3)	16.4	27.1
All Cities	32,359	58,998	26,639 (82.3)	23.5	36.3
Suburbs	50,107	55,043	4,936 (9.9)	36.4	33.9
Exurbs	36,738	32,285	−4,453 (−12.1)	26.7	19.9
Shared Suburbs	16,499	14,283	−2,216 (−13.4)	12.0	8.8
TOTALS	137,563	162,499	24,906 (18.1)		

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

of Oneida, lost population over time, mirroring the fate of the exurban towns. In the Cheese Belt, the presence of urban production in the Cooperstown area failed to stem population decline, even as the rural economy thrived. In addition to cheese production, farmers throughout Otsego, Chenango, and southern Madison Counties turned increasingly from the model of agrarian self-sufficiency to being participants in urban-rural systems, with a capitalist economy. The region became the nation's largest producer of hops in the late nineteenth century, creating tremendous wealth for farmers who, in turn, expanded or even replaced earlier farm homes with larger Victorian homes. The wealth also allowed for the purchase of labor-saving devices that further reduced the need for agricultural laborers. Combined with declining natural growth rates, the majority of rural townships experienced a dramatic century-long decline.

By the turn of the twentieth century, the pattern of the late nineteenth century intensified (table 10.3). Between 1890 and 1920, the PRMs accounted for nearly half the region's population, despite the continued decline in the predominantly rural exurbs and shared suburbs. The urban population grew by 147 percent, much of which was based on rapid immigration in Utica and the development of smaller cities such as Oneida and Little Falls. More distantly, third-order centers also grew urban populations approximately 50 miles from Utica in such smaller cities as Amsterdam, Gloversville, and Oneonta. By 1950 the city's population peaked at 101,531, but its share of the local population had fallen to 31.5 percent of 322,177 residents of the PRMs.

The period between 1920 and 1950 is the only one on record for which the region as a whole was growing (table 10.4). Growth in the cities slowed considerably, the percent increase falling from nearly 150 percent in the previous period to only 14 percent during this period. This was matched by an increase in suburban growth, a consequence of increased development outside the central cities due particularly to increased availability of the automobile. Thus, the region-wide population increases reflect the fact that growth turned to zones

Table 10.3 PRM Population by Zone, 1890–1920

				Percent of Region	
	1890	*1920*	*Change 1890–1920 (%)*	*1890*	*1920*
Utica	44,007	94,156	50,149 (114.0)	27.1	36.9
All Cities	58,998	145,828	86,830 (147.2)	36.3	57.1
Suburbs	55,043	71,427	16,384 (29.8)	33.9	28.0
Exurbs	32,285	24,670	−7,615 (−23.6)	19.9	9.7
Shared Suburbs	14,283	11,433	−2,850 (−20.0)	8.8	4.5
TOTALS	162,499	255,278	92,749 (57.1)		

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

outside cities, including not only the suburbs but increasingly the exurbs as well. The comparatively low growth rate of 2.8 percent for thirty years in the exurbs is significant not for the growth, but its reversal of population declines experienced during the nineteenth century. However, this did not reflect a repopulation of the farms: farming declined in significance during this period, the acreage under cultivation falling during the same time. The exurbs were developing lifestyles more in line with the suburbs: one of commuting into the city and provision of "urban" services in communities outside the city.

The industrial base of the city and suburbs expanded during this period, in part because of the ability to build a factory accessible only by automobile. In addition to new facilities in the city, industrial suburbs such as New York Mills attracted new factories owned by such firms as Westinghouse, General Electric, and Remington Rand. Nevertheless, some weaknesses were becoming apparent during this time. Since the beginning of the Industrial Revolution over 100 years earlier, the textile industry, the primary manufacturing base, was maturing as an industry. Competition from other firms both in the United States and abroad had throughout the nineteenth century placed pressure on profit margins, resulting in the initial move from employing whole families to teenage girls to recent immigrants, but by the 1920s there were few options left. Boosters in such cities in the Southern United States as Greenville, South Carolina, targeted northern firms for investment: factories built outside city limits to reduce taxes and "right-to-work" laws that weakened labor unions were two features of southern cities. By the 1920s, many of the firms had been bought by investors in New York City and other large financial centers, and the new owners were typically interested in lowering costs. Sister factories of those in the Utica area were often built in southern cities. The Great Depression of the 1930s forestalled any further economic erosion, but also lowered birth rates in Utica and throughout the United States. World War II had a similar effect during the first half of the 1940s (Thomas, 2003). In the exurbs, the farming economy continued as it had during the nineteenth century. A regional market in Utica provided an outlet for local products,

Table 10.4 PRM Population by Zone, 1920–1950

				Percent of Region	
	1920	*1950*	*Change 1920–1950 (%)*	*1920*	*1950*
Utica	94,156	101,531	7,375 (7.8)	36.9	34.7
All Cities	145,828	166,315	20,487 (14.0)	57.1	56.9
Suburbs	71,427	85,123	13,696 (19.2)	28.0	29.1
Exurbs	24,670	25,373	703 (2.8)	9.7	8.7
Shared Suburbs	11,433	13,693	2,260 (19.8)	4.5	4.7
TOTALS	255,278	292,454	37,146 (14.6)		

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

particularly vegetables and meat products, to be collected and then shipped via rail across the Great Lakes and the northeastern United States.

The expansion of the industrial economy during the previous period was continued during the next, but so was the restructuring of the textile economy. The period after World War II is known locally as the "Loom to Boom" period, as it was during this time that much of the textile industry vacated the area. Between 1945 and 1955, Utica and the industrial suburbs lost two-thirds of its employment base in textiles, dropping to less than 4,000 jobs. As the national economy was healthy, however, these jobs were by and large replaced. During the 1950s, Utica was home to factories that built jet aircraft engines, electronics, and the Univac File Computer—the world's first commercial computer. The factories expanded production, absorbing many of the employees who lost their jobs in the textile industry. The healthy national economy did more than replenish jobs, however: it provided the confidence to attempt to redress a sense of decline that comes from living in a city that was largely built in only a few decades (Thomas, 2003).

The development of the Utica urban-rural system was not unique to central New York. As a second-order center, the region was part of the larger New York urban-rural system, and as such, the patterns taking place in Utica and its hinterlands during the nineteenth century were repeated in second-order systems throughout the wider region. New York City gained constituent urban-rural systems based on Utica and Albany in Eastern New York, but also expanded the hinterland deep inland with systems based in Syracuse and Rochester—both cities that barely existed before the building of the Erie Canal. Each developed significant industrial economies as well, often with functional specializations that reflected their location and levels of technology when they industrialized. As a textile center, Utica reflected the earliest phase of the American Industrial Revolution, but Rochester would become a center for optics, with Bausch & Lomb's early success influencing later firms such as Kodak and Xerox. Similarly, both Schenectady and Niagara Falls would enjoy a spell as early twentieth-century "Silicon Valleys" as they grew tremendously around electricity.

With its port on Lake Erie, Buffalo functioned as a first-order center, and by the early twentieth century was a world-class city. Buffalo processed all agricultural products from the Midwest shipped through the Erie Canal, the hulking remains of massive grain elevators still visible today on the city's south side (Goldman, 2007). It was Buffalo that connected New York City to the vast inland empire of the Great Lakes, a region that by 1900 had spawned other industrial powerhouses, including Cleveland, Detroit, Chicago, and Milwaukee. And for much of the nineteenth century, and even a good portion of the twentieth, the preferred international harbor for the entire region—the industrial heartland of North America was the Port of New York. The city's

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

banks grew ever larger, its stock exchange ever more powerful, its population ever more dependent on the urban-rural system that somehow siphoned the wealth of a quarter of the nation through its harbor and out to sea. For the city to grow, however, it needed more than food and trade goods. It needed natural resources, and perhaps the most basic (save for air) is water.

NEW YORK WATER

The broad contours of the multitiered urban-rural system built around New York City offered access to a range of agricultural and manufactured goods produced throughout upstate New York, with second-order centers like Utica filtering trade between New York and its third- and fourth-order hinterland hamlets and villages. The port of Buffalo extended the great city's reach even further—into the Great Lakes and the Great Plains with its amber waves of grain. New York's position as the ocean port for the entire Great Lakes basin attracted finance and additional manufacturing and, of course, people to run it all, who were also arriving by sea. But the urban-rural system that provided food and trade goods for the great city could not provide all requisite resources. New York needed water to continue its growth. As the city expanded up Manhattan Island and into the surrounding landscape, it of necessity looked even farther afield for this most basic of natural resources. The volume and weight of water needed for a city would be nearly impossible to meet through long-distance trade—water must be at least regionally local.

Water scarcity has always been an issue for cities. Even before the rise of Mesopotamian cities, the Samaria and Ubaid cultures grew around irrigation systems in the Euphrates and Tigris Valleys. The Sumerian cities that later grew in the region relied on extensive canal systems. The temple establishments were heavily involved in the accumulation of knowledge-oriented toward their administration. When Sennacherib transformed the city of Nineveh into a new capital of the Assyrian Empire, during their early first millennium BCE, he relied on an aqueduct built to transport water from Jerwan 40 miles away. The Romans perfected the technology, building dozens of aqueducts to water numerous of the empire's cities, their graceful arches still standing in places throughout the Mediterranean Basin. Just as cities require ever-increasing amounts of calories, they require ever-increasing amounts of water. This forced them to find and access sources from the farthest reaches of the empire. As water was necessary for Nineveh, so too for New York.

Like other northeastern landscapes, Manhattan Island was in its natural state exceptionally gifted with sources of freshwater despite being surrounded by saltwater. Numerous streams, often today drained by subterranean tunnels

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

beneath the city streets, provided water for drinking and crops. The largest supply was available just north of the original city of New Amsterdam—a sizable body in the area north of the current City Hall called the Collect Pond. Two small hills flanked the pond, and during the seventeenth and eighteenth centuries, it was a primary source of freshwater for city residents. Private firms were established to transport water to wealthy patrons. The city's first privately owned water delivery system attempted to transport water to effete homes through wooden pipes (Koeppel, 2000). As the eighteenth century drew to a close, however, the city was expanding into the lands around the pond. The source of freshwater was also necessary for the tanneries that were established on its shores; its waters a convenient place to dump the excess of industrial processes as well as a popular place to dispose dead animals. By 1800, the pond was quite polluted. Most residents, however, relied on water drawn from collected rainfall in cisterns and from public and private wells dug behind homes and businesses. The wells were "typically shallow, and, given the geological conditions, provided water best drunk after the boiling with requisite ingredients into beer" (Koeppel, 2000, p. 14).

As New Yorkers quenched their thirst with beer, a healthy alternative to the often-polluted groundwater, population growth increased the potential for disease. As early as 1668, a mysterious epidemic, possibly typhoid or malaria, spread throughout the city (Burrows & Wallace, 1999). Over the next 100 years, summer epidemics would become a regular part of life, and by the early eighteenth century, those with the means to leave the city would do so for the "summer season." The island's marshes and swamps were a haven for mosquitoes, and the polluted water a breeding ground for cholera. The streetscape itself also fostered epidemics:

> The streets were littered with household trash, in many cases simply dumped from residents' windows upon the street below. In addition to trash, the privies of neighborhood residents were frequently simply dumped from windows or surreptitiously carried out to the street at night, and thus the human urine and fecal matter was swept to the sides of the street where it mixed with that of the numerous animals that roamed the city. Horses of course traveled through the town regularly, but cattle as well roamed the streets. (Thomas, 2005, 69)

Freshwater is thus not just about thirst—indeed, the beer could quench that—but was fundamental to public health.

There had been several false starts for a comprehensive water system dating as early as the 1770s, and by the 1790s, there was consensus that such a system was necessary for the growing city. In 1799, Aaron Burr convinced the state government to charter a corporation to water New York, called the Manhattan Company. Its stated purpose was to build the

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

water system, but an unusual clause (for the time) allowed the company to channel excess funds into a bank. The company raised two million dollars from investors, spent only 100,000 on the water system, and commenced banking as its primary focus (Chernow, 2005). To say that the Manhattan Company cut corners would be quite an understatement. Due to encroachment on the Collect Pond, the consensus among engineers by the 1790s was that the best water source was found in the Bronx River Valley north of Manhattan. The siting of the dam and aqueducts was the major source of debate. Nevertheless, the Manhattan Company utilized the Collect Pond as its source of water, transporting it into the city through hollowed-out logs that soon became leaky and choked with roots. By 1804, the city began negotiations for the purpose of the system. As Burrows and Wallace (1999) summarized its deficiencies:

> (The) system was so limited that it reached only a small portion of the city . . . it had no hydrant, only hard-to-find and hard-to-open fire plugs, forcing firemen to drill holes in the wooden mains to gain access. (362)

Having failed to gain control over the system, the city funded the construction of fire cisterns throughout the city, and private companies delivered water to residents. In the meantime, the Collect Pond was filled in by leveling the hills on either side. The area's pollution was evident as sewer gases overwhelmed the fashionable neighborhood occupying the area that would soon be known as the "Five Points."

In the summer of 1832, a ferocious cholera epidemic raged that over half of the city's 202,000 residents fled, while 3,500 died; 104 died in one day in July alone (Rosenberg, 1962, 28). The Common Council allocated 1,000 dollars for investigating a new water supply for the city. Soon the councilors found themselves touring the Bronx River Valley only to find that thirty years of development had introduced farms, mills, and villages that would pollute the water supply as surely as they had the Collect Pond. Further 30 miles upstream to the north lay the Croton River Valley flowing westerly into the Hudson. The costs associated with the Croton Supply seemed prohibitive, but the 1830s made a case for it. In 1834, a cholera epidemic as severe as 1832 again ravaged the city and sent thousands upstate looking for cover. In 1835, just before Christmas, a fire in a warehouse spread engulfing 13 acres south of Wall Street and destroying 674 buildings. Twenty-three of the city's twenty-six insurance companies went bankrupt (Burrows & Wallace, 1999, 598). As a result, the original Croton System was constructed between 1837 and 1842, complete with a new dam at Ossining and a distributing reservoir at what is now the site of the New York Public Library. The new supply opened at perhaps the most auspicious time.

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

The 1840s were not just significant for New York, but for Ireland as well. The peasantry had grown dependent on the potato, an import from the Inca Empire centuries earlier, and when the Blight spread to Ireland by 1845, the island nation experienced a famine that devastated the lower classes. The result was waves of immigrants arriving in New York City in search of employment and food. The city's population nearly doubled to almost 700,000 in 1850 and nearly 1.2 million by 1860. The new water supply was soon to be outstripped once again and expanded almost continually through the building of new reservoirs and retrofitting lakes for that purpose. Thomas (2005) noted:

> Throughout the duration of the nineteenth century, New York by necessity expanded the system by building new dams upstream, an enlarged Croton Dam (New Croton Dam), and more miles of aqueduct. By the 1880s, the Croton System was in an almost constant state of upgrading as the city required ever-increasing supplies of water. The system grew until 1911, when the last of the reservoirs for the system were finally completed, but by then nearly everyone familiar with the issue recognized the city's need to look even farther afield. And as time went on, the conflicts that arose over the city's use of eminent domain to not only force landowners to give up land for the reservoirs themselves, but to remove any building sited near a reservoir in order to protect its water quality, resistance to water projects in northern Westchester and southern Putnam Counties grew . . . . The Croton System thus expanded until it could expand no longer, and the growing city still needed more. (80)

As the nineteenth century drew to a close, the search was one for a new way to water New York.

In a state with an abundance of water, there were undoubtedly options—a luxury that many cities around the world lack, as is especially the case in the Middle East. Perhaps the most obvious was the Hudson River itself. As early as 1834, Bradford Seymour had proposed a dam connecting lower Manhattan and New Jersey, thus turning the river into a freshwater lake with locks to allow ships access, but the success of the Erie Canal upstate meant that the number of ships made such a venture unfeasible. As the Croton System was growing with the city's population, new plans also made use of the Hudson. In 1876, Harvey Eastman proposed pumping river water at a station near Poughkeepsie and sending it south via a new aqueduct to the existing Croton System. Even as late as 1950, Lawrence Beck proposed damming the river at Haverstraw, south of Poughkeepsie, which could also function as a causeway for the newly built New York State Thruway (Galusha, 1999, 12). The traffic on the river was early on a major strike against the Hudson, and as the nineteenth century wore on, it was outstripped by another: pollution. Poughkeepsie, Haverstraw, and New York are all downstream of major

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

industrial centers upstate. For a traveler from New York, the city seems to fade into the "wilderness" of the Catskill Mountains, and it is easy to forget that the urbanization begins again on the other side of the mountains. Immediately upstream of Poughkeepsie is Kingston, a small metropolitan area home to heavy industry that would alarm activists today, but by the standards of the time, the more significant threats to Hudson water were further upstate. The Albany Metropolitan Area was home to industrial cities and towns lining both the Hudson and Mohawk Rivers, including major facilities in Watervliet, Troy, and Cohoes. Further north in the Glens Falls Metropolitan Area, industries so polluted the river that lawsuits continued throughout the late twentieth century. In Schenectady on the Mohawk, tens of thousands labored for General Electric, and immediately upstream, Amsterdam was home to even more industries. In Gloversville and Johnstown, two leather-working centers on a tributary to the Mohawk, the pollution was part of local lore, as relayed by an elderly resident in 2010:

> You always knew what day of the week it was by the color of the creek. Monday would be red because they were dying red that day, and the next day might be blue. Every day of the week, there was another color, and it all went right into the creek and down into the river at Fonda.

In Canajoharie, there was Beech-Nut baby food and Lifesavers, and in Fort Plain, more factories. Further west was metropolitan Utica, with gun manufacturers Remington and Savage Arms, electrical firms General Electric and Westinghouse, and, of course, textile mills and other industrial firms. By the mid-twentieth century, the river had been given the unfortunate nickname "Muddy Mohawk," and the idea of New York City pumping drinking water from a site downstream from any of the hundreds of industrial facilities was unpalatable. This marked a new era in the development of urban-rural systems when the quality became more of a concern than the quantity of water. Clean water needed to come from more pristine tributaries.

Just as New York City's settlement space outgrew the Collect Pond and the Bronx River's ability to provide water, so too did the new sources beyond the Croton need to be further away. In 1905, Charles Armstrong proposed piping water from Oswego on Lake Ontario along the abandoned route of the original Erie Canal, recently replaced by the Barge Canal, to New York. Other reports suggested various streams, "some as far away as the Susquehanna Valley near Oneonta, the Hoosic River near Albany, and the Black River north of Utica" (Thomas, 2005, 81). In other cases, extensions of the current system into Connecticut were proposed, but City leaders lacked control over neighboring states' legislatures, therefore such ideas were not plausible. By 1907, the city had settled on a plan that developed a new water supply on the

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

west side of the Hudson in the Catskill Mountains, starting work on an aqueduct to transport water from the Esopus Valley near Kingston to New York.

The first of the "Catskill System" was the Ashokan Reservoir, constructed between 1907 and 1915. The reservoir would be one of the largest in the world at the time, the mammoth Olive Bridge Dam standing twenty stories tall and a mile across the valley floor. The 1.3 billion gallons of water would cover over 8,000 acres, flooding eight rural villages and numerous farms. In all:

> The city would claim 504 dwellings, perhaps 1,500 barns and outbuildings, 10 churches, 10 schools, seven sawmills, nine blacksmith shops, and several stores, mills, and other establishments. More than 2,600 bodies in 40 cemeteries had to be exhumed and reinterred elsewhere. The coming of the reservoir also required the relocation of 13 miles of the Ulster & Delaware Railroad tracks serving six stations in the valley. Miles of telephone and electric lines were also moved. (Galusha, 1999, 128)

As in the Croton System, which eventually constructed new reservoirs and took over lakes to increase water supply downstream, the Catskill System was not to be limited to the initial reservoir. Even before being completed, plans were being made for the Schoharie Reservoir.

On December 20, 1915, the residents of Gilboa were informed of the future site of the Schoharie Reservoir over their village in a line buried in the fifth paragraph of an article titled, "City gets Half of Water it Pays For." The twelve-story dam would be built just downstream of the hamlet, thus inundating the entire community beneath 120 feet of water stretching 6 miles behind the dam. A drain near the south end would divert water from the northward-flowing Schoharie Creek into a tunnel beneath Shandaken Mountain and thence to the Esopus, thereby supplementing the water supply. Villagers in Gilboa had to move, and as early as 1919, the Middleburg *News* was reporting on where thirty-eight of the families were moving. Thomas (2005) summarized:

> Of those that were listed, sixteen (42.1 percent) moved to communities within a ten-mile radius of Gilboa. Of the remaining 58 percent, two families had moved out of state—one to Wisconsin and one to Connecticut. Seven families (18.4 percent) had moved to one of the small cities in the region, specifically Catskills, Kingston, or Oneonta. None had moved to one of the state's metropolitan centers. The remaining 13 families (34.2 percent) were scattered among ten different rural towns over ten miles from Gilboa. In all, Gilboa residents moved to at least twenty different communities, and half of those communities received only one Gilboa family. (133)

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

It seems likely that the 2,000 rural people displaced from the Ashokan Reservoir exhibited a similar pattern. For New York City to grow, rural communities were destroyed, and there was little consternation about it in the urban press. Even in the left-leaning *The Nation*, a 1914 article praised the selection of the Catskills with no mention of the fates to be met by the rural residents soon to be displaced (*The Nation,* Nov. 5, 1914, 557).

GROWING A MAJOR CITY

The growth of New York, like many cities, is typically chalked up to natural advantages of the city itself: its landscape, its people, its spirit. Cities are conceptualized as growing on "trade," and there is certainly an aspect of truth in this. We have used the term "transit point" rather than "trade center" for a specific reason: a transit point is a node in a network of interdependent communities, whereas a trade center implies a centrality and justifiable dominance of one community over the rest. In the next chapter, we will discuss the spectacular growth of New York City and its surrounding metropolitan area, but this chapter's central focus is its continued dependence on the larger urban-rural system.

The growth of New York's urban-rural system is reminiscent of earlier systems. Growth in the city as well each of its secondary centers resulted in a regionalized urban dependency, in time outstripping New York State of the ability to feed and water its population, as we further discuss in the next chapter. The model from part one predicts the emergence of secondary centers with their own urban-rural systems. In fact, Utica and its (third-order) centers such as Cooperstown mirror earlier patterns found in Mesopotamia, the Mediterranean Basin, and other urban societies. The model is an ideal type, however, and the specific patterns found in each region and time was affected by variations in geography, modes of technology, and transportation networks. This is evident in the Utica region as well, as the "dairy belt" surrounding the city in 1870 was interrupted by the industrialized Erie Canal corridor and intensified southwest of Utica, where the dairy industry served both Utica and Syracuse. As transportation technologies changed, so did the contours of the system: the building of the canal system favored the textile industry in the Utica Complex over the Cooperstown Complex, for instance, and as will be discussed in the next chapter, the expanding railroad network favored upstart Oneonta over Cooperstown as well. The shifting of transit networks affected the fates of ancient cities as well, the shifting of the China-Mediterranean trade from overland Silk Road routes to Indian Ocean routes being perhaps the most dramatic. Polities have often attempted to exact such change as was evident when Western European powers explored the oceans

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

in an attempt to bypass Italian intermediaries to the Orient. Similarly, the building of the Erie Canal was a conscious attempt to propel New York Harbor to the nation's most important port by connecting to the interior.

Complex Adaptive Systems may demonstrate similarity of structure over time, but time and context are important variables, and we should not be surprised that the New York system was and is quite different from those of the past. Indeed, as we discuss in the next chapter, the contours of the system today evolved to be quite different from those in the past, even as it remains contingent on its past. The periods of Dutch and British rule occurred during Mercantilist economic systems, and it is doubtful that the colonies would have evolved as they did without state-enforced monopolies. Arguably, it was such monopolies over such items as tea that led the American colonies toward revolution, and after the revolution, those same regulations made it a crime for Samuel Slater to smuggle textile mill technology to Rhode Island. As the nineteenth century evolved, however, the profit motive propelled industrialists and farmers alike toward capitalist modes of production.

Yankee settlers in upstate New York arrived with a dream of self-sufficient agrarian farms from which they could trade some surplus for cash or the services of other community members. By mid-century, this model was being replaced by rural farms growing cash crops—the hops industry bringing prosperity to farmers even as it introduced Capitalist "boom and bust" cycles. By the early twentieth century, in part because of disease and competition in the hops industry, dairy was ascending as the industry's replacement. Farming was not simply a lifestyle or cultural phenom; it was business.

This ethic of profit transformed upstate society. Early mills, particularly grist mills, cider mills, and even cheese factories, were often run by farmers as a side business. A water-powered sawmill could sit idle until a customer placed an order, with the main economic activity being farming and the industry serving as an adjunct. By mid-century, mills were increasingly for profit, and in the case of textile mills, the profits were addictive. The Industrial Revolution transformed society, and as steam power favored large factories on the canals and railroads, their sheer scale provided an incentive for owners to court recent immigrants to move to upstate cities to work the mills. At the center of such industrial relations were the contradictions and conflicts of modern capitalism, resulting in a society in 1900 that would have been unrecognizable to someone in 1800.

The evolution of the New York urban-rural system, including its upstate second-order systems with increasing reliance on urban production, took place within a wider global network. Simply stated, Utica's and Cooperstown's cotton industry relied on Southern rural slave labor for raw materials and urban wage labor for profitability. The privileged access to southern cotton enabled the region to grow at the expense of English companies, and the politics

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

around cotton and trade policies were a major contributor to Civil War. This is an essential corrective: the emphasis on the Civil War being "caused" by slavery is accurate as it is a primary reason the Confederacy seceded, but the reliance of northern factories on southern cotton is all too often suppressed in the popular imagination to the cause of emancipation even though this was not done until 1863. As the nineteenth century wore on, rural migrants from Europe were recruited to form an urban proletariat in New York City and its upstate satellites.

The critical component of any Complex Adaptive System is the interaction of a multitude of individual agents over time, each moment contingent upon the one before. The complexity of the system overall is a product of numerous interactions, which depends on the number of individuals at a given time (among other factors). In consequence, at its heart is continuous evolution and change. This is as true of urban-rural systems as it is for the climate system or the human body. As the twentieth century dawned, the system itself became more complex both through population at home and expansion of the periphery, and as in past systems, the contours of the New York urban-rural system changed. We explore the ramifications of those changes in the next chapter.

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

Chapter 11

Growing the City

We are accustomed, even trained, to think of cities as autonomous settlements freely trading for what they need. However, the structure of the city means that it can never be "freely" engaged in trade. The city is dependent upon rural resources, and the larger the population becomes the more entangled is the urban-rural network necessary to support it. The contours of that network are guided through the same parameters as any urban-rural system. Political alignments allow for the extraction of rural surplus. In the previous chapter, we saw that New York City chose the Catskills for an expanded water supply, in part, due to its greater ability to influence New York State government, even though the proximate Connecticut water supplies were more technically feasible (Koeppel, 2000). The polity also allowed for the creation of infrastructure—particularly the canal and railroad systems—that encouraged a shift toward urban production deep into the state's interior, and thus for manufactured goods that Manhattan traders could sell the world over. The economic might that came from having access over such a rich hinterland was compounded by the access to the Great Lakes Basin. A series of other first-order cities assembled and shipped cargo that ultimately found its way to the Port of New York. The natural environment aided this economic efflorescence, especially the fast-running streams so close to the only inland water route through the Appalachians in the United States. Communities so reliant on urban production could support higher populations that could pay for food—food increasingly produced on mechanized farms throughout upstate New York. This environmental factor—simple demographics—further spurred economic growth. All of this required a culture that allowed for such growth, and not only did the industrial technology exist, but the regional culture was also highly supportive of innovation, often to the point of finding willing investors for the right product.

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

We see the hinterland of a settlement as the secondary tiers of the urban-rural system that exchanges rural for urban goods. Ideally, a single urban-rural system would balance so that the city's entire repertoire of rural products could be obtained from its own hinterland, but as we saw in part II, this has rarely been the case. Even if food could be produced locally, as it often was in Mesopotamian and Egyptian city-states, the raw materials for urban production were often obtained from outside the immediate system. In the New York system, the immediate impetus for settlement was for a raw material—beaver pelts—and so was reliant on an advanced world-system from the start. The previous chapter discussed the growth of the New York urban-rural system in the hinterland, and it was this development that ultimately fed New York's need for food, trade goods, and water. The economy produced in both the city and its hinterlands was a powerful draw for residents of rural communities not only locally but throughout more troubled regions of Europe, from where many immigrants originated.

GROWTH OF THE CITY

New York City grew at an unprecedented rate for much of its history, bursting at the borders with migrants from its own hinterlands and the world over. The contours of this growth are not, however, so easily discerned. One measure, and perhaps the most common, is New York City's growth as it developed at the tip of Manhattan Island and spread northward, eventually annexing the southern reaches of Westchester County that became the borough of the Bronx. The growth of this city was impressive: from a population of 32,305 at the first census in 1790, the city grew to 1,515,301 by 1890. The statistics conceal a more complicated reality. Nineteenth-century Manhattan was home to farms and villages not part of New York City, the two most famous perhaps being Greenwich (now Greenwich Village) and Harlem. As the city expanded during the nineteenth century, it met and absorbed these smaller (but often growing) villages. This pattern in Manhattan was repeated throughout the region that became the New York Metropolitan Area and is still in evidence today.

New York City's current borders came to be in 1898 by an act of the State Legislature. The City of Greater New York merged New York County with Richmond, Kings, and a portion of Queens County (Wallace, 2017). In 1914, portions of New York County that had been annexed from Westchester County, the West Bronx in 1874 and the East Bronx in 1895, were consolidated into Bronx County and became the borough of the Bronx. This region, much of it through the nineteenth century serving as the immediate hinterland of New York City, grew steadily as well, from 49,401 in 1790 to 2,507,414 in

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

1890—about three-fifths of whom lived in the then-boundaries of New York City. This corporate change introduces differing ways of measuring New York's growth, as shown in table 11.1.

The first row shows New York's growth according to most popular definitions, that of the growth of the city's population as the official boundaries expanded to incorporate formerly suburban communities. Constrained by the rivers on each side, New York City spread north on the island as it grew to encompass Greenwich and Harlem. In 1811, a state commission recommended the gridiron pattern that today dominates Manhattan Island, and even the early map shows a densely settled lower quarter of the island. The adopted street plan promised, and did, obliterate any remnant of rural land use in the urban layout: villages and hamlets were absorbed, farms could only be sold in units that matched the street system as it developed (Burrows & Wallace, 1999).

The city's official boundary included Manhattan and a few associated islands, but none of the mainland before the annexation of the area of Westchester County west of the Bronx River—the West Bronx—in 1874. This annexation involved three townships: the southern portion of the town of Yonkers, the town of Morrisania, and the town of West Farms. West Farms had initially been split from the town of Westchester, which covered much of what is currently the Bronx, in 1846, and Morrisania split from West Farms in 1855. By the time of these initial splits, the area was already developing as a suburb of Manhattan, and in Morrisania, even the street numbering of Manhattan Island directly across the Harlem River was transposed to the mainland. In West Farms, maps from 1867 show a series of small hamlets north of Morrisania developing along the railroad, the largest being Fordham, Tremont, Belmont, and West Farms. These villages were found along urbanized corridors, but open land could still be found between them off the main roads. In 1873, these areas were incorporated into the borough of the Bronx and merged with New York City and County. Although only two censuses recorded Morrisania's population, it had grown from 9,245 in 1860 to 19,609 in 1870; West Farms was home to 9,372 residents in 1870. In 1895, the town of Westchester, or the "East Bronx," which had quadrupled in population from 2,492 in 1850 to 10,029 in 1890, was further incorporated into the Bronx borough.

In the last federal census before the formation of the City of Greater New York, New York City alone numbered a population of 1,515,301 in 1890, but there were 2,507,414 in the soon-to-be city limits. As shown in the lower rows of table 11.1, within the newly formed city there were core areas and those with (for the time) suburban character. Very clearly, New York City had, prior to 1898, a formidable competitor across the East River in the city of Brooklyn. New York was home to 1.2 million people in 1880,

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

Table 11.1 Growth of New York City, 1790–1920

Year	*1790*	*1820*	*1850*	*1880*	*1890*	*1900*
New York City	32,305	123,706	515,547	1,206,299	1,515,301	3,437,202
Boroughs:						
Bronx	1,781	2,782	8,032	51,980	88,908	200,507
Brooklyn	4,495	11,187	138,882	599,495	838,547	1,166,582
Manhattan	33,131	123,706	515,547	1,164,673	1,441,216	1,850,093
Queens	6,159	8,246	18,593	56,559	87,050	152,999
Staten Island	3,835	6,135	15,061	38,991	51,693	67,021
Greater New York	49,401	152,056	696,115	1,911,698	2,507,414	3,437,202

twice that of Brooklyn. Nevertheless, when in 1883 Emma Lazarus wrote "The New Colossus," comparing the soon-to-be-opened Statue of Liberty (in 1886) to the ancient Colossus of Rhodes, she called the East River "the air-bridged harbor that twin cities frame." After 1898, the two cities would be one.

The development of western Long Island provides further study in how New York City developed. Whereas New York was subject to one overarching county government from an early time, Long Island was more similar to conditions found in other cities: an amalgam of varying county and local governments.

LONG ISLAND

Long Island extends nearly 120 miles east from New York Harbor, spanning up to 23 miles wide in places and lined on the south by miles of barrier islands with broad wide sand beaches. As early as 1640, the English settled Southold and Southampton on each "fork" of Eastern Long Island, then a part of Connecticut. A year later, the Dutch founded the "six towns" in what became Kings County, and so the early history of European settlement involved two rival powers at opposite ends of the island. The approximate boundary between the two colonies remains the boundary between suburban Nassau and Suffolk Counties today.

In 1807, entrepreneur Robert Fulton began operation of the North River Steamboat, the first steam-powered commercial ship in the United States. The ship ran between New York and Albany, and its success in long-distance travel was not only inspirational for future water travel into New York's interior—the soon to be built Erie Canal—but for shorter runs as well. Even as early as 1810, New York City was sprawling further north on Manhattan Island, producing traffic congestion and increased urban ills such as pollution and stench further and further afield. Fulton reckoned that the reliability of steam service across the East River to the tiny village of Brooklyn would be attractive to those with the funds to pay to regularly cross in order to have a home in the country. With the Fulton Ferry, Brooklyn became New York's first commuter suburb, and its success resulted in many more ferries plying the waters of New York Harbor (Jackson, 2009).

As the village immediately across from New York and a favorable port in its own right, Brooklyn was home to over a third of the population of Kings County in 1790 (see table 11.2). Brooklyn would remain the county's major center throughout the nineteenth century, often sprouting suburbs of its own before absorbing them, until finally being absorbed itself into Greater New York.

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

Table 11.2 Western Long Island Growth, 1790–1890

Municipality in 1790	*1790*	*1820*	*1850*	*1880*	*1890*
Kings County:	4,495	11,187	138,882	599,495	838,547
Brooklyn	1,603	7,175	96,838	566,663	806,343
Williamsburgh (est. 1840)	Formed from Bushwick		30,780	Merged with Brooklyn 1854	
Bushwick	540	930	3,739	Merged with Brooklyn 1854	
Flatbush	941	1,027	3,177	7,634	12,338
New Lots (est. 1852)	Formed from Flatbush & Flatlands			13,655	Merged with Brooklyn 1886
Flatlands	423	512	1,155	3,127	4.075
Gravesend	426	534	1,064	3,631	6,937
New Utrecht	562	1,009	2,129	4,742	8,854
*Queens County: **	6,159	8,246	18,593	56,559	87,050
Flushing	1,607	n/a	5,376	15,906	19,803
Jamaica	1,675	n/a	4,247	10,088	14,441
Newtown	2,111	n/a	7,208	9,804	17,549
Long Island City (est. 1870)	Formed from Newtown			17,129	30,506

*Towns of Hempstead (excluding the Rockaway Peninsula), North Hempstead, and Oyster Bay secede from Queens County in 1898 and form Nassau County in 1899; population data reflects Queens County minus these townships (i.e., the borough boundaries).

Brooklyn was bound on the northeast by the town of Bushwick, and despite some frontage on the East River, by 1820 the town had only grown to 930 residents—mostly in the area that became Williamsburgh. By 1840, that village was home to 5,094, and residents chose to separate from more rural Bushwick, leaving only 1,295 residents in the township. By 1850, the settlement of Greenpoint, also on the East River, drove Bushwick's population to 3,739 before merging with the city of Brooklyn in 1854. To the south was Flatbush and New Utrecht, both of which climbed to slightly more than a 1,000 residents by 1820 when Brooklyn was home to over 11,000. Further afield along the south shore was Gravesend and Flatlands, both exhibiting almost no growth by 1820 and home to slightly over a 1,000 each by 1850. The center of urbanization was in a sector along the rivers, and further away was simply that.

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

In 1836, the completion of the Brooklyn and Jamaica Railroad allowed for rail transit between South Ferry terminal on Brooklyn's waterfront to a station in downtown Jamaica in Queens County. Even before the line's completion, the Long Island Railroad was chartered to extend the line to Greenport at the eastern end of Long Island, where a ferry to New London would link to railways bound for Boston. As with the ferry, the initial impulse was long-distance travel—a use of the new technologies that proved highly successful in the Hudson and Mohawk Valleys upstate. And as with the ferry, the profitability of rail in what would become Greater New York was impressive for distance travel but even more so when combined with real estate development aimed at wealthy commuters. Even as Flatlands, Gravesend, and New Utrecht grew slowly during mid-century, the areas near the new rail line grew more rapidly. Flatbush tripled in population between 1820 and 1850, and bordering Flatlands doubled in population. In 1852, the town of New Lots was formed from portions of Flatbush and Flatlands, its principal village of East New York growing rapidly as the eastern portion of the new township remained largely bayside swamp. By the second half of the nineteenth century, the sector along the rail lines experienced the fastest growth, but as new lines were built into Gravesend, New Utrecht, and Flatlands, a pattern reminiscent of Concentric Zone theory was found as Brooklyn expanded radially toward the ocean.

Queens County was considerably larger in land area than Kings County, and until the creation of Greater New York in 1898 included the townships of what is today suburban Nassau County as well. In contrast to Kings County, Queens thus presents a variegated urbanization pattern that in the west is similar to that of Brooklyn and to the east features rural towns expanding into one another to coalesce into a greater whole. The townships of Queens County were reasonably large in land area, more extensive than those found in Kings County. For example, the town of Oyster Bay in what is now Nassau County spans the entire width of Long Island—more than 20 miles north to south. The towns of what is now Nassau County thus started with "large" populations for the time and then grew slowly but steadily as the multiple villages within them expanded. On the northern half of the island, North Hempstead grew from 2,696 in 1790 to 4,291 in 1850, its southern neighbor Hempstead from 3,828 in 1790 to 8,811 in 1850, and eastern-most Oyster Bay from 4,097 in 1790 to 6,900 in 1850. After 1850, growth in each township accelerated, particularly in the corridor served by the Long Island Railroad.

The western half of the county, the area now included in the Borough of Queens, developed earlier and more rapidly. As in Kings County, the most rapid development was in relation to the East River and Manhattan beyond. Unlike in Kings County, much of the development was in relation to the

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

emerging city of Brooklyn as well as the smaller agricultural market villages in what is now Eastern Queens—specifically Jamaica and Flushing.

As late as 1852, like Brooklyn, Williamsburgh and Greenpoint on the Queens County line grew rapidly, the East River shore in the town of Newtown was still sparsely settled. Its largest village was Astoria, and although incorporated, the sole population statistic we have is that in 1870 it was home to 5,204 residents; it seems a reasonable assumption that perhaps half that many lived in the village in 1852. Across a bridge to the south was a smaller hamlet called Ravenswood, home to 36 buildings in 1852—if every building was a duplex home with each side housing six people, it yields a population of 432. A newly laid-out street system was by and large empty at the time, but by 1870 Ravenswood was home to 1,536 people. East (inland) from these villages was a mixture of farmland and forest interspersed with smaller agricultural hamlets such as Dutch Kills and Middletown. The 1852 map lists the names of significant estates such as Woodside, "Estate of Jno A. Kelly," along the Earl Gate Road across from a forest. Just north of Newtown Creek, the township's southern border with Kings County, Eliphalet Nott had laid out a gridiron street pattern in Hunters Point between the East River and a swamp. Newtown had a population of 7,208 in the 1850 census, but the development pressure spreading north of Brooklyn and east from New York was already in 1852 manifesting as a series of speculative developments that rapidly transformed the area. In 1870, the area south of Astoria to Hunters Point was incorporated as the city of Long Island City and became independent of Newtown, dropping the town's population from 20,274 in 1870 to 9,804 ten years later. The J. B. Beers map of 1886 reveals that by then much of the town of Newtown had fully urbanized, the area now contiguously urbanized between the East River and the town of Flushing just east of Newtown. However, most of Flushing was farmland in its southern and eastern extremes—away from the water.

Developers could build entire villages. An 1870 map printed by Benjamin W. Hitchcock, a music publisher on Beekman Street in New York City turned suburban developer, promised "Homes for the People at West Flushing," now Corona. Over a 1,000 lots were for sale for $300, and no-interest mortgages were held for a payment of ten dollars per month. The development was on the New York, Flushing, and North Side Railroad, adopted a modified gridiron street plan with a small park featuring a lake at its center. Corona filled in the remaining land in the town of Newtown between the urbanized western half and the adjacent town of Flushing due east. The attraction was neither Astoria nor Flushing as it advertised, "22 Minutes from 34th Street, N.Y.; Only 45 Minutes from N. Y. City Hall" and "only 5 Miles from Hunter's Point by Steam." The railroad ran thirty-eight trains per day from a newly

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

built depot in the development, and the developer boasted of a "Public Hall and School, Which cost $12,000."

The town of Flushing tripled in population to nearly 16,000 in 1880. In 1852, the rural town was serviced by its market village of Flushing, located where Flushing Creek emptied into Flushing Bay and bound to the west and north by a swamp with tiny College Point beyond. To the south and east was a landscape interspersed with farms and forest, and Clover Hill in the distant south near the town line was by and large wooded. By 1886 the village had grown, and College Point and a new village, Whitestone, had filled in the landscape between Flushing village and Long Island Sound. East of Flushing village, however, was still mostly open land till two small villages on the south end of Little Neck Bay—Little Neck and Bayside. The southern half of the township remained mostly rural.

South of the town of Flushing, on the other side of Clover Hill, was Jamaica. The village of the same name that served as the town seat of government was centered on a road, now Jamaica Avenue, that just west split to send travelers to either Williamsburgh or Brooklyn. The village was the first county seat for Queens County, and after the American Revolution, it was host to the only post office on western Long Island. As early as 1806, according to a map in the possession of the Library of Congress, the basic structure of the village had been established with a series of deep parcels with homes located nearer to the main road. At the west end of the village was the "King Mansion," today a public park and museum. One of two "four corners" intersections divided the community into its separate divisions. The West Quarter lay to the west of the road to Flushing, and the East Quarter was east of the road to Rocky Hill. The center of town was divided by the street, the North Quarter being the north side of the street, and the South Quarter being the south side of the street. The fact that a hamlet of fewer than forty structures, which included three churches, one school, and an "ancient windmill,' was divided into quarters was an expression of hopefulness for the future.

In 1790 the township of Jamaica was home to 1,675 residents, and this had grown to 4,247 in 1850. By 1850 the growth spurred by the building of the Long Island Railroad had begun, and a map from 1859 shows new developments just west of Jamaica village in Unionville and Woodhaven, noticeable in part by the straight gridiron street plans and a dearth of actual houses. In contrast, the village of Jamaica itself had developed from its early plan. The railroad cut through the old South Quarter, and some older meandering streets found themselves subjected to the gridiron plan of the newer subdivisions. As in Manhattan and elsewhere in New York City, but on a smaller scale, Jamaica had planned its future landscape. An 1876 map of the incorporated village of Jamaica demonstrates the extent of the planning: every inch of the village was seemingly planned out, complete with named streets. The

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

ownership of the land mattered little to the plan; a large lot owned by John de Bercise on the east side of the village was overlain with Adams, Putnam, and part of Montgomery Streets and crossed by four avenues, but there is no indication of land being divided into parcels for sale. Across town, land owned by Jos. P. Disbrow and crisscrossed Washington, Franklin, and Jackson Avenues was divided into parcels and awaiting sale. The principal road through town was named Fulton Street but is today Jamaica Avenue, and the area between the two four corners on the 1806 map had filled in with commercial structures just as many small towns of the time. The King Mansion remained in the family, the 1876 map noting the area as belonging to John A. King, and the Grace Episcopal Church located just up the street remained as well. Seemingly everything else had changed.

In 1880, the entire town of Jamaica still was home to only 10,088 residents, and ten years later had grown to 14,441. Located along the railroad lines, the town was in the rapidly developing ring of suburbs outside of the "twin cities" of New York and Brooklyn. Perhaps because of the rapid growth that was obviously connected to New York, Jamaica and its northern neighbor of Flushing were incorporated into the City of Greater New York in 1898. The Queens County neighbors to the east—Hempstead, North Hempstead, and Oyster Bay—did not. This was not due to a lack of development pressure from New York City, however. Both the villages of Mineola and Hempstead in what is now central Nassau County had developed in a rural manner similar to those in western Queens County, but developers arrived with the railroad. In 1869, Alexander Stewart purchased a large parcel in the town of Hempstead between Hempstead village and Mineola village (which is actually in the town of North Hempstead). Along the major thoroughfare between the two villages, Franklin Avenue, Stewart developed the Garden City Hotel, and in the surrounding area laid out streets and sold large parcels to those who could afford to build considerable homes. Like other communities in what became Nassau County, Garden City developed as a suburb for the wealthy, accessible to Manhattan by train and later by car via the Long Island Motor Parkway that opened in 1908.

Staten Island was the last region of New York City to urbanize fully, and even today is the least populous borough (see table 11.3). Growth was more uniform along the coast of the small island, although the towns of Castleton and Southfield in the northeast—closest to New York—grew fastest. In 1860, the town of Middletown was formed from these two, and much of the coastline on the north shore of the island had been lightly urbanized by 1874. In addition to New York, the area was also close to Bayonne and Elizabeth, New Jersey, and a short sail up Newark Bay from Newark.

The development of western Long Island and Staten Island was similar in its basic contours to that which occurred in northern New Jersey. Nearly the same

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

Table 11.3 Staten Island Growth, 1790–1890

Municipality in 1790	*1790*	*1820*	*1850*	*1880*	*1890*
Richmond County:	3,835	6,135	15,061	38,991	51,693
Castleton	805	1,527	5,389	12,679	16,423
Middletown (est. 1860)	Formed from Castleton and Southfield			9,029	10,557
Southfield	855	1,012	2,709	4,980	6,644
Northfield	1,021	1,980	4,020	7,014	9,811
Westfield	1,151	1,616	2,943	5,289	8,258

distance west of New York City as Jamaica is east, Newark was first settled along the Passaic River's mouth as it enters Newark Bay, and early on was a rival to New York Harbor. In the 1890 census, the last before the consolidation of Greater New York into one city, Newark was home to nearly 182,000 people, and it would peak at over 400,000 fifty years later. Indeed, the area between New York and Newark is, like western Long Island, densely settled, with such "suburbs" as Hoboken and Jersey City more evocative of the brownstone-lined streets of Brooklyn than those at greater distances east or west of New York.

Other cities of northern New Jersey also began with an independent existence. Paterson was home to one of the earliest industrial centers in the United States, harnessing the Great Falls of the Passaic River, and its first water-powered textile mill was constructed only two years after Slater's mill in Pawtucket, Rhode Island. Like Newark, Paterson grew independently of New York even as it competed against and benefited from the larger city. It was the funding from New York investors that ultimately built the Paterson mills, and its products found a global market through the Port of New York just as those of the Erie Canal cities in upstate New York.

ASSESSING THE PATTERN

The popular imagination of a great city growing from its point of origin, in this case, the southern tip of Manhattan Island, and spreading into the hinterland was not the pattern found in New York. The growth of New York City and its environs provide an opportunity to assess past models of urban growth, and it seems evident that they are all, in some respects, correct. It is that truth that ultimately undermines all of the models: if they are all accurate, then there is a deeper truth to be uncovered.

The main theories of the Chicago School, as discussed in part I, each offer a glimpse of New York's development. Each model is conceived as an ideal

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

type of sorts, even though such Weberian language was not in vogue for the American scholars.

Allowing for the influence of the waterways, there is evidence of a radial development pattern from the tip of Manhattan once the appropriate technology allowed for it. Specifically, the steam-powered ferry that ran to Brooklyn and, in time, Staten Island and Eastern New Jersey across the Hudson. This pattern was most dramatic on western Long Island and the Hudson River shore of New Jersey and reflected the steady expansion uptown by New York City on Manhattan Island. While this offers some support for Concentric Zone theory, it is Brooklyn that more evidently expanded outward from its port, evident even in maps from the American Revolution, that grew after the arrival of Fulton Ferry. The city expanded outward to consume the entire town of Brooklyn, and thence into the surrounding towns. Nevertheless, this radial growth was also met by similar patterns centered on different points of origin, such as the city of Williamsburgh and older settlements such as Flatbush that grew slowly before being absorbed by the greater mass of Brooklyn just as Greenwich had been by New York. Concentric Zone theory is thus imperfect and only coherent when seen as an array of "centers" that grow into one another and coalesce into one.

The development along both shores of the East and Hudson Rivers supports the contention of Sector theory. The rivers functioned as transportation and industrial sectors along the waterfront, and new development further upstream tended to continue patterns in older areas downstream. Hence, both in New Jersey and Long Island, the "suburban" growth proceeded northbound. Again, however, this is not a perfect scenario: older villages such as Astoria predated the sector development and were in time absorbed by it. More evidence of Sector theory was the development along the rail lines. The corridor between Brooklyn and Jamaica developed reasonably rapidly during the late nineteenth century, but areas at a distance from the rail line, even when close to New York City, tended to remain rural for longer.

The pattern thus seemingly best matches Multiple Nuclei theory, but with some exceptions. Multiple Nuclei theory posits a "natural" development pattern based on rational free markets like other Human Ecology theories. Sampson (2012) noted that neighborhood effects based on human ecology principles tend to hold up to empirical scrutiny even over extended periods, but *Great American City* also suggests that the mechanism for such patterns over time is not the operation of a rational free market but instead the basic human processes as outlined by political economists. Indeed, the street plans adopted by city leaders, most famously in Manhattan but also across the multiple municipalities that eventually coalesced to form New York City, point conclusively to the "interference" by government officials into "free" markets. Just as dramatically, the size of urban development schemes during

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

the late nineteenth century, like that in Corona, was a response on the part of private (capitalist) developers to demographic trends (i.e., rapid population growth) with an intent to form a profit. When potential profits could be so high, entire communities were built according to the logic of the developer—not a city plan. This is to say that, in line with arguments by many political economists (e.g., Logan & Molotch, 1987; Mollenkopf, 1983), urban development took place as a result of interactions between government, developers, and demographic-economic conditions.

We argue that, based on New York's experience, urbanization is best understood as multipoint regional development. The various theories proposed in the past, from the models based on neoclassical economics proposed by the Chicago School to the urban growth machines of the political economists, each are useful for understanding urban development. However, each individual settlement space develops according to a unique, path-dependent logic that includes its geographic location, the location within the larger urban-rural network and its location in the global political economy, and the specific cultural and political conditions at a given moment in time. Over time, as in New York, the settlements grow together and coalesce into a single settlement space. In the case of the territory that is now the city of New York, the enlarged city imposed by the state in 1898 fused into a political unity numerous separate communities whose residents over time adopted an overarching identity. In other words, a resident of Flushing added to their local (neighborhood) identity a higher-level identity of "New Yorker." In the case of New York and all American metropolitan areas, the coalescence of settlement space into an overarching political entity was incomplete. Political boundaries within the larger settlement space are useful for economically separating oneself from other communities while banding with those with whom affiliation is desired. This is most evident with the difference in suburban and inner-city schools: suburban communities maintain a separate political sphere within the same settlement space to enhance educational opportunities within their own quarter and separate from the perceived problems of the inner city or other suburban school districts. This pattern of multicentered growth is evident in different neighborhoods within the city today. However, the multicentered network continues to be evident on the urban fringe and in adjoining rural areas as population pressure has been insufficient to urbanize the territory between centers.

NEW YORK'S HINTERLAND

Just as within the city as we know it today, New York expanded within its multicentered urban-rural network over its entire history, "filling in" between

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

centers in response to population pressure. This effect can be seen throughout southeastern New York State. As shown in figure 11.1, in the last federal census before the consolidation of Greater New York (1890), the population spread both east onto Long Island and north up the Hudson Valley. Even north of the current Bronx line, Southern Westchester County was developing in a similar vein as core areas to the south. White Plains in the central part of the county, for example, grew as an independent city. In Rockland County across the river, the pattern was mostly agricultural but nevertheless multi-centered. By 1920, these same areas were subject to population growth due to immigration from Europe and mostly second-generation migrants leaving the city for the suburbs. While the technology that enabled people to do so was primarily limited to rail, this growth was comparatively slow. Indeed, automobile suburbs were early on the province of those wealthy enough

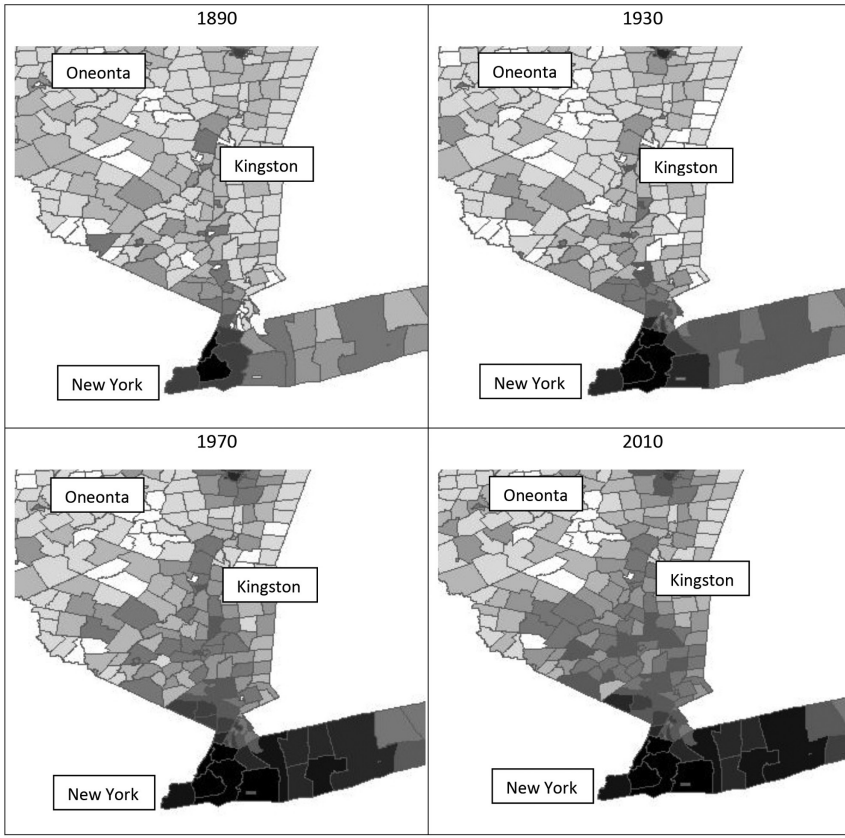


Figure 11.1 Population Distribution in Southeastern New York, 1890-2010. Created by author.

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

to afford an automobile. In 1908, for example, the world's first dedicated automobile highway, a private road known as Vanderbilt Motor Parkway on Long Island, required a paid subscription. After 1920, as automobiles became more common among the middle classes, parkways and expressways were built, and particularly with the Interstate Highway Act after World War II that greatly accelerated these earlier patterns, suburbanization grew considerably (Jackson, 2009). By 1970, the suburbs had spread as far north as Poughkeepsie in Dutchess County and Middletown in Orange County, and dense urbanization spread into Eastern Long Island. By 2010, the suburbs' outer reaches extended as far east as Riverhead on Long Island and Kingston in the Hudson Valley—as much as 100 miles or more from lower Manhattan. These patterns reflected the earlier pattern found in New York: older cities such as Newburgh, Poughkeepsie, and Middletown in the northern suburbs radiated their own suburbs that grew in response to the larger metropolitan pattern, congealing into a larger whole.

Figure 11.2 shows a traditional measure of urbanization: population density as measured by minor civil divisions throughout the New York metropolitan region. The darker the municipality, the more densely populated it was in 2017. The extremely dense boroughs of New York City are quite



Figure 11.2 Population Density in Greater New York Region, 2017. (Population density by township in the Greater New York City region. Darker colors represent areas of higher density.)Created by author.

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

noticeable, as are the densely populated suburbs of Long Island and northern New Jersey. Population densities are also high along the Connecticut coast leading through Bridgeport and New Haven, and densities are even elevated to New London and even into Rhode Island. Indeed, the Census Bureau classifies much of this area as "urbanized" between New York and New Haven, and northward through the Connecticut Valley to the northern suburbs of Springfield, Massachusetts (not shown). Leading southwest of New York, population densities are elevated through the southwestern suburbs of Philadelphia, and indeed the Census Bureau data shows contiguous urbanization between New York and the western suburbs of Wilmington, Delaware. This is a curious situation as the New York Combined Statistical Area ends at the Bucks County, Pennsylvania line, implying that somehow Trenton, New Jersey, and Bucks County across the Delaware River are separate metropolitan areas. Instead, we argue that New York and Philadelphia are, in reality, the two major centers of a dipole metropolitan region that stretches along the continuously urbanized region between Springfield and Wilmington. In effect, the two metropolitan areas long ago coalesced into one. Given the proximity of urbanization between the Wilmington and Baltimore suburbs, it will soon be contiguously urbanized between New York and Washington as the entire Northeast Corridor coalesces into one massive, multicentered settlement.

Within New York State, Westchester and Rockland Counties are also densely populated, and population densities are elevated throughout the Hudson Valley and Southern Catskills. This region holds an interesting conundrum about the meaning of "urban." A large swath of undeveloped land extends as a 15-mile-wide band that stretches from the Connecticut state line to New Jersey (see figure 11.3). This territory includes protected areas surrounding the Croton System of the New York water supply, a number of state parks such as Harriman State Park and Bear Mountain State Park, and the U.S. Military Academy at West Point. Functionally, the region is a green belt established through a series of policies dating back over a century. We see this territory as "urbanized," despite being undeveloped, as much of it functions as parkland. The key determinant is that the landscape has been protected from market forces for aesthetic and recreational purposes; had this territory not been so protected, it would have been heavily developed decades ago. On the northern side of the green belt, the suburbs begin once again, extending radially from the comparatively small urban centers of Poughkeepsie, Newburgh, Middletown, and Kingston. Indeed, none of the central cities have ever contained more than 40,000 residents, but the combined suburban rings number in the hundreds of thousands. Not surprisingly, this region is classified as part of the New York Combined Statistical Area.

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

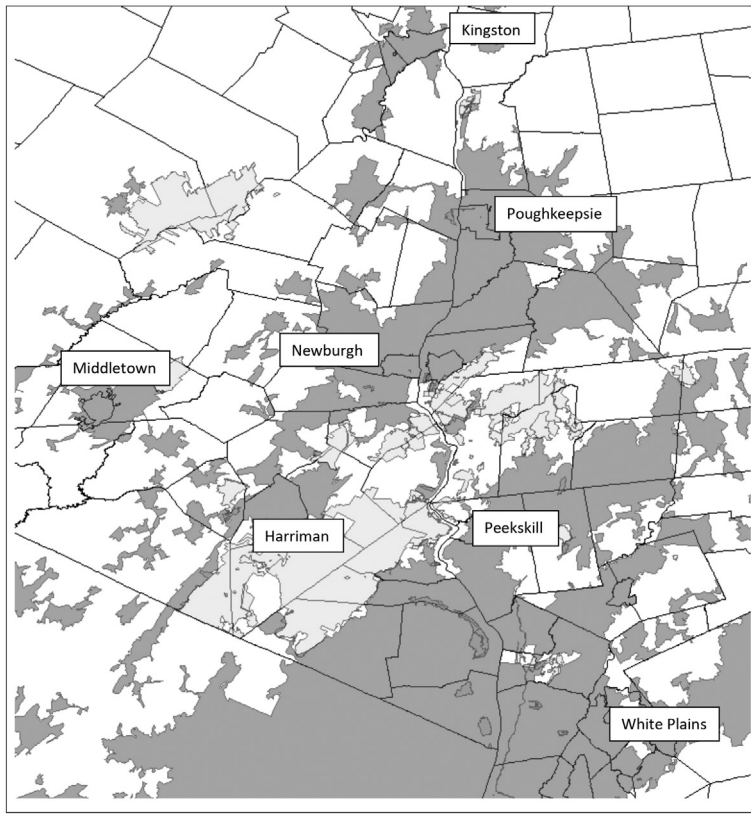


Figure 11.3 Urbanization in New York's Northern Suburbs. (New York's northern suburbs are divided into inner suburbs south of the greenbelt of state parks (lightly shaded) and water supply reservoirs and the outer suburbs north of the greenbelt.)Created by author.

The character of each zone differs with distance from New York. The region south of the green belt, the inner suburbs, is densely settled, and population densities increase with proximity to the city. North of the green belt, the outer suburbs are more densely settled closer to the urban centers, and these once independent cities have coalesced into the northern suburbs of New York. This pattern is like that found in western Long Island during the nineteenth century. Further north, the Kingston Metropolitan Area is classified as part of the New York CSA despite being closer to Albany and our own city of Oneonta. These areas are more independent of the city, and many commuters to the New York CSA are, in fact, commuters to outer suburbs.

Nevertheless, many do commute into Manhattan, and public transportation options are available for getting to the MetroNorth rail station in

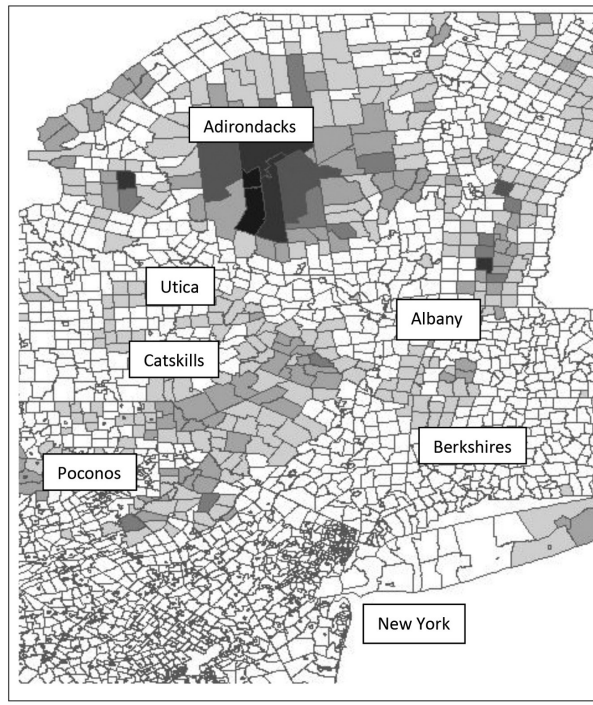
EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

Poughkeepsie. Outside the Kingston suburbs, many townships reinforce a "rural" character through a combination of public policy and market costs. For example, multiple townships have established a minimum lot size of three acres to obtain a building permit, ostensibly for preserving rural character but functionally pricing out of the real estate market those who cannot afford so much land. This pattern has resulted in large areas of developed but not densely urbanized communities, extending throughout Ulster County and adjoining Sullivan County immediately west.

Sullivan County provides an interesting case. Its population has grown by nearly 25 percent since 1980, and there is a noticeable uptick in traffic when driving on interstate 86 (formerly New York 17) through the county toward New York. Sullivan is not, however, included in the CSA and thus is defined as "rural." A combination of factors seems responsible for this. Given the low-density residential development, the contiguously developed areas between the centers of Monticello, Fallsburg, and Liberty do not rise to population densities high enough to be considered "urban," and as such, no one urban cluster approaches a population high enough to be registered as a Micropolitan Area. In addition, much of the growth, particularly in older villages, has been with recently arrived Latinx populations, particularly from Mexico, who often find employment in agricultural labor or low-wage service sector jobs within the county. This limits the amount of commuting into adjoining Orange County. Put simply, why would one seek employment at a convenience store 20 miles away if the same job could be found closer? By measuring metropolitan integration through commuting patterns, rural counties that are integrated into the metropolitan region, with less prosperous populations less likely than middle-class populations to commute to work, may be less likely to be counted. This certainly seems to be the case in Sullivan County.

Immediately beyond New York's exurbs is an "Oort Cloud" of sorts, a landscape of multiple small centers dedicated to rural tourism focused on attracting urban investment. In western Ulster, northern Sullivan, Delaware, and Otsego Counties in New York, this is evident (see figure 11.4) as a band of townships extending with a high ratio of vacant to occupied housing units: a marker of second-home ownership and investment properties aimed at vacationers. This band consumes the Catskills, extends southwest into the Poconos, and eastward into Massachusetts's Berkshires. Similar regions are found in the Allegheny Mountains between Pittsburgh to the south and Buffalo and Rochester to the north. The Adirondack Mountains, easily accessible from the New York Metropolitan Area and fed by the five metropolitan areas in the Erie Canal corridor, similarly have a high ratio of vacant to occupied housing. These regions also have many tourist attractions, such as ski areas, natural recreation parks for hiking, and museums such as the Baseball Hall of Fame.

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use



Tourism belts can be discerned by areas that have higher vacancy rates and seasonal rentals. The tourism belt in relation to New York City stretches from the Poconos Mountains, through the Catskills, and into the Berkshires of Massachusetts. The Adirondacks are another major tourism region, attracting second homeowners from New York and the upstate metropolitan areas.

Figure 11.4 Tourism Belts in New York and Adjacent States, 2017. (Tourism belts can be discerned by areas that have higher vacancy rates and seasonal rentals. The tourism belt in relation to New York City stretches from the Poconos Mountains, through the Catskills, and into the Berkshires of Massachusetts. The Adirondacks are another major tourism region, attracting second homeowners from New York and the upstate metropolitan areas.) Created by author.

The economic impacts of the New York–Philadelphia region are surprisingly compact when measured as household income. In figure 11.5, Philadelphia stands out in white due to the low median household income found in that city compared to the surrounding suburbs, including the band extending to and around New York. Also in white is the borough of the Bronx, and Brooklyn is a somewhat light gray due to its low household income—away from Brooklyn Heights. In contrast, Manhattan and Staten Island are a shade of gray that mimics many townships of Long Island—all places with median incomes above the national average. The large areas of black, spreading through much of the shared suburbs in New Jersey between

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use



Figure 11.5 Median Household Income in New York and Adjacent States, 2017. Created by author.

Philadelphia and New York, represent communities with median household incomes above approximately $100,000. Looking to the northwest, townships in "white," or low income, do not appear again until one leaves the suburbs and into the adjoining rural hinterlands. Nearer the numerous smaller metropolitan areas, however, the same pattern holds: low-income cities, wealthier suburbs—often with one or two townships with high median household income (black)—surrounded by poorer adjoining townships.

New York's influence is more widespread when measured by median housing value (figure 11.6), in part because the Oort Cloud of second homeownership in the Tourist Belts extends the influence further afield. Median housing values are quite high in the cities, but highest in select suburbs in the core suburban areas of northern New Jersey and southern New York, extending into southwestern Connecticut. West of the Catskills, the rural landscape exhibits a wide swath of townships shaded as white for the lowest median values. The exceptions to that rule, outside of the Adirondack Park, are in the suburbs of metropolitan areas. Close examination shows darker-shaded towns ringing white-shaded cities, with some suburban towns in larger metropolitan areas such as Buffalo, Albany, and Rochester with particularly affluent communities even within the context of suburban belts that are more affluent than the adjoining cities and rural communities. However, controlling for income reveals an interesting fact: the ratio of income to housing value translates into a more comfortable existence for

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

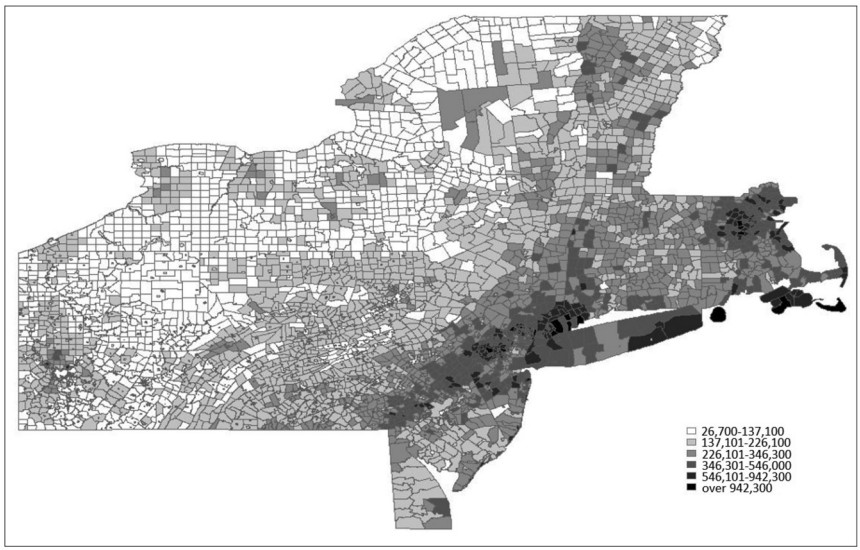


Figure 11.6 Median Housing Value in New York and Adjacent States, 1017. Created by author.

those willing to forego the big metropolitan areas for the cities of western New York and Pennsylvania. Pittsburgh and Buffalo might not be New York, but one's income goes a long way (figure 11.7).

In figure 11.8, we see two metropolitan areas of vastly different scale. In 8a, New York and the inner suburbs display the now-predictable pattern: higher poverty in the city, particularly the Bronx, and in older "suburban" cities such as Newark and Elizabeth, New Jersey. Poverty rates drop considerably through the suburbs and again rise in the rural Catskills as one heads north. The result is a wide swath of suburbia with poverty rates lower than the national average. For someone who lives in such a community, the mile after mile of comparatively affluent suburbia would appear normal. Since poverty is concentrated in the cities, and within cities in specific neighborhoods, the lived experience of the social system is one of "poor" cities and "normal" suburbs—the variation from suburb to suburb appearing to reflect a wider spectrum than it does. The rural hinterland beyond, areas where poverty rates hover at the national average or above, may even appear hyper-impoverished. If one lives in a community with a poverty rate of 8 percent, the community with a poverty rate of 13 percent (approximately the national average) would appear comparatively impoverished. Nevertheless, does the wider pattern found in New York hold for smaller cities as well? In figure 8b, we see (at a different scale) a similar pattern in the region around Rochester. In fact, the cities and older industrial suburbs have the highest

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use



Figure 11.7 Ratio of Median Household Income to Median Housing Value in New York and Adjacent States, 2017. Created by author.



In both regions, poverty rates are highest in dark-shaded central city areas, surrounded by suburbs with poverty rates well below the national average. Outside the suburban rings of both cities, however, poverty climbs to the national average or above. In the New York region, the affluent band of suburbs stretches as far as fifty miles from the less affluent urban and rural zones. In the Rochester region, the affluent suburban zone stretches perhaps twenty miles.

Figure 11.8 Pattern of Poverty in New York Region (left) and Rochester Region (right), 2017. (In both regions, poverty rates are highest in dark-shaded central city areas, surrounded by suburbs with poverty rates well below the national average. Outside the suburban rings of both cities, however, poverty climbs to the national average or above. In the New York region, the affluent band of suburbs stretches as far as fifty miles from the less affluent urban and rural zones. In the Rochester region, the affluent suburban zone stretches perhaps twenty miles.) Created by author.

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

poverty rates, the suburbs have considerably lower rates, and the adjoining rural areas return to the national average or slightly above. This is due to the self-similarity of metropolitan areas: similar patterns at each level of scale. Similar patterns are found in rural areas: older villages are typically surrounded by newer houses, home to wealthier households in the surrounding countryside.

Given the wide array of urban influence in the hinterland, it is more accurate to measure the full geographical extent of the influence as the urban system (*not* urban-rural system). Arguably, given a metropolitan area of sufficient size, this is the outer edge of the Tourism Belt. The Census Bureau does something similar based on commuting patterns, and it is worth noting that the New York CSA extends very nearly to the inner edge of the Tourism Belt. This methodological observation is important: comparisons between differing types of geographies—for example, rural counties and inner cities—are an "apples and oranges" comparison. To measure prosperity, it is more accurate to measure similar units: an entire urban system, including both the inner city and the suburbs, should only be compared to other urban systems.

NEW YORK'S URBAN-RURAL SYSTEM

In 2018, New York City was home to 8,398,748 residents, and the Combined Statistical Area was home to 22,679,948. Also, given the contiguous urbanization that stretches from the Philadelphia suburbs and much of the Connecticut Valley, it seems appropriate to include the Philadelphia (7,204,035) and Hartford (1,473,084) CSAs as well. This yields an urban system centered on New York that is home to 31,357,067 people—about 10 percent of America's population of 327 million. If each person requires 2,000 calories per day to survive (to say nothing of tourists and pets), the region requires 62,714,134,000 calories per day, or 22,890,658,910,000 per year. If a population eats nothing but corn, an acre of which can support three people under ideal conditions but only two people under stressed conditions, this would require between 7,630,219,636,667 and 11,445,329,455,000 acres, and this far exceeds the adjoining region. Indeed, taking the most favorable number of 7.6 trillion acres for comparison, the entire state of New York contains only 34.9 million acres; it would take 218 New York States to feed this area a diet of nothing but corn. If some of the diet includes less efficient foods such as fruits and meats, this number climbs dramatically. Much of this need is met through global markets today, a topic for a later chapter, but for now we should explore the contours of at least the New York State portion of the New York urban-rural system.

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

New York's urban-rural system is indeed global, and we will explore the ramifications of that fact in greater detail in the next two chapters. The basic structure of the system found abroad is also found within the state, and like the rural towns turned urban neighborhoods of western Long Island, the features found in each scale to the system as a whole. Each settlement has historically performed certain transit functions similar to those of other communities at the same level in the system. The features found in New York's system are, adjusted for the available technology, consistent with those of other systems found earlier in human history.

Thought experiments are uncommon in the social sciences, but perhaps Albert Einstein was onto something by stepping away from the data from time to time. Consider the territory of New York State as if it had not been colonized but rather had developed in a manner more similar to the cities of Southwest Asia. Of course, this can be problematic: there were populations before European settlement, and they presented a logic quite different from those of Europe. The Iroquois Confederacy lining Lake Ontario, the Mohawk Valley, and the upper Hudson formed around a transportation network that connected the Hudson to the Great Lakes, but also had linguistic and ethnic similarities with other Iroquoian tribes in the Great Lakes that could create tensions with their Algonquian neighbors to the south and east. It might be tempting to suggest that European settlement smoothed over such distinctions, but that would ignore the distinct conflicts among the European powers. The Iroquois were undoubtedly aware of such rivalries, playing the French and English against each other in a three-way realpolitik foreshadowing that of the Chinese, Soviets, and Americans during the Cold War (Aquila, 1977). Nevertheless, imagine populations in each region of the state growing in tandem of their own accord without the immigration that, in fact, drove the settlement structure of the state.

The preeminent center would, in all likelihood, still be New York City. The Port of New York is the state's (and most of the East Coast's) best harbor. The natural waterways of the Hudson and Mohawk Valleys come so close to accessing Lake Ontario via Woods Creek, at present-day Rome, that this route would likely still be the dominant corridor through the state were we to run the clock a second time. Nevertheless, environmental concerns are not purely dominant. Were a player of a city-simulator game such as *Sim City* to open a map on central New York, it seems unlikely that Utica's location would be the choice of where to build the city. On the route between the Mohawk and Woods Creek, our hypothetical gamers would likely choose Rome as the location to build a great city. Not only is the east-west route advantageous, but the Mohawk Valley itself turns north and proceeds into the Tug Hill Plateau region and thus provides a promising route north. Indeed, this route was utilized in part to build the Black River Canal during

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

the nineteenth century. In contrast, Rome is located several miles west of the mouth of the Sauquoit Creek, which provides a good southward route. In doing so, it also provides an arguably better connection to the Oriskany Valley, which provides a route to the southwest. In contrast, to the north of Utica is a looming ridge called Deerfield Hill, and the best way north from the city is either via Rome or, heading downstream 12 miles to Herkimer, the West Canada Creek valley. Utica's dominance in east-central New York thus cannot be explained solely through an environmental explanation, and social factors such as the political-economic structure of the area are crucial to understanding the region's development. This mixture of environmental and social factors influencing community development is to be found in every community, and the networked nature of the communities represents an external constraint on each community. As with other complex adaptive systems, replaying the history might lead to similar structures (New York City as the first-order center) but differ in the details and even major structural factors in other ways.

We have seen these features before. The early history of urbanization in Southwest Asia was heavily influenced by environmental factors, including demographic growth itself, that created feedback loops that influenced subsequent development. Social factors were also important. The probable use of livestock in the Levant contributed to the region declining in social complexity, reverting to pastoral nomadism from an earlier network of agricultural villages. At the time, this might have seemed a rational response, but in hindsight, we might be tempted to call it "collapse." The logic of the system emphasized the role of livestock even as they ate the crops and contributed to desertification, but it is difficult to classify such a logic as "rational." As a result, the focus of urbanization seemingly shifted to the Tigris and Euphrates Valleys, where the logic of the agricultural economies forced a demographic expansion southward into drier territories. The Samarra culture developed irrigation, a technology that could support higher populations but came into its own as it reached the marshes aside the Persian Gulf—"becoming" the Ubaid and spreading back north. The Ubaid's success eventually "became" the Uruk, and the birth of the city was upon us. As in New York, to replay this history might yield similar structures but differ in the details.

The networked nature of the canals that developed in southern Mesopotamia, human-created or at least enhanced, imposed a new logic on settlement location. In principle, a village could form near a human-created canal that allowed settlement in an otherwise uninhabitable location. A larger town or city might develop at a juncture of canals. This human-created environment, so dependent upon the technology of the time, was reliant on the region's political economy. Agricultural production was administered through the cultural knowledge of the time: a religion that transmitted the necessary

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

scientific knowledge (through early astronomy) and reinforced the power structure through myth and ritual. The cultural practices and artifacts were scaled to the level of social organization and settlement. Each household had a shrine and suite of household gods, each community had one or more shrines to the gods. The largest temple in a city was dedicated to the patron deities, but smaller temples and sanctuaries were found as well. Centralization of such practices could be utilized to solidify power and as a benchmark to judge political leaders, a central theme in the Biblical Book of Kings I and II.

In New York, these same features are still found but in a modern context. Religious structures are a low-level transit function, utilized historically as mechanisms of communication throughout the system. Not surprisingly, they are found in nearly every small hamlet in New York State. We will refer to these as sixth-order functions because, as will be evident, New York has a six-level structure. Sixth-order functions are found throughout New York City because such low-level activities are necessary throughout the system, in the densest of urban neighborhoods and in tiny rural hamlets. They reflect the culture in which they are located. In Mesopotamia, various religious cults centered on a variety of gods and spiritual practices co-existed throughout the landscape, although the state-sponsored cult in the primary city typically built the largest temple precincts. Due to the destruction of the Pagan world during the Roman Empire by the ascendant Christians, the spectrum was more narrow in New York but nevertheless contained some diversity.

In addition to self-similarity at various scales within the system, the network as a whole was intended to siphon surplus rural products to the urban centers and the products of the city and those of its trading partners to the hinterland. This involved in ancient times a continuous circulation of goods throughout the entirety of the system, and this was and continues to be true within the New York urban-rural system as it moves goods and information from the larger world-system to the hinterlands. New York integrates economically, politically, and culturally with the global economy; this is most evident with its sea and airport facilities, but its financial and communications infrastructure is also critical. This trade is facilitated by the massive population of its home market, but this is, in turn, facilitated by the depth of its transit functions. Each institution, from its various airline terminals, cargo facilities, investment firms, retail outlets, news networks, and so on, carries an employee base that, in turn, is connected to an aligned population: a reporter and their family, for example. These dynamics feedback on one another: population is market, and market spurs population. However, to support this population, surplus rural goods extracted by way of rural labor are brought through the network to the center, in New York, from the sixth-order centers scattered throughout the hinterlands, at least historically. It is important to note that there is a center and a periphery at each level, so it is possible

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

to speak of sixth-order systems, fifth-order systems, and so on. As each of these levels are scattered within the urban-rural system, however, a concentric view of the region is not possible: an individual living in the periphery of a fourth-order center such as Cooperstown, for example, is geographically more proximate to the first-order center of New York City than an individual living in a second-order center such as Syracuse.

A sixth-order center far from Manhattan is Mount Vision, New York. A strip of homes along state route 205 north of Oneonta, Mount Vision has never contained more than 250 residents but was at one time home to two (Christian) churches: one Baptist, now closed, and the other Methodist. It also contains a post office that, like the churches, integrated the community into the larger system through communication. Historically there were a few stores and agricultural mills in the hamlet, but those have long since closed as economic and transportation efficiencies have taken their toll. As with the concentration of religious functions in centralized temples, the concentration of such economic functions into higher-order centers also shifts power from the local community to higher-order centers by fostering a dependency upon the larger communities' institutions. It should be noted, however, that a hamlet of 200 surrounded by farmland could, in principle, be economically independent if the residents were willing to forego the trappings of modern life: internet, telephones, microwave food processed in another state, music recorded in Los Angeles deemed superior to the local band. In other words, the dependency is a construct of power relations (the control of resources by those in other communities) and culture (an urbanormative assumption of the centrality and/or superiority of urban goods over those of the local community).

A fifth-order center contains churches and post offices, for example, but typically also some rudimentary retail activities deemed central to modern (read: urban) life. Five miles north of Mount Vision is Hartwick, and three miles south of Mount Vision is Laurens. Both communities are larger than Mount Vision, but more importantly, they both provide economic activity and system integration for their own populations and for that of Mount Vision and other sixth-order settlements. Both fifth-order centers have gas stations with attached food stores, and both have diners. With about 700 residents in 2010, Hartwick is about 50 percent larger than Laurens and hence until recently added to the suite a bank. In contrast, Laurens still is home to its own school district, whereas Hartwick had merged with nearby Cooperstown (a fourth-order center) in the 1950s. This pattern is similar to those of other fifth-order centers throughout the region.

As noted, Cooperstown, seven miles east of Hartwick, is a fourth-order center. Containing all the fifth-order institutions, Cooperstown also has retail functions essential on a day-to-day basis. These include pharmacies,

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

supermarkets, hardware stores, and some limited clothing. Within the region, Cooperstown is unique among fourth-order centers in that the area does not have a Walmart or similar big box store, a function of the local political economy wherein past proposals have elicited protest. As a result, the various fourth-order retail functions are spread across multiple stores (e.g., two supermarkets, two pharmacies), whereas in other fourth-order centers, a comprehensive store might provide some or all of these functions.

As we will discuss in chapter 12, Oneonta overtook Cooperstown as the third-order center for the region south of the Mohawk Valley at the turn of the twentieth century. Oneonta has all the fourth-order institutions, and given a higher population, adds considerable diversity to the mix. The community of nearly 20,000 people spread across an urbanized area that includes a city, a surrounding political entity called the "town," and adjoining townships has not only an array of Christian churches, but also two synagogues, a Unitarian Universalist church, and a coven of Wiccans. This is typical for larger communities: various lower-level activities serving higher populations allow for multiple institutions to be supported, thus yielding a greater diversity. This holds in economic activities as well: Oneonta contains three traditional grocery stores, a specialized organic grocer, a Walmart, and a wholesale club. There is also some higher-order retail, including clothing and sporting goods stores and an array of automobile dealerships that include foreign brands such as Toyota and Subaru. The community is also home to a crucial third-order institution: a daily newspaper, in contrast to the weeklies more typical of fourth-order centers.

For each of these lower-level settlements, they "fill in" a space in the network of communities and integrate an area around the higher center. For example, Oneonta is centrally located between second-order Schenectady, Binghamton, and Utica, thus providing goods and services to a region that might find it cumbersome to drive to the larger city for lower-level functions. Oneonta thus performs central place functions for its own (third-order) region, and as such, residents within its region are divided in terms of what cities to travel to for second-order functions. For example, Cooperstown is 22 miles north of Oneonta but 26 miles south of Herkimer, a suburb of Utica that also performs third-order central place functions for Utica's eastern hinterlands. A resident of Cooperstown traveling to a third-order center for, let us say, a furniture store, the choice is between Herkimer and Oneonta. If a resident knows a store in Oneonta has the item in question, Oneonta is the closer choice. However, if there is some question, Herkimer may be the better option because if the item is not found there, it is a short drive to Utica for a more extensive selection. The overall effect is that, whereas a resident of Utica or Schenectady is dependent on the home city's retail base, the resident of the hinterland has a choice.

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

The choice of centers for central place functions enjoyed by residents of the hinterlands, particularly those about midway between centers, can have dramatic consequences for individual centers over time. The expansion of the Destiny USA Mall in Syracuse, about 1.5 hours from Cooperstown, has had the potential of attracting village residents there instead of the formerly larger Crossgates Mall in Albany, also 1.5 hours from Cooperstown. Both malls can take advantage of the economies of scale resident in their respective metropolitan areas, and consequently, both metropolitan areas can support larger shopping malls than in Utica in between. Thus, the resident of Cooperstown has a choice between the retail bases of all three cities, typically utilizing Utica for shorter trips but Syracuse or Albany for all-day excursions. The expansion of Destiny USA has thus been able to tilt the retail loyalties of people in the hinterlands over a region 140 miles wide.

Much of what Americans consider "normal" in a city are found in second-order centers: highly specialized retail functions, television networks, luxury car dealers, and access to the national transportation network through rail terminals and airports. Of course, the full suite of third-order functions is also found. For each transit function, whether retail, media, transportation, or otherwise, a certain number of employees, some quite specialized, must be employed. To the extent these institutions exist and grow, the population will spiral, but as they founder, the result will be stagnation and decline. There is a reinforcement to these dynamics, with population increase resulting in increased economic growth but stagnation leading to decline. We explore these dynamics in more detail in chapter 12.

GROWING NEW YORK (STATE AND CITY)

It is an expression of urbanormativity that we typically assume that a city such as New York grew in either isolation and equitable trade with other communities or a domineering force for good that brings the fruit of "civilization" to the countryside. The concept of civilization descends to us from the Romans, its root *civitas* being the Latin root for city. Indeed, *civitas* more precisely refers to the city's citizenry, whereas *urbs* referred more specifically to the built environment—a distinction we continue to make today. For the Romans, as for perhaps most Americans, the city is the expression of civilization itself and symbolic of both its highest achievements and its lowliest vices. In either narrative of urban growth, the city is deserving of its rural spoils, whether through beneficent trade or paternalistic domination. The picture of a city as dependent is foreign to our ears. The city's association with power is evident in the Greek term *polis,* which refers to a city-state, and is the root of the term *polity*.

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

In this and the previous chapter, we offered a picture of a city growing in relation to its hinterland. This growth was not so much dialectical as dynamical, with each new step in the region's development reinforcing and enhancing the system as it expanded and intensified. The environment in which the system grew was and continues to be quite lush, filled with forests and abundant water for irrigation, industry, commercial, residential, and transportation uses. The natural topography upstate that fostered comparatively easy communications and transportation also offered the ideal conditions for industrial development along the state's countless fast-running streams. It was all connected to the global economy by one of the world's best natural harbors. All of these resources had been available to the native inhabitants, but despite some highly advanced political structures, nothing like the New York urban-rural system developed. The missing piece should be obvious: an urban-rural system needs enough population to generate the system dynamics that lead to growth.

Throughout New York State, and broadly throughout the New York urban-rural system, there was a period when the major settlements were relatively independent of one another. In fact, Albany is older than New York, and throughout the period of Dutch and British rule, each city could have conducted its affairs quite independently of one another. There was enough farmland around both cities to support the substantially lower populations of the time, and the trade that did occur between the cities was based on comparative advantage and more or less equal exchange. Over time, both cities grew more dependent on their hinterlands for food, water, and other resources, and the competition for the resources of the shared hinterlands led to the coalescence of the two systems into one. When complex adaptive systems coalesce, there is a tendency to recenter the entire system on one point: the first-order center. The previously independent smaller city, in this case Albany, is relegated to a secondary status, and as the system expands will be joined by other second-order centers. In the case of New York, the "fuel" for this system expansion was not simply endogenous growth, but exogenous growth spurred by the endogenous growth of regions in the wider world-system. For much of the nineteenth and early twentieth centuries, the source of this immigration was Europe.

The initial European settlement of the state began with the Dutch and continued with the British, and from the beginning there were Africans as well. In upstate New York, the period after the American Revolution witnessed an influx of mostly English-descendent New Englanders looking for land, a population that swept through the region and into the Midwest. This sweep of population largely "filled" the available farmland upstate, and numerous rural counties witnessed an early peak of population around 1825 before slipping over the next century (Thomas, 2005). In Otsego County, the hillsides

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

surrounding Oneonta bear witness to this demographic movement in the form of 200-year-old stone walls that once separated field from pasture now found in forests that have made a comeback since the 1920s. With much of the farmland allotted, more recent immigrant groups have found themselves confined to the cities.

The first significant influx of city-bound immigrants was the Irish. A result of the potato famine, a blight on the peasantry's chief staple that stretched from 1845 to 1852, one million people died while the upper classes continued to export food to feed the masses in England (Kelly, 2012). Emigration from the small British dependency of only eight million had been steady before the famine, but the famine encouraged another million to leave (Grada, 1975). The majority set sail for the New World, finding themselves in Canadian and American port cities, with New York and Boston being perhaps the largest destinations. In New York, the influx of thousands of uneducated, Catholic peasants from Ireland had major consequences. The area of the Collect Pond, for example, had been filled in but, due to the noxious gases seeping from the ground, became unpopular among the elite—the area of the Lower East Side would thus become home to the Irish and, as the century progressed, a host of newer immigrant groups without the means to move uptown. The skills of a peasant are primarily related to farming, but in a state and region where farmland was already claimed, a range of "urban" occupations would have to do, if further westward expansion was not chosen (such as farming in the Midwestern states). The rise of industrialization upstate and increasingly in the city itself had employment opportunities, the low-wage workers in turn dynamically enhancing the ability to produce more for less. The transportation networks, including the Erie and other canals and the booming railroad industry, also provide employment and other opportunities throughout the state. As the nineteenth century continued, the Irish and then subsequent immigrant groups found their way upstate to the booming secondary cities with their industries: textiles in Utica, optics in Rochester, and by the turn of the century, electronics in Niagara Falls and Schenectady.

New York City grew rapidly from the waves of immigrants, and the upstate cities grew in turn through secondary chain migration. Historians today generally recognize three significant periods of immigration after the famine (McLemore, 1994). From the Civil War to about 1890, the first phase was seemingly a continuation of earlier trends, with the bulk of immigrants originating from northern Europe. With the exception of the Irish, most were white Protestants. After the turn of the century, however, conditions in northern Europe had stabilized, and it was now Eastern and Southern Europe struggling under the complications of overpopulation. By the hundreds of thousands, immigrants arrived from Italy, Poland, and the territories

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

in between. The new migrants were most often not Protestant, the majority being Catholic or Jewish, and being peasants were greeted by native-born Americans with the same suspicion and outright loathing that greeted the Irish after 1845. By the 1920s, the Eugenics Movement sought scientific rationale for the "inferiority" of the new immigrants, passed legislation aimed at controlling the inflow of immigrants, and forced thousands into sterilization for offenses ranging from being mentally ill to simply morally inadequate. Since the 1970s, a third wave has attracted a higher number of immigrants from Latin America.

In each immigration wave, a corresponding set of factors in the originating country acted as a "push" factor leading the migrants to leave. This has frequently involved complications of overpopulation, particularly famine and war. For example, much of the population movement in the 1920s were refugees from a European landscape ravaged by World War I. In the United States, there were political and cultural ramifications as well. The fear of newly arrived immigrants, particularly Catholics and Jews after World War I, led to a revival of the Ku Klux Klan (KKK). The KKK held rallies in favor of immigration limits and against the influence of Catholics and Jews, and the nationwide support resulted in a reign of terror directed against African Americans in the southern states.

In New York City and the upstate cities, the form of government that divided the municipality into wards represented by alderman on city councils gave rise to organizations known today as "political machines." In New York, the Tammany Hall machine organized around the needs of recent Irish and later Italian immigrants, growing city government functions to provide new employment opportunities, including paid police and fire departments (Allen, 1993). Similarly, powerful machines organized along similar lines grew in major upstate cities, with the Wheeler Machine, an Irish machine in Utica that peaked in the 1880s and 1890s, controlling both political parties (Bean, 1994).

The politics of demographic growth extended beyond machines. The growth of such a massive urban agglomeration as that which existed in New York Harbor created an economic and legal landscape that pitted each municipality against the other for investment and a range of regulatory complications that had the potential to slow or even stop both private and government investment. It was this bureaucratic inertia, as well as a desire by opponents of the Tammany Hall machine, that led to the consolidation of the city of Greater New York. As with the gridiron street system on Manhattan Island, the political decision would have wide-ranging consequences. The city's formation, particularly the decision to leave large areas of suburban Nassau and Westchester Counties independent, helped to fuel the post-war growth of suburbs and the racial hyper-segregation that was left in its wake.

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

New York City's position as the major port for New York State goods and those of the entire Great Lakes Basin enabled the growth of a particularly robust financial sector that continues to dominate the global economy today. Manufactured goods and agricultural products from inland left New York City for global markets, and the preeminent first-order city spread the produce of the world deep into the interior of North America. The transit functions associated with a major port provided a vibrant employment sector for longshoremen and teamsters, augmented by the manufacturing and service sectors found in the city itself. Economic growth spurred employment opportunities, which in turn attracted migrants from America and abroad, which in turn fueled more economic growth. The city's home market enabled it to grow companies with seemingly no limits, and these companies could, in time, look inland for new investment opportunities. It is here where we find a major shift from earlier time periods. In ancient Mesopotamia, in the Bronze Age world-system, and in Rome itself, the elite of a city seeking to plunder the resources of adjacent cities and region *might* have been able to do so peaceably (e.g., see Algaze, 1993), but more often such plunder of resources was dependent upon an overt use of force. For the elite of New York and other major cities, the plunder could "peaceably" take place under the rules of capitalism.

The environmental, political, and economic clout of New York City enabled the city to develop media and entertainment markets that came to heavily influence those of other cities throughout the nation, so much so that even though New York is home to neither a seat of governmental power nor a site of religious veneration the city is arguably the center, with Los Angeles, of American culture today. With so much cultural production taking place in a city that sprawls suburbs for a 100 miles and more in every direction, where hundreds of suburbs spread across a swath 50 miles wide experience poverty rates well below the national average, and low-income areas are found in highly segregated neighborhoods divided by race and ethnicity, the urbanormative assumptions of the city's elite not only influence how Americans discuss urban and rural issues, but issues of race and class, gender and sexuality, or religion and politics, they largely determine it.

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

Chapter 12

Change amid Growth

On September 6, 1901, as he shook hands with a spell-bound public, President William McKinley was shot by anarchist Leon Czolgosz. The president's death led to the inauguration of Vice President and former New York governor Theodore Roosevelt. The event was to be the most memorable moment of the Pan-American Exhibition, a world's fair that ran from May through November. The selection of Buffalo as the location for such a fair was understandable at the time. With 352,387 residents, Buffalo was at the time the eighth largest city in the United States, between Cleveland and San Francisco, and larger than Pittsburgh, Detroit, and Washington. Located across the river from Fort Erie, Ontario, and teeming with immigrants from Europe and the world, the city had an international flavor. Twenty miles south of Niagara Falls, the city was electrified and modern. At the Lake Erie terminus of the Erie Canal, Buffalo was the principal gateway of the agricultural and manufacturing products of the Great Lakes into the canal, New York City, and the global markets beyond; from Buffalo, the wares of the global economy were distributed to the Great Lakes. Buffalo was a first-order city, its bustling waterfront with towering grain silos and warehouses underwriting a world-class park system and new skyscrapers.

In 2010, Buffalo was a city 261,310, about 50,000 larger than its sister city of Rochester an hour east. Indeed, the populations of the two regions converged, and by the end of 2010, metropolitan Buffalo was larger than Rochester but by the lowest margin in the history of both cities. The convergence of the two cities and their associated metropolitan areas resulted from the complex of forces at work during the twentieth century. It signaled a shift in Buffalo's status as a major city, from a contemporary of first-order cities such as Cleveland and Detroit to that of a sizeable second-order city such as Rochester or even Albany. The demise of Buffalo offers lessons for

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

how modern urban-rural systems operate, and we adapt Dillaway's (2006) discussion of factors influencing Buffalo to broaden the focus beyond western New York. For Dillaway, the significant factors include (1) shifts in the transportation network, (2) deindustrialization, which in Buffalo refers primarily to steel, (3) corporate concentration, which in turn led to absentee corporate overlords, (4) business costs, including both labor and taxes, and (5) the whims of local elites.

After decades of exploratory studies and political wrangling, in 1959, the Saint Lawrence Seaway was officially opened by President Dwight Eisenhower and Queen Elizabeth II. The seaway's opening was the latest and most severe blow against Buffalo's status as a major port. The mouth of the Buffalo River was a natural harbor that provided an ideal terminus for the Erie Canal. Buffalo grew rapidly after the Canal's opening in 1825, and just as in Utica, the canal was joined soon after by railroads that closely followed its route; several of these were later merged into the New York Central Railroad. Although the New York Central, the competing Erie Railroad, and a number of smaller systems utilized Buffalo's port, they also were competition as they ran west to Cleveland and Chicago. By 1900 passenger service was primarily a rail service, but freight was (and still is) most efficient via water. The complex of grain elevators, now known as Silo City, was responsible for transferring the bulk of midwestern harvests to the canal for transport. By enabling ocean-going ships direct access to Great Lakes ports, the

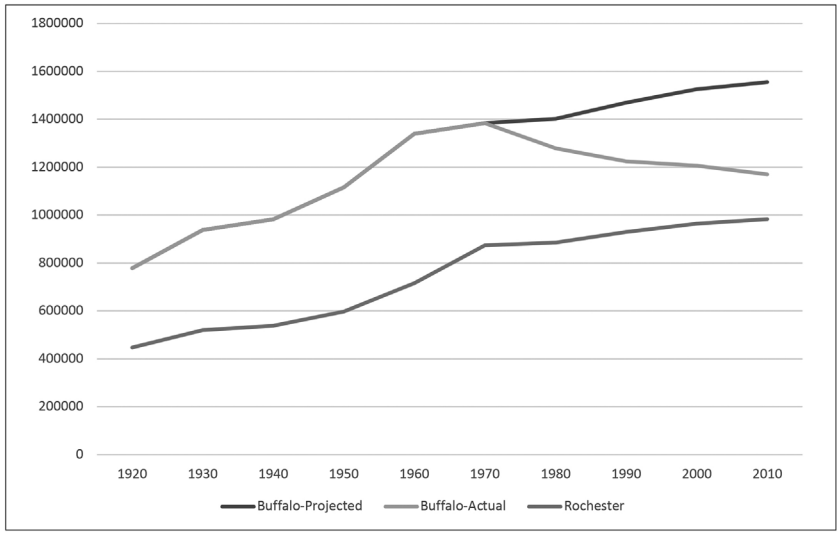


Figure 12.1 Population of Population Related Municipalities in Buffalo and Rochester, 1920-2010. Created by author.

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

Saint Lawrence Seaway nullified the purpose of Silo City and more generally weakened the city's transit functions. Buffalo became, within a decade, a secondary port somewhat out of the way of the Great Lakes trade further west.

The impact on the region's population was immediate: the metropolitan area's growth was cut from 19.9 percent during the 1950s to only 3.3 percent during the 1960s; in contrast, Rochester grew by 19.9 percent and 22.1 percent during those same decades (figure 12.1). Had Buffalo grown at the same rate as Rochester over the ensuing decades, the PRMs would have been home to 1,555,462 residents in 2010, but instead were home to only 1,170,743. Of course, this convergence masks another reality: Buffalo stretches across the international boundary into Canada whereas Rochester does not, and this is a striking difference between the two cities:

> The statistics for Buffalo are complicated because the region lies across the river from Canada. When one adds the Saint Catherine's-Niagara Metropolitan Area to the Buffalo CSA, the region had 1,638,074 in 1990, compared to 1,598,787 in 2007, a loss of only 2.4 percent. This is because growth on the Canadian side of the river between 1991 and 2006 (the years of the Canadian censuses) was over 7 percent. However, the western end of Lake Ontario is Canada's largest megalopolis, stretching from the American border around the end of the lake to Toronto and Oshawa on the lake's northern coast—this area is known as the Golden Horseshoe. Adding just the metropolitan areas hugging the lakeshore—Saint-Catherine's-Niagara, Hamilton, Toronto, and Oshawa—yields a population of 6,526,971 in 2007, up 27.9 percent from 5,103,349 in 1990. When metropolitan Buffalo is added to the region, the population in 2007 was 7,735,441 and is projected by Statistics Canada to hit over 11 million by 2030. (Thomas & Smith, 2009, 13)

The difference in fates between the two sides of the Niagara River also points to a stark reality: Buffalo's ills are not the result of the weather, and the convergence with Rochester points to the loss of its first-order transit functions, that is, the restructuring of its transportation sector, as a primary cause. This situation was aggravated by two major economic trends in the national economy: restructuring of manufacturing and corporate concentration.

Buffalo had been ascendant in the steel industry, on pace to outstrip even Pittsburgh in production. As the twentieth century wore on, however, many of its largest companies had been acquired by or merged with such out-of-town firms as U.S. Steel, leaving Buffalo with a host of factories owned by elites in other cities. As many other, and most often smaller, cities discovered during the twentieth century, there are advantages to having the corporate headquarters locally: in a close call, a company's elite is more likely to close or restructure a plant in another city rather than at home. As the American

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

steel industry restructured, downsizing hit every steel city but hit Buffalo and its suburbs particularly hard. As manufacturing was more broadly restructured, the damage of the steel industry was compounded.

The loss of manufacturing jobs contributed to the spiral in Buffalo's population, but Rochester continued to grow during the same time period, although at more robust rates during some periods than others. The PRMs grew 22.1 percent during the 1960s, and it is likely that at least some of this growth was at Buffalo's expense. The slowest period was the 1970s, a time when the statewide population was down, and metropolitan Rochester grew by an anemic 1.3 percent before rebounding to nearly 5 percent during the 1980s. Even between 2000 and 2010, a period when Western New York lost population overall, the Rochester area grew by 1.9 percent. In a capitalist economy, we tend to assume that growth is "natural," but demographers know something else: it is "natural" for the growth rate to fall to replacement or barely above as a region urbanizes. In other words, population growth rates of 2 percent reflect the basic replacement of the population and are in line with the expectations of Demographic Transition Theory—it is the Capitalist expectation of continued double-digit growth rates that is out of line as they anticipate that people will move to the city from somewhere else. By the late twentieth century, however, New York State's natural growth rate had fallen to replacement levels, and there were simply no surplus people to move to the cities unless they were coming from further afield. As such, the transition of Rochester to a high-technology economy by virtue of the presence of such corporations as Kodak (cameras and imaging), Xerox (photocopying), and Bausch and Lomb (optics) enabled the region to hold its own even as Buffalo's restructured manufacturing base led to outflows of population.

It was not only deindustrialization but corporate concentration more broadly that affected Buffalo. As Dillaway (2006, 6) noted:

> The disappearance of locally owned industries and Buffalo's subsequent reliance on multinational corporations contributed to the city's economic decline . . . . Absentee ownership and the new global economy complicated the ability of local leaders to create or attract new firms and shape Buffalo's economic destiny.

Across economic sectors, from manufacturing to finance, firms merged and enlarged, then sought to increase profits by taking advantage of the higher economies of scale, shed themselves of redundant locations, product lines, and other facilities. For example, a bank resulting from a merger of two formerly regional banks would shed a redundant mortgage processing center; a manufacturing firm would rid itself of one of three plants after a merger. In earlier periods, Buffalo would benefit from such changes. For example, the

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

growth of Marine Midland Bank during the twentieth century was often at the expense of smaller cities who found that the corporate headquarters in Buffalo left them with a regional headquarters and local branches but allocated other functions and quite often higher-paying positions to the home city. In addition to the employment base, the cityscape itself is altered. When another Buffalo-based bank, M&T Bank, bought the Savings Bank of Utica in 2007, the spectacular gold-plated dome that serves as a crown of the five-story building was converted from a headquarters to a simple branch—the block-long building was mostly empty as a result. As in smaller cities, however, so in Buffalo: Marine Midland was acquired by London-based HSBC in 1980. By and large, this national-level trend impacted Buffalo and Rochester in similar ways, and their convergence is not easily tied to these trends.

The cost of doing business is a factor that is often cited by corporations as a reason for leaving a community or threatening to leave for a tax reduction. The sources of economic ennui can be broken into three categories: labor costs, regulations, and taxes. Although much of the emphasis has historically been placed on taxes, labor costs and regulations have typically been more decisive in a firm's decision to close or relocate a plant (Markusen, 1987; Storper & Walker, 1989). Dillaway (2006) notes that the highly unionized environment of Buffalo in a particularly well-unionized steel industry helped turn the region's factories into targets for corporate cutters. Nevertheless, taxes have played a role as:

> It was known that the City of Lackawanna kept the assessed valuation of Bethlehem Steel Corporation "written in pencil" to be changed easily. Bethlehem's real estate taxes fluctuated each year, often paralleling Lackawanna's income needs. These taxes represented up to 60 percent of Lackawanna's tax base. (112)

There is a limit to the explanation: the economically healthiest region of New York State is the New York metropolitan area, and it is home to the highest property tax rates and even a city-imposed income tax. There is no equivalent to this upstate.

There is a further demographic tale of these two cities, and one that bears comparison to New York. New York City and State became less popular destinations for recent immigrants during the 1970s compared to such cities as Los Angeles and, during the 1980s, Miami. By the 1990s, the immigration pipeline was firmly reestablished and following a pattern similar to the nineteenth and early twentieth centuries: arrival in New York and then, for some, seeking new opportunities in upstate cities. By the early 2000s, this trend was evident in Eastern New York cities, with record populations recorded for New York and some demographic rebound in such cities as Albany,

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

Schenectady, and Utica; indeed, every city in New York State east of route 12 through central New York gained population in the 2010 census, but in western New York only Ithaca gained population. Natural growth rates have thus hampered Western New York cities, which has impacted the metropolitan areas' internal organization. Since the 1840s, immigrants have moved to central cities, thus the uptick in population for not only New York but also Schenectady and Utica. In Buffalo and Rochester, reliant on the natural increase to "replenish" those moving out of the central cities, the results have been dramatic (Smith et al., 2013).

Mirroring national trends, between 1950 and 2010, thousands of inner-city residents sought new lives in the suburbs and the exurban fringe. In Eastern New York, this explains the addition of Kingston and Ulster County to the New York Combined Statistical Area, but in a region with high immigration rates, the population of the central city (New York) has grown considerably; before the outbreak of COVID-19 in 2020, Manhattan was experiencing a boom of new construction and areas of Brooklyn had been considerably gentrified. Western New York experienced the same trends but without the new migrants. As shown in table 12.1, both Buffalo and Rochester experienced continual expansion between 1950 and 2010. Cities in each metropolitan area lost population overall, but the significant declines were in central cities in both cases. Both Buffalo and Niagara Falls experienced a decline of population on the order of half, whereas other cities in the region experienced lower rates of decline or, in the case of North Tonawanda, a slight increase, reflecting a suburban pattern. This is true in Rochester as well, where the population decline was about a third in the central city, but Canandaigua, the only other city in the region, experienced a slight increase in population reflecting its

Table 12.1 Population of Buffalo and Rochester PRMS by Type of Community, 1950–2010

	1950	*1980*	*2010*
Buffalo Region PRMs	1,116,597	1,278,931	1,170,743
Cities (total)	763,143	531,252	397,507
Buffalo	580,132	357,870	261,310
Niagara Falls	90,872	71,384	50,193
Suburbs	273,479	636,086	657,323
Exurbs	77,224	108,211	112,059
Reservations	2,751	3,382	3,854
Rochester Region PRMs	606,273	900,961	983,185
Cities	340,820	252,160	221,110
Rochester	332,488	241,741	210,565
Suburbs	167,340	488,069	578,196
Exurbs	98,113	160,732	183,879

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

suburban location. In both metropolitan Buffalo and Rochester, the decreases in the central city populations were more than met by increases in the suburbs and exurbs. In Buffalo, where population gains turned to losses metropolitan area-wide, this kept expansion at a minimum and concentrated growth in the suburbs; in Rochester, the continued growth rate also led to continued expansion into the exurbs even as the suburbs grew fastest. In essence, much of the economic growth for both metropolitan areas was based on populations moving from one place to another, and central city decline was traceable to the lack of new migrants to the city—an understandable consequence of low to non-existent natural growth rates in the countryside and low rates of foreign immigration. Indeed, the situation in Rochester is precisely what one would expect for a healthy metropolitan area, given these demographic trends.

During the same time period, the racial composition of the central cities changed markedly, most evident in the past twenty years. Buffalo was 64.7 percent white in 1990, falling to only 50.4 in 2010. This was driven the most by the decline in the white population itself, the non-white population growing but not nearly enough to explain the gap. In contrast, the suburbs and exurbs remained heavily white, although declining in some as well: the suburbs went from 97.2 percent white in 1990 to 92.2 percent in 2010, driven to some degree by population losses in older suburbs such as Cheektowaga. The exurbs dropped from 96.9 percent white in 1990 to 94.9 percent in 2010—in other words, little changed overall. This pattern was evident in Rochester as well, where the central city fell from 61.1 percent white in 1990 to 43.7 percent in 2010. The suburbs fell from 95.4 to 89.5 percent white during the same time period, with some suburbs having Asian American enclaves, while the exurbs similarly experienced a slight decline from 97.0 to 94.8 percent white. Put simply, both metropolitan areas became more segregated during this time period, a continuation of the "white flight" from earlier in the twentieth century, but did not see the outflowing population replaced. In contrast, cities in Eastern New York witnessed increases in Latinx populations that made up for such losses, particularly between 2000 and 2010 (Smith et al., 2013).

SYSTEMIC CHANGE AT LOWER LEVELS

The convergence of Buffalo and Rochester was fed largely by a complex of forces that deprived Buffalo of its earlier first-order status. The city was no longer an important port city, the manufacturing base suffered, and other nationwide trends such as corporate concentration had mixed results for the city itself. As natural population increase slowed, there were not enough "pull factors" to attract enough recent immigrants to the city to replace the continual outflow of population that accelerated due to new expressways and

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

redlining after World War II. The deceleration in population contributed to economic difficulties: population growth is half of economic growth (Piketty, 2014). Rochester held on longer due to a high-technology economy, and even in its slowest periods has retained its natural increase population. The nature of complex systems is that they are forever in a state of flux, and Buffalo and Rochester are an example of this flux. In other locations and varying time periods throughout the New York urban-rural system, the relationships between communities and as nodes in the wider network changed over time. We can see this change in Otsego County between 1870 and 1920 when the upstart small city of Oneonta overtook Cooperstown as the third-order center for the region south of the Mohawk Valley.

In 1870, Cooperstown was thriving, and the future looked bright. There is no census data available for the village that year, but the village grew from 1,597 in 1860 to 2,199 in 1880, so it seems safe to assume that the village was growing in 1870. The hinterland was teeming with the sounds of prosperous farms, water-powered cotton and woolen mills, and a budding tourism industry catering to an urban elite entranced with James Fenimore Cooper's writings. The village featured stately homes and the county seat, and just a year earlier, the Cooperstown and Susquehanna Railroad ran the first train from its junction with the Albany and Susquehanna at Cooperstown Junction. It seemed just a matter of time before the line extended northward to Fort Plain, its Erie Canal port. The railroad also planned an extension through the Catskills to meet the West Shore Railroad near the Hudson.

In 1870, Oneonta, 20 miles south of Cooperstown, was a booming though tiny upstart. The village had just recently incorporated with a population of 1,061. Located midway between Schenectady and Binghamton, the village had to its immediate west an ideal location for a railyard, and so in 1865, the Albany and Susquehanna railroad arrived in town. The railroad spurred Oneonta's growth, tripling in population by the 1880 census and doubling again—to 6,272—by 1890. Prior to the arrival of the Albany and Susquehanna, Oneonta had been a non-descript fourth-order center. A millrace on the village's east powered a sawmill and other local industries, but nothing on the order of the market-oriented textile mills in Cooperstown's hinterlands. However, by 1920, despite continual growth in Cooperstown, Oneonta was the third-order center for the region south of the Mohawk Valley and Cooperstown was a prosperous fourth-order center. The switch is evidence that even when both communities grow, a systemic change can nonetheless occur. In this case, the growth of Oneonta increased the depth of the urban-rural system, with Oneonta assuming the third-order function, Cooperstown and some other villages performing fourth-order functions, and some smaller villages in the region that had failed to keep pace even with Cooperstown's growth and became fifth-order centers (Fulkerson & Thomas, 2021).

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

As mentioned in chapter 10, Cooperstown's founder William Cooper had imagined the village as a great city, favorably comparing the source of the Susquehanna with the mouth of the Buffalo River and the fording spot in the Mohawk that became Utica. The building of the Erie Canal doomed whatever fantasies Cooper might have had at the time, and the Mohawk Valley railroad connections did further damage as they arrived thirty years before Cooperstown's railroad. Of course, this was not so apparent in 1825. On the day of the canal's opening, the celebration in Cooperstown brought hope to Cooper's dream of his village being a gateway to the west. Birdsall (1917) relates:

> The hopes which gave importance to this celebration are expressed in two of the toasts proposed, one by Henry Phinney, "The contemplated Susquehanna River Canal"; the other by Elisha Foote, "A speedy union of the pure waters of Otsego Lake with the Erie Canal." (61)

The opening of the Chenango Canal between Utica and Binghamton in 1834 should have ended this dream as well, but one senses in the words of Birdsall that at least some in the village continued to hope for their own canal, the author concluding, "It is almost needless to say that the development of railway transportation put an end to this project for a canal" (62). No canal, and the railroad would not live up to expectations.

At the time of the building of the Cooperstown and Susquehanna, the emerging city of Oneonta was not on the radar of the Cooperstown elite. The line would meet the Albany and Susquehanna at Cooperstown Junction and, in later plans, head directly into the mountains with no need to traverse the extra 7 miles into tiny Oneonta. Ten years later, Oneonta was more populous than Cooperstown and increasingly the community with institutions that integrated the small city and region to the wider political economy. Cooperstown would remain the county seat, but in Oneonta, the growing population enabled new transit functions that Cooperstown's small market could ill afford. In addition to retail and manufacturing powered by coal arriving via the rail lines, there was state investment. In 1889, the Oneonta Normal School was built, a training facility for teachers that evolved into the State University of New York College at Oneonta decades later. In 1900, the New York, Kingston, and Syracuse railroad completed a link between the Hudson to Oneonta. In 1888, Oneonta got its first electricity-power trolley line, and it was by 1902 extended beyond the city limits to Hartwick, Cooperstown, Richfield Springs, and eventually Mohawk on the Mohawk River 40 miles north. The completion of the Southern New York Railway connected each of the communities to an electric rail network that stretched from Oneonta and Little Falls in the east, through Utica and Syracuse, to the western suburbs

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

of Rochester hundreds of miles away. The region became more integrated with the wider urban economy, but it was Oneonta that was the hub south of the Mohawk and on the northern edge of the Catskills—not Cooperstown. In 1916, a new requirement for a third-order center, a daily newspaper, was launched in Oneonta, and the city rapidly assumed the role of the region's major news outlet. This shift was driven by the surge in population after the rail lines arrived, but the new transit functions, news outlets, and business enterprises also fed the growth.

In contrast, Cooperstown lost the last of its textile mills, the Phoenix Mills a mile south of the village, in 1914. The village had largely failed to keep pace with the growth in Oneonta despite continual growth, but the tourism economy and the notoriety of Cooper's writings promoted a vibrant summer season for the wealthy. The arrival of the railroad was followed by a spurt of development between the new depot and Otsego Lake, large "cottages" in a variety of architectural styles, along with hotels catering to the elite. The crowning achievement was the opening of the Otesaga Hotel in 1909, built by the Clark enterprises as one of several tourist-oriented attractions. The Clarks, over the course of the twentieth century, shaped the village to be an ever-magical tourism destination. Across from the Otesaga, German-inspired Kingfisher Tower graced the lake's eastern shore below a clearing in the forest known as Star Field. In the countryside, the decaying remains of old textile mills were purchased and their field stones reused in a number of stately buildings throughout the region, including the Cooperstown Village Hall, the Clark Gymnasium (now part of the Baseball Hall of Fame), and Bassett Hospital. The move simultaneously added to the architectural graces of the village while expunging the country of industrial decay—only one of the old mill buildings, in Index, survives today. The elite preference for pastoralism was evident in the village and surrounding countryside, with Upper-Class families buying any number of farms to be summer homes; the Clarks alone would control much of the lake's eastern shoreline, preserving its natural beauty from further development. By the 1920s, the aura of two communities had diverged: Oneonta, incorporated as a city in 1908, was larger, industrial, and simply more in keeping with urbanormative expectations, whereas Cooperstown remained pastoral and effete. When, during the 1920s, Hartwick Seminary entertained proposals from both communities to build a "college department," the board of directors chose the site in Oneonta.

RESTRUCTURING EAST-CENTRAL NEW YORK I

By 1920, the Mohawk-Susquehanna region had developed a six-tier urban-rural system in New York City's shadows. Utica was the region's second-order

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

center, home to the largest population, the largest and most vibrant manufacturing capacity, and a cityscape of towering office buildings, stately homes, and an Olmstead-designed park system. Its outer suburbs of Herkimer and Rome functioned as third-order centers for the regions immediately east and west, and to the south, Oneonta had assumed the mantle of the third-order center for the Upper Susquehanna. As the larger New York urban-rural system expanded, the population increased and the economic structure became more complex, and this intensified the integration of the systems overall. The mechanism for doing so is the Integrative Institution, just as it had been in the past, but during the nineteenth and twentieth centuries, the number and function of these institutions expanded dramatically.

An integrative institution may be understood "as a community institution that functions to integrate the community with the larger urban culture and economy" (Thomas, 2003, 45). It is a feature of any urban-rural system, the specific mechanism for conveying knowledge or materials from one place in the system to another. Each institution conducts its own transit functions, and these vary from one to another. For example, an airport often conveys both people and freight, and typically is an institution found in second-order centers; in a first-order center such as New York, these transit functions are typically quite international in scope. A daily newspaper is typically found in third-order centers, whereas fourth-order centers most often have weekly papers. Specific forms of retail are found at varying levels, with higher-end department stores found in second-order centers and grocery stores found in fourth-order centers. This can vary with prestige as well, and third-order centers typically sell automobiles, but high prestige automobiles can only be found in second-order centers. In higher-order centers, the city's home market is augmented by that of the surrounding countryside to enable the higher-priced item an outlet. As the U.S. economy grew dramatically during the twentieth century, it is not surprising that the density of integrative institutions and their transit functions grew as well, particularly with retail sales. As retail grew more critical, this further spurred manufacturing in a virtuous cycle—an economically driven escalating dynamic. This dynamic fed the early twentieth-century growth in Buffalo and Rochester, and in Utica as well (Fulkerson & Thomas, 2021).

Industrial cycles have a familiar rhythm. The industry expands rapidly when new, driven by extraordinary profits. Over time, new competition enters the field and gradually lowers profit margins, exacerbating conflicts over remuneration and working conditions. As profit margins decrease, redoubled efforts to save money ensue, driving further mechanization and, since the twentieth century, seeking new locales with lower labor costs, worker safety, and environmental regulations. As one of the first cities in the United States to industrialize, it should come as no surprise that Utica was at the forefront of deindustrialization as well.

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

At the beginning of World War I, Utica was home to two of the world's largest textile producers (Przybycien & Romanelli, 1977). The city's mills had produced uniforms for the Union Army during the Civil War, new styles of weaves in long underwear, and was famous for "Utica Sheets" produced by the Utica and Mohawk Cotton Mills. By 1919, "two-thirds of Utica's gainfully employed were working in clothing and textile factories" (Bean, 1994, 216). The prosperity would not last. In such cities as Greenville and Spartanburg, South Carolina, mills could be built outside city limits to lower tax burdens, with lower labor costs and "right-to-work" laws that limited labor's ability to unionize, northern firms had found a low-wage alternative. As Sheehan (1949) summarized:

> At the time of the First World War the city of Utica was one of the richest per capita in the U. S. [But] after the war the tide turned sharply. . .the trek of the textile mills out of Utica to the south began. By 1924 there were only six (of 22 in 1910) working mills in Utica, and some $15 million of capital was tied up in idle properties. (170)

Utica's political leaders needed to act.

In New York City, the Tammany Hall political machine had its roots in late eighteenth-century politics, but its infamy and power grew rapidly after 1850. Fueled by explosive growth in the Irish immigrant population, Tammany Hall politicians courted their vote through a combination of activism, social programs, and jobs programs fed by an expanding police and fire protection apparatus (Allen, 1993). The political organization in the region's largest city was found at lower scales as well. As early as the 1860s, Utica's politicos courted the Irish vote, and by the 1880s, the Wheeler Machine controlled the nominating committees of both political parties (Bean, 1994). As in other upstate cities, machine politics would be a fact of life well into the twentieth century, and by the 1920s, the local machine was run by Rufus Elefante. The machine networked the combined efforts of political leaders, labor leaders, and the business community:

> Dues from Teamster members paid for a considerable amount of the generosity the machine was able to bestow on its friends. All in all, the machine probably took in far more money than it needed to spend in election campaigns. When the Democrats controlled City Hall (virtually the entire 1950s), city employees were required to kick back to the party 4 percent of their salaries each election year. In off years they only had to pay 2 percent. But those kickbacks alone, allies of the machine agree, were sufficient to pay the campaign expenses. Union money and all other sources of machine income were more or less available for Elefante to dole out as he saw fit. (Ehrenhalt, 1992, 109)

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

The machine politics of the era smoothed to a degree conflicts between the business community and labor. A number of Utica's business leaders were involved in Democratic Party politics, a smart move in 1920s and 1930s New York. Franklin Delano Roosevelt had developed a soft spot for Utica when, after a string of lackluster campaign stops, Elefante and Democratic leader Charles Donnelly met the 1928 candidate for governor at Union Station and whisked him away to Utica's Little Italy section for a campaign rally. Elefante commented in 1986 that Roosevelt was "so highly elated and he was so pleased after all the other meetings were flops. He took a liking to me and Charlie Donnelly . . . [and we would] go and visit the governor and ask for political favors, which we got" (Utica *Observer-Dispatch*, 28 Sept. 1986, 8A). After Roosevelt was elected President in 1932, the machine turned to the administration for help getting Utica through the Great Depression:

> The WPA employed nearly five thousand people in Utica alone for such jobs as building new sidewalks and demolishing dilapidated buildings. In addition, the federal government backed loans that allowed Utica to buy its then-private water company. In hindsight, the government was controlled by a political machine, but at the time it was simply the way politics was conducted. Simply stated, the machine worked for Utica. (Thomas, 2003, 37)

It was not just workers who benefited from these connections.

As the 1930s wore on, the business community came to terms with working with the machine for their common interests. If there was an agreed-upon goal, it was that of any urban growth machine: continual growth (Logan & Molotch, 1987). The coalition of politicos, labor, and business won the praises of the national press after World War II, with *Fortune* magazine even praising the new "spirit in town, a kind of wave of good feeling that has swept groups that were once dangerously dissident in Utica somewhat closer together—the haves and have-nots, the native and the foreign-born, and especially management and labor" (*Fortune*, 1949). Utica and the surrounding region would need this composure as the textile industry experienced its final lurch after the end of World War II.

Even with the restructuring of the textile industry during the 1920s, "it was still the leading industry as late as 1947" (Crisafulli, 1960, 179). Utica and its suburbs still contained over 12,000 textile workers, nearly a quarter of the metropolitan area's non-agricultural employment. The majority were in the city itself, although the eastern suburbs of Herkimer and Mohawk, in particular, had large mills, and the historic New York Mills west of the city, now owned by Julliard, continued to operate. However, the industry now looked fully to the non-unionized south made more comfortable by the invention of

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

air conditioning by Carrier Corporation in neighboring Syracuse. The end of the war brought opportunities to finally break free of the unions and northern taxes, and company after company, each pressured by intense pressure on profit margins, chose to leave upstate New York (Bean, 1991). As Thomas (2003) noted:

> The metropolitan area lost 8,800 textile jobs alone. Hardest hit were the textile mill workers, who plummeted from 9,700 jobs in 1947 to 1,700 jobs in 1957. As a total share of manufacturing jobs, the textile industry dropped from almost 24 percent in 1947 to just over seven percent ten years later. As a result, Utica had one of the highest unemployment rates in New York State for years after the layoffs and would not have an unemployment rate below the state average until the 1990s. Local leaders at the time recognized the need to reinvigorate the economy. (39–40; see also figure 12.2)

The period between 1945 and 1960 is known to local historians as the "loom to boom" years. Although the city's textile workforce was hard hit, those who managed to retrain could find employment in emerging sectors of the economy. During this time, the national economy boomed, which enabled Utica to weather the restructuring reasonably well. Public policy enabled the growth of Mohawk Valley Community College, and eventually, SUNY Polytechnic Institute. Syracuse University also opened a branch campus, now Utica College. The efficiency of the growth machine enabled new investment in the region, often in the suburbs, as well as the conversion of textile mills into new industries. The transition was not complete as low-skilled workers nevertheless found themselves unemployed, but the transformation was

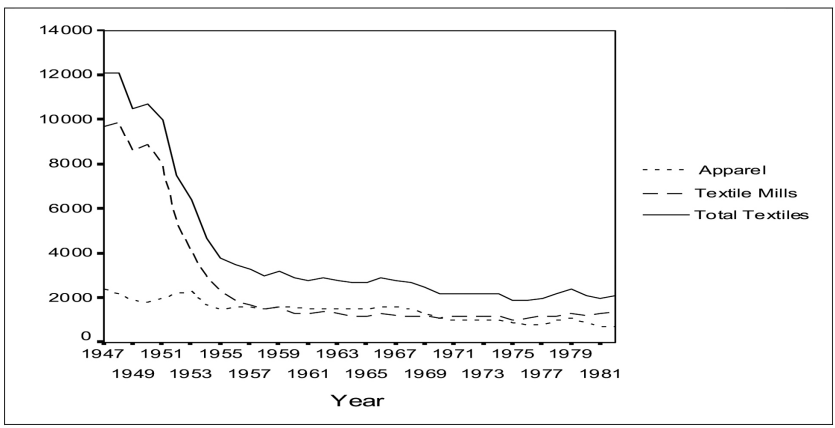


Figure 12.2 Utica Textile Industry Employment, 1947-1982. Source: US Bureau of Labor Statistics, 1984. Created by author.

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

considered something of a success for the middle class and the local business community.

A glance at table 12.2 shows the fundamental dynamics of the mismatch. By the end of the 1950s, fourteen major facilities in the city and older suburbs closed or moved operations elsewhere. Of these, ten were in textiles, and if one counts Foster Brothers Mattresses, eleven. The Utica Knitting Company alone closed three facilities. One major plant that was not involved in textiles was Savage Arms, the manufacturer of the Thompson Submachine Gun, who employed nearly 8,000 workers. Due to an overall healthy national economy, these facilities were mostly replaced by more "modern" firms. Of the twelve new firms, only Cosmos Footwear is representative of the "old" economy. The "new" economy was based on aerospace and electronics, including the four Kelsey-Hayes plants, two General Electric plants, and Bendix Aviation. One of the "new" firms was actually not so new, and it inhabited the former Savage Arms facility.

Remington Rand had its roots in a foundry built by Eliphalet Remington in 1810 in the hills south of the Mohawk River. Remington began supplying

Table 12.2 Utica's Loom to Boom Period, 1945–1960

Companies Lost:		***Companies Gained:***	
Name of Company	Primary Products	Name of Company	Primary Products
Eastern Footwear	Slippers, Shoes	Sperry Rand Corp.	Museum Cases, Computers
Melrose Slipper Co., Inc.	Ladies' Slippers & Shoes	Cosmos Footwear Corp.	Women's Shoes
Joseph S. Feiss Co., Inc.	Men's Clothing	Kelsey-Hayes Co. (4 facilities)	Jet Turbine Blades & Buckets
Foster Brothers Mfg. Co.	Beds, Springs, Mattresses	Chicago Pneumatic Tool Co.	Electric & Hydraulic Tools
Brunner Mfg. Co.	Air Compressors, Refrigeration	General Electric Co. (2 facilities)	Radios, Military Electronics
Savage Arms Corp.	Firearms	Bendix Aviation Corp.	Aircraft & Engine Accessories
American Woolen Co., Inc.	Woolen Fabrics	Lily White Sales Co., Inc.	Surgical Dressings
Oneita Knitting Mills	Knit Underwear	Mele Mfg. Co., Inc.	Jewelry Boxes, Sewing Accessories
Utica Knitting Co. (3 facilities)	Knit Underwear, Yarns, Outerwear		
Utica & Mohawk Cotton Mills	Cotton & Wool Fabrics		
Moses-Cronk Co., Inc.	Grinding & Mixing Feed		
The Oneida Bleachery Inc.	Sheets and Pillowcases		

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

rifled barrels throughout the region, a business that exploded after the 1825 opening of the Erie Canal. In 1828, he moved his factory to a complex on the south shore of the canal in a village that would soon be known as Ilion. During the 1850s, the business expanded to produce agricultural implements and then sewing machines in 1870. In 1873, the company began manufacturing typewriters, the first of their kind, introducing the QWERTY keyboard. The model 2, in 1878, introduced a shift key to allow for both upper- and lower-case letters, and the success of both the keyboard layout and the company was assured. Remington would grow to employ thousands at its Ilion plant, 6 miles east of Utica, and was well-positioned to take over the former Savage Arms plant in 1950.

Over time, Remington Arms sold its stake in Remington Typewriter, and a series of mergers and acquisitions during the early twentieth century resulted eventually in Remington merging with Rand Kardex in 1927 and becoming Remington Rand. The new firm saw a future in a new machine called the ENIAC and purchased the firm of its creators: the Eckert-Mauchly Computer Corporation. Remington Rand, and its successor Sperry-Rand after another merger in 1955, continued to produce the Univac File Computer in the former Savage Arms facility. In 1964, Sperry Rand announced plans to cut its Utica-area workforce in half. The Kingston Daily Freeman reported at the time, "the division employed about 4,150 production workers at Utica and Ilion when the layoffs began" (25 Feb. 1964, 5). About a 1,000 employees were at Ilion, meaning that the Savage Arms facility designed for 8,000 workers was home to less than half that number. Even if a skills mismatch between the "old" economy and the "new" had not been evident, factories with smaller workforces could not ease the plight of Utica's working class. By 1960, metropolitan Utica was, like Seattle, home to facilities in aerospace, electronics, and computers, but not for long.

The mergers involving the various descendants of Remington followed a familiar pattern: over time, even when the local production facilities survived, they were controlled by out of town interests. As in Buffalo, the control of local resources by firms located elsewhere, most often in New York City, led to an enhanced interest in profits and less interest in the local community. This was evident as early as 1907 In New York Mills when the Walcott & Campbell Company, the mills' local owners, sold to New York–based Julliard Corporation. Strict Christians, the firm had throughout the nineteenth century infused a community ethic in the village. Many of the homes were company-owned, and workers received a small stipend for upkeep on the homes. Of course, this beneficence was accompanied by curfews and prohibitions on alcohol. However, Julliard cared little about the morality of its largely Polish immigrant workforce but did care for its profit margins. Wages were frozen, but it was the elimination of the stipend for upkeep that amounted to a pay

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

cut for many workers. In a series of strikes between 1912 and 1916, Julliard resorted to using African Americans as scabs against the Polish immigrant laborers until the strikes were settled, at which point the Poles replaced African Americans on the factory floor (Pula & Dziedzic, 1991). In 1937, Remington Rand utilized a new set of tactics against strikers in Utica, one stressing propaganda and attempts to discredit union leaders; a system sometimes called the Mohawk Valley formula (Chomsky & Barsamian, 2015). By the 1960s, both of these firms had pursued their interests throughout the world—in effect broadening the hinterland to a global scale. In essence, Utica had transitioned into a "blue-collar city"; when one of its out-of-town taskmasters sought to build a conservatory, the Juilliard School used the profits borne of upstate laborers to build the New York City landmark.

In the ancient world, the slowing of growth was an impetus to expand the frontier—leading inexorably to continental Goliaths such as the Roman Empire, the Persian Empire, and the Han Dynasty. The caloric well demands a widening of the resource horizon, or the system, dependent on continual expansion, will suffer a loss of complexity. In a capitalist society, the slowing of growth due to industrial cycles or simply a slowing of market growth similarly creates a pressure to expand, but it is manifest as crises in profitability that invoke a mad search of new markets, lower manufacturing costs through lower labor costs or mechanization, or the buyout of competing firms (to eliminate competition) or firms in new markets (to diversify its product line). The advantage over older forms of plunder is twofold: it is legitimated through law and urbanormative institutions, and it requires less overt violence, which, of course, is less costly than actual force. The effect for the community plundered of its economic resources is the same: loss of control of the resource, and often the loss of the resource itself.

The corporate concentration that cost Buffalo its steel industry affected other cities as well, and it spanned across any number of industries. The plunder was fueled by high finance in the first-order centers, New York first among them. Just as Utica lost local control of such companies as the New York Mills and Remington Rand to New York interests, this was found in finance as well. Since the early nineteenth century, Utica had developed a substantial banking industry, fueled in large part by the textile industry and its investors. Many banks had early roots, such as Savings Bank of Utica, initially chartered in 1821, and as noted earlier, owned by Buffalo-based M&T Bank. One such bank was Oneida National Bank, founded in 1836.

Oneida National served the public largely through its sole location in downtown Utica for nearly a century, but after World War II began an aggressive expansion. Utica had been growing suburbs for decades, but the proliferation of government-subsidized homes in suburban towns created an opportunity for commercial real estate developers as well. Shopping centers

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

spread throughout the region, and one mainstay was a local bank. In many such locations, that bank was Oneida National. The branches were typically full-service banks, although major decisions such as mortgages were often reserved for the downtown offices. Seeing increased profits from their suburban locales, Oneida National began buying smaller banks in nearby rural towns, such as the Little Falls National Bank, 20 miles east of Utica. This trend continued throughout the 1960s and 1970s, and Utica benefited from the expansion: by 1980, Oneida National had grown to thirty-four branches across seven counties. The bank had built a new headquarters downtown, and it employed a sizable number of employees who operated call centers and passed judgment on loan applications. This pattern had been found earlier as well: Utica benefited from corporate concentration in the textile industry in the late nineteenth century as Utica-based firms bought textile mills in the Cooperstown area, for example, merging them into their own operations and eventually closing the Cooperstown facilities (Bohls, 1994). As in textiles, so in banking: Albany-based Norstar, another regional bank, bought Oneida National in 1981. In doing so, much of the high-level administrative work, with their paychecks, went to the Albany area, but not for too long:

> Within ten years, Norstar was acquired by Boston-based Fleet Bank. During the 1990s, Fleet also merged with Shawmut Bank and later with BankBoston (itself the product of a merger between BayBank and Bank of Boston) to become FleetBoston. In 2000, FleetBoston was the eighth largest financial holdings company in the United States. (Thomas, 2003, 90)

In 2005, FleetBoston became part of Bank of America, headquartered in Charlotte, North Carolina, but maintained backoffice operations in a suburban location north of Utica. The new headquarters built by Oneida National during its heyday: after sitting vacant for a number of years, developers received an $800,000 grant to turn "the five-story building include a 'competitively priced' restaurant and bar in what was once the bank lobby" (Utica Observer Dispatch, Jan. 23, 2019).

Like most other cities, Utica was heavily subject to trends in the national and international economy, based heavily on the interests of elites living in first-order centers and the policy whims of the federal and state government. Once again, the city both benefited and was harmed by such ventures. For example, the coziness of the city's machine politicians with the Roosevelt Administration during the Great Depression won money for slum clearance and urban renewal projects. As early as the 1930s, a large portion of the Triangle Neighborhood west of historic Bagg's Square was demolished and redeveloped into the Washington Courts housing projects. The neighborhood being replaced had aged markedly since its heyday in the early nineteenth century,

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

and city leaders believed that clearing the area and building from scratch was the best idea. Urban planning ideas that were current at the time stressed a need for open space, however, and the design of Washington Courts is a familiar one for similar projects across America: numerous multistory brick structures organized around courtyards that over the years became poorly maintained. Washington Courts was eventually demolished during the early 2000s. Similar urban redevelopment projects proliferated around downtown after World War II, and although well-intentioned, the designs and actual implementation did more damage than good to the city (for a discussion, see Thomas, 2003, 74–79).

The result of the restructuring of the economy, urban renewal, the building of new expressways into growing suburbs, and an enigmatic political scandal during the late 1950s that brought Utica national attention, was a sharp contraction in the metropolitan area's independence and economic vitality. Utica did not just lose population in the city and fail to replace the outflow with new migrants, as was the case in Rochester, but like Buffalo, the metropolitan area as a whole lost population, particularly during the 1970s and the 1990s. The metropolitan area's official population peaked in the 1970 census at over 340,000 residents and then fell to less than 300,000 by 2000. This effect is seen in the population-related municipalities as well.

Similar to other major cities along the Erie Canal, Utica lost population. In the wake of the industrial decline and restructuring due to the opening of Saint Lawrence Seaway, Buffalo lost 49.6 percent of its population between 1950 and 2000, from 580,132 to 292,648. In contrast, Rochester and Syracuse both lost about a third of their populations during the same period, Rochester falling from 332,488 to 219,773 and Syracuse from 220,583 to 146,070. Utica lost 40.4 percent of its population during the same period, dropping to 60,523 in 2000 before gaining slightly to 62,235 as other Eastern New York cities did. This was primarily due to an increase in immigration. Local lore often points to a particularly effective refugee center, and this has been responsible for large numbers of migrants from Bosnia, Somalia, and Vietnam. Many of the migrants, however, are recent Latinx immigrants to New York City who found their way upstate—a pattern found in Schenectady, Albany, and other upstate centers as well (Smith et al., 2013). Even during the most dramatic losses during the twentieth century, however, population continued to spread to the exurbs.

The impact of Utica's economic restructuring is only partially measured by examining population trends. As shown in table 12.3, an actual loss of population required significant outflow of population—and scenarios that might have seemed likely in 1950 all show upswings in population (figure 12.3). In alternative scenario 1, one in which the metropolitan area PRMs experienced similar trends into the future as the 1930–1960 period exhibited, resulting in an annualized growth rate of 0.87 percent every year. This would have resulted in a significantly higher population, 511,372 in 2010, compared to the actual

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

Table 12.3 Population of Utica PRMs by Type of Community, 1950–2010

	1950	*1980*	*2010*
Utica Region PRMs	292,454	322,177	300,566
Cities	166,315	139,254	115,370
Utica	101,531	75,632	62,235
Rome	41,682	43,826	33,725
Suburbs	85,123	126,431	126,618
Exurbs	25,373	33,938	35,745
Shared Suburbs	13,693	20,574	20,823



Figure 12.3 Population of Utica PRMs in Three Projected Scenarios and Actual Data, 1920-2010. Source: Thomas 2014c. Created by author.

298,556. A second scenario in which the Utica PRMs had simply mirrored the growth (and decline) of the population in New York State overall also results in a higher figure of 389,445—a reflection of the population swings experienced statewide over the period. The third scenario projects growth rates that mirror national trends and would have resulted in the highest population: 580,429 in 2010. The discrepancy between the actual population and any of these alternative scenarios is the real population cost to Greater Utica of deindustrialization.

RESTRUCTURING EAST-CENTRAL NEW YORK II

As Utica was suffering the horrors of deindustrialization and the demographic decline, it was increasingly falling behind other metropolitan areas not

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

enduring the same social and economic dynamics. Social science research has often examined such trends from the standpoint of cities, particularly central cities, but we see the basic dynamics as occurring throughout the urban-rural system: as the concentration of firms and civic institutions becomes more likely due to transportation, communications technologies, and cultural expectations become more common, the minimum population necessary to support integrative institutions increases. This is particularly true in retail, but even possible in that most basic of integrative institutions, the post office. This is upscaling:

> Such changes in scale of business firms thus also affect the communities in which production takes place, and the whole process can be called upscaling. Upscaling involves an emphasis on larger economies of scale for investment, and thus gives bigger cities an infrastructure capable of out-competing smaller metropolitan areas, which typically receive such investments last if at all. There are also cultural ramifications, as the minimum market size required to have modern institutions (e.g., shopping malls, media outlets, dance clubs) becomes increasingly larger. As such institutions are accepted as "necessary" in everyday life, smaller communities come to be seen as cultural backwaters as only the largest cities are capable of competing against the increasingly small number of cities that can support such institutions. (Thomas, 2003, 8)

Upscaling is perhaps most evident in the rural areas surrounding metropolitan areas, and the hinterlands south of Utica are no exception.

Sixth-Order Centers

Historically, there has perhaps been no more utilitarian integrative institution than a post office. Today, they are most often considered for their transit functions, but the lobby of any post office continues to demonstrate their communicative functions as well. Government notices, most wanted lists, job postings, and often a panoply of local posters for county fairs and perhaps willing babysitters: long before the internet, the post office was not only an institution for transporting letters and packages, but for information as well. They are found seemingly everywhere, and we use them as a measure of mapping sixth-order centers. They are a more reliable measure than a convenience store or gas station due to their tendency to serve a local community rather than the driving public, and as they as less ubiquitous than religious organizations, problematic as they are due to the differing levels of extra-community organization found across dominations. A post office has historically been found in settlements with at least some population.

We noted in chapter 10 that Cooperstown by 1900 had developed a textile industry in satellite mill villages in the hinterlands. These varied in size

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

with the number and scale of factories, and the larger mill villages were granted post offices during the nineteenth century. As the third-order center south of the Mohawk Valley until being overtaken by Oneonta after 1870, Cooperstown not surprisingly was given a post office early: it was the second in the county, opening six months after the 1794 opening of the one in Cherry Valley. These early post offices reflect an attempt to communicate with the frontier: the third post office in the county was in Morris, 25 miles southwest. By the early and mid-nineteenth century, the (now) sixth-order centers received post offices in order to facilitate communication and business activity in the home community. The earliest of the additions was in Oaksville, where a post office was established in 1814 only to close a year later, and then reestablished in 1822: Oaksville was on the Western Turnpike and home a textile mill. In 1828, Hartwick Seminary was given a post office, mainly to serve the new seminary, after which the community derives its name. In 1850, one opened in Toddsville, home to a cotton mill and a paper mill, and a year later, another in Fly Creek a mile east of Oaksville but gaining in importance. The last of the new post offices was in Index, home to a cotton mill, which operated between 1902 and 1915. In each of these cases, a post office was typically a section built into a general store (U.S. Postal Service, 2020). We learn some of the contours of upscaling by the pattern of their closure.

The 1915 closing of the Index post office was a straight-forward decision. Located less than 2 miles south of Cooperstown on a trolley line, the textile mills' closure simply meant that there was less business for the post office. In 1918, for precisely the same reasons, the post office in Toddsville closed as well. Located on the Western Turnpike, the post office in Oaksville held on until 1942, long after its cotton mill had closed. The first wave of post office closures was thus a consequence of rural deindustrialization and the organization's ability to centralize operations in larger villages, specifically Cooperstown and Fly Creek, both of which continue to operate post offices. The post office in Hartwick Seminary held on long after the loss of the seminary due to the accumulation of a population base that increased mainly through the placement of mobile home parks in and around the hamlet. Nevertheless, the post office closed in 1994. Other sixth-order centers still, of course, have post offices, such as Fly Creek noted above as well as Mount Vision, in the hinterlands of Oneonta, discussed earlier.

Fifth-Order Centers

As in the sixth-order centers, we would anticipate that fifth-order centers similarly lose integrative institutions due to economic restructuring and ease of centralization in a larger center. Unlike sixth-order centers, a fifth-order center has historically performed significant central place functions,

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

including general retail transit functions oriented toward villagers and those in the hinterland. Until the mid-twentieth century, many such villages were home to weekly newspapers, a communicative function that today seems centered in fourth-order centers (Fulkerson & Thomas, 2021). We discuss Hartwick as an example of a restructured fifth-order center.

In the Susquehanna and Oaks Creek valleys, the eastern zone of the town of Hartwick had developed as a series of satellites of Cooperstown. Both Index and Toddsville, New England-style mill villages, straddled the town line between Hartwick and Otsego, of which Cooperstown is a part. Further south was located Hyde Park, Hartwick Seminary, and another mill village, Clintonville. To the west of these sixth-order centers was an imposing ridge-line that separated the Susquehanna Valley in the east from the Otego Creek Valley in the west, and it was there that the small village of Hartwick grew. Although the village was home to the town government, there had been a divide between the eastern and western portions of the township from its earliest settlement. Hartwick grew not as a satellite of Cooperstown but instead as an independent community with its own religious, retail, and industrial institutions. And, of course, a post office. Even so, Hartwick registered a population of 629 in 2010 and likely never was home to a 1,000 residents at its peak. Nevertheless, the geographic isolation from Cooperstown 7 miles away and its own hinterland in the Otego Valley helped Hartwick develop. Home to three Protestant churches today, the village once had four: the now-defunct Presbyterian, a Methodist, non-denominational Christian, and a Baptist Church that today proudly exclaims on a historical marker that it was the first organized church in the township (and not the Lutheran in Hartwick Seminary).

Throughout the nineteenth century, Hartwick played a role similar to other villages its size. Its central place functions included a small business district in the center of town and, eventually, the creation of a High School. The village was primarily a farming town. Except for a cotton oil factory just south of the village, the industrial activity was primarily services for the local community and thus had few transit functions: a grist mill, a lumber mill, a blacksmith, a dairy. The primary export trade was thus in agricultural wares for cash, with the distribution of urban products in the village's downtown stores. Throughout the nineteenth century, export seemingly grew, with the area caught up in the dairy zone around Utica and the growth of a cheese industry. By the late nineteenth century, many farmers grew and exported hops, also to Utica and the larger market available through canal and rail transport—this brought in more cash but also subjected local farmers to capitalist cycles of boom and bust. Even with such trade, Hartwick never grew as wealthy as Cooperstown, benefiting from its own role as the county seat and a burgeoning tourism economy based on Otsego Lake and James

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

Fenimore Cooper's writings. A visitor to Hartwick in 1882 described the village as having streets that were "poorly paved" (Weeks, 1981, 39), and in the 1880s, a description of the village cemetery noted it was in danger of being a "disgrace to the village" (Potter, 2002, 386). Nevertheless, throughout the nineteenth and the early twentieth centuries, the villagers sought to develop for their village the same infrastructure found in urban areas: a well-maintained downtown with concrete sidewalks, a quality public school system, and a water system. The village approximated other villages of similar size throughout the region.

It was the cemetery design, spurred by the creation of the Hartwick Cemetery Association in 1894, that was perhaps the high point of the village's development to date. Inspired by the City Beautiful and Rural Cemetery Movements found in communities large and small throughout the United States, Hartwick sought to expand its small burial ground in a park-like setting befitting an important village. A village resident involved in its creation noted in the 1880s, "If the effort is successful, steps will be taken at once to construct a vault, enlarge the grounds, and care for the lots that have been so long neglected" (Potter, 2002, 386). The result was an enlarged burial ground with landscaped lawns and roadways. At the north end, the by and large level landscape was artificially lowered about 8 feet by creating a series of semicircular terraces that focused their attention, as if an amphitheater, on a vault faced with fieldstone and covered with sod. The extensive effort required to dig, by hand, a semi-circle of approximately 112 feet by 170 feet was a costly act of community pride. Thomas (2012) notes:

> When understood in conjunction to other projects of the time, including the new sidewalks and water system, it is clear that villagers of the time perceived Hartwick as a community that deserved what other villages also desired. This reflected a cultural tradition that dated to the early settlement of the village: villages were understood as small cities, and Hartwick was not different. As any proper city has a water system and a landscaped cemetery, Hartwickians deserved the same. This tradition was encoded in the physical structure—the character—of the settlement space and continues to this day. (51)

It was perhaps the last time Hartwick kept up with contemporary cultural demands of what a "proper" community should have.

In stark contrast, the construction of the new high school a few decades later shows how the village was in the process of being restructured. In 1898, the Hartwick School Board established a "Union School and Academy," today known as a high school (Hornbeck, 2002). The impetus was primarily cultural: the township lost nearly a third of its population between 1880 and 1920, and this was primarily due to a falling birth rate and emigration, particularly to

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

the region's cities. The first building in 1898 was a two-story Victorian-style building, but it soon proved too small to accommodate the demands of a state-regulated high school. In 1915, the school board developed plans for a new building at the end of a side street. The building would be two and a half stories, the basement also containing classrooms, with a modern cafeteria and gymnasium. In truth, a similar design to nearly every other such school found in the local region, including the one in nearby Cooperstown. The proposal went to the voters who rejected the plan by a vote of 153 "for" to 177 "against." Unlike most villages of its size, Hartwick already had a gymnasium built by the electric railway headquartered in the village, and so the obvious choice to cut the cost of the project was that. In 1920, voters approved a plan to build the new school with a cafeteria, but no gymnasium—students would walk to the other end of the street to the previously built gymnasium.

Hartwick received a new school in the 1920s, and so it is not fair to say that the village was in a state of "decline" as typically understood. The decline was relative, not absolute: the school simply did not live up to the standards of those found in other similar villages, and certainly not to the larger Cooperstown. The period between the 1920s and the 1950s in Hartwick did not otherwise seem altogether different than for other communities: Hartwick struggled through the Great Depression of the 1930s, rallied the troops during World War II in the 1940s, and even experienced a slight increase in population in the 1950 census—its own version of the post-war baby boom. Even so, the town population "bottomed out" in the 1960 census at only 1,400 residents, and nobody even bothered to keep statistics for the various hamlets within the township. As in Buffalo and Utica, however, the post–World War II period brought dramatic changes.

The period before World War II had expanded and modernized the road network throughout New York, and in the years after the war, residents could shop in their own local shops or quickly drive to another town. Cooperstown was less than ten minutes away, and Oneonta was less than twenty. The world of Hartwickians expanded. But there was a problem: the village economy had evolved during a period when most people did not own automobiles—even as late as the 1920s, there was a tendency to see them as farm equipment. By the 1950s, the excitement of driving to other communities and the enhanced selection found there slowly undermined the local retail economy.

The reasons for retail decline in Hartwick cannot merely be expressed as a desire by residents for adventure. Throughout the 1950s and 1960s, the same tendencies toward corporate concentration and restructuring of production affected Hartwick. The impacts were not as dramatic as the mass layoffs in Buffalo and Utica: in Hartwick, the closure of the local dairy operation resulted in only a few people losing their jobs. This was true for the local newspaper as well, and also with any given store. The 1950s and 1960s

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

saw the closure of an appliance store and the village's hardware store, for example. The events were seen as sad losses of community institutions and a personal tragedy for individual families, but the sense of siege that enveloped larger cities was slow to set in. Decay set in slowly, and it was not until the 1970s that crisis was evident (Thomas, 2003).

The awakening of Hartwick to its plight began with the loss of its last school. During the 1950s, Hartwick and Cooperstown merged school districts with the goal of building a new, modern high school to accommodate the combined district's needs. The former Hartwick High School was converted to an elementary school, one in which the children walked to the other end of the street for gym class. This situation lasted until 1976 when the Cooperstown School Board voted to close the elementary school and build an addition to the Cooperstown Elementary School. Hartwick residents mobilized against the closure, but the case was difficult to make. Hartwick residents pointed to the small school's coziness, easily interpreted by board members as suggestive of the lack of economies of scale at the Hartwick school. In addition to cost, however, school officials noted the lack of a gymnasium at Hartwick, in contrast to a Cooperstown Elementary built less than twenty years earlier with a gymnasium, full library, and music rooms (which were moved into trailers to accommodate the Hartwick students). The debate took less than a year, and many Hartwick residents perceived years later that the village's problems started with the school closure. It had actually started earlier (Thomas, 1999).

The school closure did further lower the economies of scale in the village—simply stated, there were fewer employees in the village. This further weakened the retail economy, and the rash of business closures collapsed the economies of agglomeration present earlier in the village. Perhaps 1978, two years after the school closing, was the worst. On April 1, the town landfill closed; it had been built in a bog, and the disappearance of the mound of garbage under the winter snows was both a local lore and a cause of environmental concern. The local supermarket, part of a regional chain, closed one week later, as did the Agway Farm Store in June. The mobilization of Hartwick residents was too late: by 1980, only a bank, post office, and American Legion remained downtown, and several buildings had been demolished or converted to residential use. An earlier project inspired by the urban renewal projects in large cities even demolished a large stretch of commercial buildings on the south side of Main Street, depriving the village of the storefronts necessary had anyone actually wanted to start a business there (Thomas, 2003).

Fourth-Order Centers

As Hartwick and many other fifth-order centers in the region declined, Cooperstown benefited from the addition of several thousand shoppers to its

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

retail market. The decline of retail options in just its two largest competitors in the hinterland—Hartwick and Milford—shifted the retail needs of approximately 2,000 people toward downtown Cooperstown. The 1970s and early 1980s were thus fairly prosperous for downtown Cooperstown, as a longtime resident noted in 2019:

> Well, when I moved here back in the seventies, there wasn't anything you couldn't get on Main Street. We had clothing stores, I mean real clothing stores and not T-shirt and baseball shops, and a Hallmark store, a drug store, several hardware stores, Newberry's. Some of that's out of town now, but back then it was all here. You didn't have to drive all the way to Utica back then.

This was true for a Cooperstown resident, but the residents of the restructured villages were already in the car, and an extra ten or fifteen minutes could bring a driver to the big box stores in Oneonta or Herkimer, an eastern suburb of Utica. By the late 1970s, without realizing it, Cooperstown merchants found themselves competing head to head against such chains as Ames, Jamesway, and K-Mart. The construction of new enclosed malls in Oneonta and Utica itself intensified that competition. As the 1980s wore on, downtown Cooperstown's local market was slowly weakening, and as in Hartwick, the final collapse of a locally oriented retail market was rapid. As a 1987 Cooperstown high school graduate commented in 2019, "When I went to the prom there a few places right here in town to rent a tux (tuxedo), but when my cousin went to prom five years later, he had to drive to Oneonta to rent a tux." Indeed, the shift from a community-oriented downtown filled with hardware and clothing stores to a tourism-oriented one with souvenir and baseball card shops was quite rapid.

As the community-oriented downtown transitioned, it turned increasingly to its tourism economy (Thomas, 2020). The tourism industry based on the aura of Cooper's novels and the beauty of the lake attracted an upper and professional class clientele, but in 1908 the foundation of the village's downtown renaissance in the 1980s and 1990s was announced with barely a whimper in the village. The Mills Commission on Baseball Origins had announced in 1907 that Abner Doubleday had invented the game in Cooperstown in 1839, an event now known as the Doubleday Creation Myth. It was not until 1917 that the Doubleday Memorial Fund was created, an organization charged with raising money for the purchase of the Elihu Phinney pasture behind Main Street, where the game supposedly occurred. The choice of location was due to the Mills Commission report, but the impetus was the building of the Mary Imogene Bassett Hospital on the grounds of the former baseball grounds. The purchase of the pasture allowed for the building of a new baseball grounds, followed by a 1934 New Deal project that constructed the grandstand. The

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

Table 12.4 Types of Businesses in Downtown Cooperstown Occupied Storefronts, 1979–2003

Business Type	*1979*	*1983*	*1987*	*1991*	*1995*	*1999*	*2003*
General	39 (39.0)	37 (35.2)	34 (35.8)	28 (28.3)	18 (18.2)	14 (14.0)	12 (12.0)
Specialty, Non-Baseball	14 (14.0)	15 (14.3)	17 (17.9)	19 (19.2)	23 (23.2)	24 (24.0)	20 (20.0)
Specialty, Baseball	4 (4.0)	4 (3.8)	3 (3.2)	11 (11.1)	16 (16.2)	18 (18.0)	22 (22.0)
Food Service	20 (20.0)	21 (20.0)	17 (17.9)	17 (17.2)	16 (16.2)	18 (18.0)	19 (19.0)
Local Services	19 (19.0)	22 (21.0)	23 (24.2)	23 (23.2)	25 (25.3)	25 (25.0)	25 (25.0)
Art/ Antiques	3 (3.0)	6 (5.7)	1 (1.1)	1 (1.0)	1 (1.0)	1 (1.0)	2 (2.0)
TOTAL	99	105	95	99	99	100	100

Source: Adapted from Thomas et al. 2003; see also appendix B

culmination was the 1939 opening of the Baseball Hall of Fame, the primary driver of Cooperstown's tourism by the late twentieth century.

As shown in table 12.4, downtown Cooperstown was in 1979 primarily a community-oriented business district supplemented by tourism businesses, and this picture was similar in 1987. The number of occupied storefronts was reasonably stable, a fact that concealed the demise of the locally oriented economy experienced in other communities of similar size. The impact of tourism is evident, however. The high number of foodservice establishments is oriented toward visitors to the village, as are the various specialty shops and the arts and antiques outlets. The number of stores catering specifically to baseball tourism, however, was stable through the 1980s. By 1991, the number of baseball shops had tripled, mainly at the expense of general businesses and arts/antiques centers. Reflecting national trends, the number of local services increased slightly, but even these present a mixed bag: an insurance agency is nearly exclusively a locally oriented business, but a real estate firm caters to second home seekers as well. These trends accelerated through the 1990s, with the number of general businesses falling to only twelve as baseball-oriented businesses expanded. The baseball economy's impact was seen in the types of businesses downtown and the names that businesses chose. In 1979, only 2 percent of business names referenced baseball, and even such a mainstay of baseball tourism as F. R. Woods, half a block from the Hall of Fame, did not mention baseball in the name; this was true in 1987 as well. By 1991, 10 percent of businesses referenced baseball, climbing to

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

24 percent by 2003. Although baseball shops are more likely than others to mention baseball in their name, not all do; indeed, a number of restaurants reference the game in their name.

If we conceptualize the economies of scale possible in a city as, at least in part, the ability to assemble a market large enough to serve particular niche needs such as an expensive jeweler like Tiffany's in a first-order center or a BMW dealer in a second-order center, then the success of downtown Cooperstown's resilience to economic restructuring is evident. Home to the Baseball Hall of Fame, and since 1995 a youth baseball camp that services dozens of teams per year, the niche of baseball tourism is capable of drawing visitors from a vast area. Just as in a large city, the niche markets rely not only on the local population but also on attracting additional consumers from the wider urban-rural system as a whole. In New York, a niche market is typically joined by numerous others; in Cooperstown, it dominates the landscape.

Throughout the late twentieth century, the village government utilized the full array of legislative tools to maintain and strengthen the village's character, including historic preservation districts, zoning and sign regulations, and citizens boards to enforce the desired image. In principle, the goal was historic preservation, but in practice, the result was the reinforcement of rural simulacra appealing to urban visitors and the community's upper and upper-middle class. Comparing the streetscape of downtown with the pictures of the same storefronts found in the Smiths and Telfer Photographic Collection from the early twentieth century, a shift has occurred. Like Hartwick, Cooperstown in the early twentieth century had aesthetic sensibilities similar to larger communities, and the storefronts resemble those found in cities. Many storefronts had large overhead signs, numerous window posters, and other features that would not be allowed today under the historic preservation-inspired sign laws. Instead, signs over the store are regulated, with a smaller sign protruding at a right angle typically above the door, with window posters and indoor signage close to the window controlled as well. The overall effect is pleasing and consistent with the urbanormative expectations of a small town, but not particularly historic. The tight regulations have helped Cooperstown maintain an attractive aesthetic that enhances its reputation as a tourist locale but has, at times, baffled would-be developers. A proposed Pizza Hit on the edge of the town in the late 1980s languished in committee for years before finally finding a location outside the village, for example, and, more recently, a proposal for a four-story hotel across the street from a four-story office building was similarly rejected. Such cases are not typical, however, of the village's economy. As one business owner noted in 2019, "Sure, there are some extra hoops to jump through here, but the result is a pretty good-looking Main Street, and most of us are better off for it."

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

The irony of the Hartwick Seminary post office closing in 1994 is what happened next. By the late 1980s, a number of businesses had opened in Hartwick Seminary and the nearby hamlets of Hyde Park and Index, and some developers started looking at that portion of the town of Hartwick 2 miles south of Cooperstown as an alternative to building in the village. Officials in the town of Hartwick had by then watched as Hartwick village in the western portion of the town lost many of its businesses, and so the opportunity to enhance the tax base in the eastern part of the town was attractive. In addition, the town of Hartwick simply did not have the same level of regulation: there were no zoning laws, and the sign law itself only dates to 1993. For some residents throughout the area, however, the potential development could threaten the rural character of the entire region, and for others, the threat to downtown Cooperstown was also real. Thomas (2003) captures the sense of conflict:

> Although the development was minor at first, Cooperstown merchants began to recognize the threat to their interests. As one resident said:
>
> I think Cooperstown's problem is that ya got people in Hartwick more concerned with their taxes than with having a nice community. They don't seem to realize that what's good for Cooperstown is good for them . . . . They should keep all the businesses in Cooperstown. We don't need them down there.
>
> Another said:
>
> If the Hartwick town board would just realize that they shouldn't have that kind of development. We shouldn't have it anywhere around here, but if we do, it should be in Cooperstown. Hartwick's a bedroom community, and it should stay that way.
>
> Hartwick residents had a different perception:
>
> You should see what those stores do to my taxes. I don't think the town taxes have even gone up; just county and school. Hell, I wish they'd build more.
>
> And another:
>
> Cooperstown thinks we should all go into Cooperstown. You try parking in Cooperstown in the summer. You just keep driving around Main Street looking for a space. They want us all to shop there, but they wouldn't put up a (parking) garage, would they? I'm glad The Commons (Shopping Center, in Hartwick Seminary) opened. Serves 'em right. (136–137)
>
> By 1993, at least two different petitions had been circulated in Cooperstown calling on Hartwick to restrict growth even though there is no overlap in legal jurisdiction. One Hartwick resident commented at the time, "if they want us to help their businesses, maybe they should help our taxes." (137)

By the early 1990s, Hartwick village was indeed a bedroom community for Cooperstown, but it was because of the decline of the 1960s and 1970s, and

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

that sense of decline fueled their side of the conflict between the two municipalities. In 1995, when the Cooperstown Dreams Park opened in Hartwick Seminary, development accelerated until the recession of the early 2000s.

Third-Order Centers

Having overtaken Cooperstown as the region's third-order center in the early twentieth century, Oneonta solidified that role as the century continued. The pattern in Oneonta is similar to both that in Cooperstown and Utica. The patterns of upscaling found in Hartwick and Cooperstown are found in Oneonta as well, and the city and its outlying township have been forced into competition with nearby metropolitan areas. Similarly, Oneonta has had issues that are reminiscent of larger cities: the city of Oneonta, a municipality legally distinct from the town of Oneonta, has had to compete against its suburban neighbor.

The effect of Oneonta's competition with other communities was demonstrated by the Hartwick Retail Practices Survey conducted in 2001 (Thomas et al., 2002). The irony of being in a central place is that the options for the individual shopper are narrowed by their centrality. A resident of the hinterland, such as Hartwick residents, can choose to shop in any number of places once they are in the car. The survey interviewed 118 residents about the shopping preferences for groceries, home improvement, electronics, and apparel. Not surprisingly, they were more likely to shop for groceries in Cooperstown and, to a lesser degree, in Oneonta. For home improvement and electronics, however, the results were quite different. In home improvement, despite outlets selling in Cooperstown, 43.2 percent of Hartwick residents preferred Oneonta and 15.3 outlets in metropolitan Utica. For electronics, 39.8 percent shopped in Oneonta and 17.8 percent in metropolitan Utica. However, it was with apparel that the contours of Oneonta's competition with nearby metropolitan areas was most evident.

About a third of Hartwick residents shopped in Oneonta for apparel items, compared to 27 percent in metropolitan Utica. This was not distributed evenly, however: 29. 4 percent of respondents in low skill occupations reported not buying apparel in the previous month, compared to only 1.1 percent of managerial/professional class members. Further results are shown in table 12.5. It is interesting to note that those in professional/managerial occupations were more likely to shop locally in Oneonta and Cooperstown. This reflects a pattern, particularly among educated professionals, to shop in the local community to "support our stores," as one shopper noted. In a sense, given the differentials of cost and selection, there is a degree of charity being displayed toward local businesses. One individual shared the story of an item on sale in the local toy store that was 40 percent more expensive than through Amazon.com but nevertheless bought locally to support the local economy.

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

Table 12.5 Where Hartwick Residents Bought Apparel, Percent by Occupation

	Low Skill Occupations	*High Skill Occupations*	*Professional/ Managerial*	*SURVEY TOTAL*
Did not buy	29.4	7.1	*1.1*	11.2
Cooperstown	0	0	2.6	1.0
Oneonta	23.5	26.2	33.3	28.6
Metro Utica	29.4	38.1	25.6	31.6
Metro Albany	5.9	16.7	25.6	18.4
Metro Binghamton	11.8	11.9	5.1	9.2

Table 12.6 Population of Oneonta PRMs, 1920–2010

MCD	*1920*	*1950*	*1980*	*2010*
Oneonta (City)	11,582	13,564	14,933	13,901
Oneonta (Town)	1,601	3,508	4,655	5,229
Davenport	1,313	1,233	1,971	2,965
Laurens	1,335	1,447	2,101	2,424
Milford	1.635	1,913	2,685	3,044
Otego	1,366	1,769	2,801	3,115
TOTAL	18,832	23,434	29,146	30,678

Oneonta has been contending with competition from metropolitan centers while also benefiting from the same trends, as evident in the case of Cooperstown. As with the metropolitan areas, Oneonta's population has spread across the landscape as well, exercising an influence over its own PRMs. In Oneonta, however, the lower overall population has resulted in two phenomena: 1) the expansion of population has occurred somewhat later, and 2) results in a much smaller geographic area of influence in terms of population spread as only four townships outside the city and town of Oneonta exhibited coordinated population spread. This is shown in table 12.6.

Growth in the Oneonta area has largely resulted from its transition from a railroad town during the 1950s to a college town by the 1970s. Home to both SUNY Oneonta and Hartwick College, the city gained population in line with the expansion of higher education during the 1950s and 1960s. Whereas the state's metropolitan centers were all losing population by the 1960s, Oneonta's population peaked at 16,030 in 1970. Controlling for the inclusion of college students during the late twentieth century, the pattern in the city of Oneonta looks much more like that of the other cities. When excluding the SUNY Oneonta student population, the city fell from a population of 12,847 in 1950 to 7,951 in 2000—and this still includes the roughly 1,800 students at Hartwick College. Yet, the system population as a whole accommodated the new students and continued to grow. The surrounding town of Oneonta

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

increased by a third during this time, and the adjacent town of Davenport nearly tripled in population. The town of Otego doubled in population, whereas Milford and Laurens both added over 2,000 residents. By 2010 the city of Oneonta had both a familiar problem, that of competition of the suburban town of Oneonta and the exurban towns beyond, and an unusual one: half the city's population left once classes let out for summer.

The city's dependence on an annual influx of college students has brought with it dynamic changes in the local economy. As shown in table 12.7, this includes the decline in general businesses found in Cooperstown and other downtowns and a rise in the number of local services. In line with a college-age population, however, there was also a dramatic increase in the number of adult-oriented options, including bars, strip clubs, tattoo parlors, and drug paraphernalia establishments, as well as general entertainment options. All told, these two sectors accounted for a fifth of storefronts in the central business district (Thomas et al., 2007).

The Oneonta area has maintained a favorable retail environment, at least compared to other third-order centers, by its proximity to the northern Catskills. For those who live in the mountains, Kingston to the southeast and Oneonta to the northwest are the two largest communities for shopping and other services. This has had the effect of spreading Oneonta's service area further south and east than to the north, where residents of places like Cooperstown can choose between Oneonta and Utica. This effect started with the ascendency of the railroad. One might recall from the discussion in chapter 10 that the Oneonta area and northern Catskills were part of Utica's "timber zone" around 1870. With the opening of the Delaware and Ulster Railroad in the late nineteenth century, to Stamford by 1872 and Oneonta by 1900, the Catskills became increasingly oriented toward dairy farming for the New York market, in effect stripping away a portion of Utica's former hinterland for the benefit of New York City. As Oneonta played a more critical role in transport and then education during the twentieth century, the increased tourist trade to Cooperstown to the north

Table 12.7 Number of Businesses in Downtown Oneonta, by Type, 1955 and 2005

Number in 1955 (percent)	Business Type	Number in 2005 (percent)
55 (34.2)	Basic Retail	19 (9.3)
22 (13.7)	Specialty Retail	41 (20.1)
44 (27.3)	Local Services	78 (38.2)
15 (9.3)	General Entertainment	22 (10.8)
0(0)	Adult Oriented	20 (9.8)
22 (13.7)	Civic Institutional	24 (11.8)
3(1.9)	Industry	0(0)
161	***TOTAL***	**204**

Source: Thomas et al. (2007)

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

and the Catskills to the south helped Oneonta maintain itself as the primary market center south of the Mohawk Valley. As much of the regional market, especially when combined with that of Cooperstown, was based on transient populations, the region has been able to support institutions that enable local residents to avoid Utica. For example, Oneonta is home to the Catskill Symphony Orchestra and the Orpheus Theater Company, and Cooperstown is home to three museums and the Glimmerglass Opera Company. This independence from the metropolitan center has enabled the region to enjoy many of the institutions for which other rural residents must travel, but it has also stripped away the southern portion of Utica's market area.

THE MORPHOLOGY OF CAPITALISM

No complex adaptive system is stable for long. Evolution occurs over time, and so the individual nodes in the system can experience significant shifts over time. Cooperstown began its life as a competitor for Utica and rather rapidly became a third-order center within Utica's orbit; by 1920, Oneonta had overtaken the village. In 1920, Buffalo was a world-class city on a par with Cleveland and Detroit, one of two first-order centers in a state that likened itself the "Empire State." The transition to a second-order city, albeit one that retains its world-class parks and museums, has been explained by several variables, and we return to Dillaway's (2006) argument of factors to examine how they relate more broadly to the dynamics of the wider urban-rural system of which Buffalo is part.

Dillaway stressed the role of the building of the Saint Lawrence Seaway in siphoning away the city's importance as a major port. Before 1959, much of the shipping of the Great Lakes eventually went through the port of Buffalo, and then it did not. This explanation is in line with broader arguments about the role of cities as nodes in a wider network (e.g., Weber, 1899; Thomas et al., 2011). It is at once a factor of the human-made environment, but one with great economic ramifications. We see similar shifts in the loss of Hartwick's businesses to Cooperstown due to automobile and better highways, and we similarly see increased competition for Cooperstown merchants by those in Oneonta and Utica's suburbs.

The next three factors are summarized as the dynamics of capitalism, and most any urban political economist would recognize them as familiar from any number of cities. Buffalo was affected heavily by corporate concentration, particularly in the steel industry but in others as well, that placed the city at a disadvantage when the industry as a whole contracted (due in part to global competition) and facilities were closed. Although separated by Dillaway, corporate concentration and deindustrialization

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

go hand in hand: the market in an industry slows, firms look to continue growth by buying other firms, and a recentralization of the firm has spatial effects for the industry and cities involved. This same dynamic was present in the restructuring of Utica's textile industry, for example, both as it grew by out-competing or taking over firms in the Cooperstown Complex and losing factories to distant cities after its firms had been taken over. These dynamics are present in manufacturing, but they are also found in other sectors of the economy, including finance and retail. Overall, the trend is toward oligopolization, and the spatial impact of those trends have aided New York City at the expense of upstate cities. In addition to the cases discussed in this chapter, New York has benefited from numerous upstate firms relocating (by forceful takeover or by choice) downstate, including Bristol-Myers-Squibb (founded in Clinton), Philadelphia Cream Cheese (founded near Watertown), and IBM (founded in Endicott). Similarly, the "cost" of doing business is, at least concerning labor costs, directly related to the business cycle.

The cost of doing business is also related to an explicitly political factor: what Dillaway considers the whims of local elites. Local government not only impacted property taxes in local communities but also set the stage for the basic framework in which development takes place. Goldman (2007) relates that Buffalo's approach to urban renewal after World War II mostly cleared the waterfront between downtown and Lake Erie. One proposal for a new campus of the University of Buffalo, having been recently absorbed into the State University of New York, was to build a new campus next to Lake Erie. Instead, based mainly on local elites' real estate interests, the new campus was built in the suburb of Amherst, and the Buffalo waterfront languished for years afterward. One does not want to pretend to own a Crystal Ball, but it seems safe to assume that the travails of downtown Buffalo during the 1970s and 1980s would have been quite different had there been an extra 20,000 students and faculty immediately southwest of downtown. This particularistic approach of individuals, reacting to but also creating the system in which they exist over time, was found in Cooperstown as well. Had not the Mills Commission on Baseball Origins, reflective of nationalistic (i.e., cultural) fervor, "found" an origin of the game in Cooperstown based on testimony by Abner Graves, and had the Clark family not sponsored the creation of a baseball museum, Cooperstown's fate as a tourism destination would likely have been very different as well.

How are these trends found throughout the interior of New York State, and one must acknowledge throughout the Great Lakes Basin as a whole, related to one another? As so much of the trends tie into economics, it is tempting to suggest simply the dynamics of capitalism. Underlying these dynamics, however, is the logic of urbanization. The twentieth-century events are not ultimately rooted in the twentieth century but rather much farther back.

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

The town of Hartwick was home to 2,110 residents in 2010, 629 of whom lived in the village and the others scattered throughout the remainder of the township—most of whom live in sixth-order centers. As each resident requires, on average, 2,000 calories per day to survive, the yearly caloric need is 1,540,300,000. Using our multiplier from chapter 11 of a population living on nothing but corn, which can support one or two people per acre under ideal circumstances, Hartwick needs 4,220 acres to feed its population, but luckily has 25,651.2 acres of land. This means that, if the town were self-supporting, some land could be given over to urbanization as it obviously is, people could eat less efficient foods, even including some meat, and still have some land left over for parks, cemeteries, and even some forest.

In contrast, the city of Oneonta was home to 13,901 residents in 2010 in a municipality with a land area of 2,790.4 acres, most of which is urbanized, but requires 27,802 acres of corn—and nothing but corn—to feed its population every year. The urban-rural system operates effectively for Oneonta, however, as the PRMs have a land area of 142,483.2 acres of land, but the population of the total system only swells to 30,678 people; the system thus requires 61,356 acres of cultivated corn. Whereas Hartwick has a considerable surplus, there is arguably an ability to export food. In the Oneonta PRMs, the surplus acreage is given over to urbanization, including nearly all of the city of Oneonta, but could nevertheless, if independent, support a more diverse diet, including some meat and maybe a patch of woods here and there. However, the nearly 300,000 people living in the Utica PRMs obviously cannot support the city, to say nothing of a larger metropolitan area like Buffalo. All of these locations must be added to the New York–Philadelphia area's caloric well, and it is apparent that New York's urban-rural system long ago outgrew its hinterland's capacity to feed the population. New York City did not just grow because of access to the Great Lakes basin for export but required the increased grain supplies the Midwest could offer—and this was during the nineteenth century. Of course, a more complex model would find that even Hartwick's ability to support itself is not as rosy as the picture painted here (see Fulkerson & Thomas, 2021).

As the New York urban-rural system expanded, it gradually grew to include the entire Great Lakes basinand the significant northern economy that coalesced into a large market. The expansion of the resource horizon brought population into the new regions, and people bring culture—including the industrial technologies that spread from New England to Utica and Cooperstown and expanded according to its own logic, spurring new industries and products along the way. The system was capitalist, but the underlying logic adjusted to the morphology of urbanization. In short, capitalism followed the resource horizon driven by an increasingly acute regionalized urban dependency on the coast. The increases in population in the Great

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

Lakes served to bring new food and manufactured goods into New York and other coastal ports, but also served to deepen the caloric well, which requires a further expansion. This system worked while the United States expanded west, but it took on thesame brutal contours of earlier expansions. Just as the Uruk culture destroyed and inhabited Hamoukar, and just as the Romans celebrated their martial brutality, the Americans did not merely dispossess the native inhabitants—they slaughtered and oppressed them.

The push of a complex system to the periphery can result in weakness in the interior. Farmland in New York's immediate hinterland could not match the efficiency of the Great Plains, and much of New York State has experienced reforestation since the 1920s. This is often celebrated as wins for the environment and a return to nature of what belongs to nature,but in reality, it is simply the system pushing the environmental impacts of New York's population further and further afield. As the resource horizon expands, other capitalist markets expand with it. Where labor costs have been lower, and more recently where environmental and worker safety regulations have been comparatively lax, new communications and transportation technologies have made it easier to exploit these differences for the gains of specific institutions—most often profit-seeking corporations—for their own benefit. The result in the regions closer to but not part of the core urbanized areas (in this case, the Northeast Corridor) is what is found in the Great Lakes region today: deindustrialization, local institutions brought under the control of corporations in (most often) first-order cities, and population stagnation if not flight. In short, internal colonization.

What explains upstate New York and the Great Lakes? The expansion of New York's urban-rural system through the region and beyond. We might recall that New York itself began as an outpost of the world-system of which Europe itself was in the periphery. The impetus for the system expansion was trade, and the success of many European countries was based on the mercantilist system of favoritism and crown patronage. We might also recall that, even in New York, that initial resource tended to be founded in rural production: beaver pelts. In other parts of the Americas, it was sugar plantations, tobacco, and of course, king cotton. Even if a country could produce such wares, it made more economic sense to grow such products in colonies and keep food production closer to home to feed the population. Once the resource horizon expanded, the logic of a newly emergent capitalism took advantage of the complexity of the system, using the differentials of value in one place to create a profit in another. It always involved the alienation of rural labor, whether the Africans forced into slavery or the peasant farmers required to turn over a portion of their yields to the elites. The legacy of this system is found in the United States today in the form of seemingly intractable racial and class conflict. If it appears somehow less brutal today

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

than it did in the past, however, it is because the resource horizon has pushed to global scales: to beef from South America, to manufactured goods from China, to rare elements mined in Africa to keep our phones running, to the children breathing arsenic as they scrape those same elements from our discarded electronics to be sold back into the global market.

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

Chapter 13

New York and the World-System

It has been all the rage for at least two decades: we live in a global age. Globalization is one of those concepts that has captured the public imagination in a way that few scientific ideas ever do. Unfortunately, few people have ever heard of World-Systems Analysis or the various scholars who have outlined its dimensions. Instead, the global economy is commonly understood to simultaneously hold promise and peril for our future (Fukuyama, 2006; for a critique, see Kagan, 2009) while being heralded as the triumph of capitalism and the end of history. Reliance on trade is interpreted as an alternative to war. Of course, the fact that Western powers, the United States in particular, have been in a nearly constant state of war since the end of World War II is conveniently forgotten. Like other social science concepts, such as "culture" and "market," the global or world-system is so thoroughly misunderstood by the general public that it is difficult to know where to begin to correct the misapprehension.

For starters, despite the proselytizers for and against the current global economy, there is not anything fundamentally new about it. As we have discussed, the earliest signs of an emerging world-system were found in southwest Asia as early as 10,000 BCE. However, a complex system demonstrating our modern system's major characteristics was not in place until the Uruk world-system's rise around 3,500 BCE (Algaze, 1993; Thomas, 2014a). The central debate among world-system scholars is not whether such systems existed before 1950 but how to classify those that did. One school of thought, epitomized by Amin (1996) and Wallerstein (1974), see a world-system as necessarily having a capitalist economy, in which case the current world-system dates to the sixteenth century. Others (Abu-Lughod, 1991; Chase-Dunn & Hall, 1997; Frank & Gills, 1996) do not consider a capitalist economy definitive of the world-system. They point to similar systems dating

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

to a time the pre-dates the rise of modern capitalism and see the origin of the world-system as dating far earlier. In either case, the world-system is hardly new and, although new transportation and communications technologies have accelerated its dynamic qualities, the system itself is, in reality, an elaborated and evolved version of its former self, whether from the sixteenth century or the dawn of civilization.

A second consideration is that, whereas the world-system is often presented as monolithic and static, it is a dynamic complex system composed of more locally significant sub-systems. The "local" is, in actuality, no more or less significant than it was in the past. The "local" has always been part of a broader social network. The primary differences are that innovations in transportation and communications had enabled some community members to take advantage of cost differentials between geographic locations that were not possible when the train represented the fastest form of transportation, to say nothing of our horticultural forbears. We may have forgotten that local communities and small-scale interactions exist in our rush to emphasize the monolithic globalizing forces. However, they remain as vital as they did to our ancestors (Smith, 2010). Just because some people interact with a more significant number of others in a wider variety of places does not mean that the local is now inconsequential. It only means that their networks have expanded for some people, and they have more options for communicating.

Perhaps most important, the world-system, as a dynamic system, is ever-changing. This pattern of evolution is not necessarily progressive: there have been numerous examples of collapse. Most people are familiar with the example of the fall of the Roman Empire, for example. Similarly, the collapse of the Bronze Age world-system that dominated the Eastern Mediterranean until about 1200 BCE is another example of system collapse. In 1400 it would have been inconceivable to many living in Egypt, the Hittite Empire, and Babylon that the system would collapse. By 1100 BCE, it was perhaps inconceivable that it had existed at all.

In chapter 2, we examined the ever-changing urban-rural system of New York as growing to be a pre-eminent city of the modern world-system, in a sense turning the world into its hinterland. This expansion had dire effects on the inner hinterland of the Great Lakes basin. The upstate region has suffered through decades of deindustrialization, been on the losing end of corporate concentration, and experienced prolonged periods of demographic stagnation and even decline. At the pinnacle is New York. The metropolitan area continued expansion while the city and its suburbs reached the highest population levels ever recorded. This chapter examines the ramifications of this expansion on the people of the periphery, rural workers, and urban traders in far-off countries and continents who siphon resources to benefit the modern world-system. The urban-rural system's basic architecture is found in

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

the more expansive world-system, with dire consequences in the developing world that supports the comparatively decadent living in the global core. As the chief beneficiary of the world-system, New York, and other global cities can offer the entire world's wares. A large segment of the world's population can buy the goods of the system—not only food, but advanced electronics such as computers and cellular phones, the internet, automobiles, and the array of other products that make modern life possible and comfortable. At base, it is the product of alienated rural labor working to provide the natural resource base underlying such goods and services.

If the world-system is constructed of the basic architecture of urban-rural systems at the core, how do urban-rural dynamics play out in the modern world? The dominant feature of the modern world-system is capitalism—itself is a late manifestation of urban-rural dynamics. So great is the spatial and epistemic distance between rural and urban producers in the modern world-systems that the dependence of global cities on rural communities is obscured by trade with the intermediary lower-order cities in the hierarchy. These connections are only dimly visible to even practiced scholars. As New York and its global sister cities matured, the scholarly community barely noticed the contours of urban-rural dynamics embedded deep in the bowels of capitalism.

URBANORMATIVITY AND THE WORLD-SYSTEM

Behind every global city like New York are thousands of supporting rural communities and lower-order cities within the global hierarchy. A consequence of globalization is that these often exist outside the same geographic region as the global city. Indeed, the global age's major trend has been to increase the distance that goods and people must travel. It is only within a global system that a city can become synonymous with a nation-state, as is the case, for instance, with Singapore, Kuwait, Monaco, and Nauru. For a species that began as nomadic foragers surviving in small groups of fewer than 200 persons, it is quite a triumph to successfully reside in a fully urbanized nation of millions that neither grows its food nor sees the necessity for self-sufficiency. There is complete faith in the extensive trade networks articulated between the global city-state and countless rural communities, near and far, engaged in gathering all the necessary resources for urban production and consumption. This arrangement is typically organized by proximate lower-order cities coordinating the harvesting and export of rural products to feed a global city's massive energy demand (Fulkerson & Thomas, 2021).

Indeed, it is an almost universal goal for populations worldwide to achieve the highest level of urbanization possible. It is not hard to imagine

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

why, since most urbanized nations enjoy the highest economic development levels and access to the maximum variety of goods and services on earth (see figure 13.1). As we noted previously:

> The overall picture provided by the analysis of the percent urban and the Gross Domestic Product (GDP) per capita is that the more urban a nation becomes, the more it stands to gain economically. As the best-fitting regression line is a quadratic (as opposed to linear) line, this is interpreted to mean that there is an exponential increase in per capita GDP when the percent urban increases for the typical nation—an urban economic take-off. However, while being more urban is not a guarantee of economic advantage—meaning that becoming urban is not a sufficient cause of economic growth—it appears that becoming urban is a necessary precondition for achieving economic advantage. This is based on our observation of the other end of the spectrum that almost without exception, rural nations suffer the greatest economic disadvantage. (Fulkerson & Thomas, 2021, Ch. 5)

Of course, these urban benefits cannot be fully enjoyed since they are founded on the extraction of surplus resources, whether food, resources, or labor, from

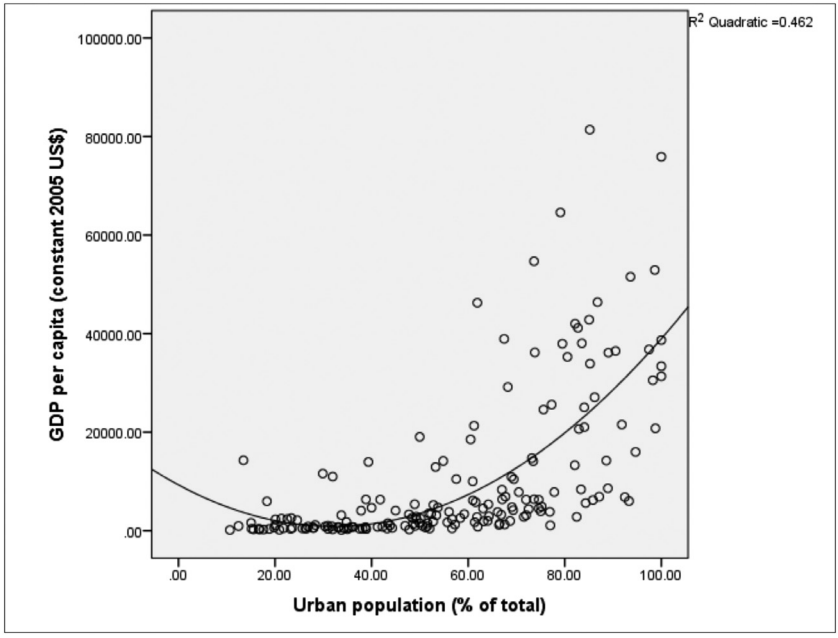


Figure 13.1 Urban Population as Predictor of GDP Per Capita, 1960-2010. Source: Fulkerson & Thomas (2021). Created by author.

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

the rural communities at the root of this system—removed as they may be from view. A world without rural communities would necessarily be a world without cities, returning to the state of our species known during the Natufian. Despite this reality, even the most rural nations on earth are rapidly transitioning into urban nations as they experience the highest rates of rural-urban migration. For the existing global cities to remain indulged in the privileges they enjoy, one might think it would be in their interest to keep the global rural populations gainfully employed in the vital work they perform. Instead, such rural workers find they are so poorly compensated, languishing in a climate of unfair trade and low prices, they are driven to cities searching for a better life. For example, an Ethiopian farmer receives about 29 cents for a bushel of green coffee beans, but Western consumers pay up to four dollars for a cup of coffee (Maasho & Hunt, 2019). This cost nets a retail price between $240 and $320. Increasing the price paid to the farmer would add less than 15 cents to the price of a cup of coffee (Fulkerson & Thomas 2019, 152). In some cases, rural people are removed involuntarily through structural shifts as changes to land tenure policy, as when public land becomes privatized, for instance, or when land is leased to another country. There are surprisingly few critics of these policies.

To better understand how urbanization became an ideal synonymous with progress and national development, it is helpful to review the perspectives outlined by development scholars over the last several decades. These scholars, introduced in chapter 3, have helped shape contemporary thinking about the importance of urbanization and the devaluation of rural life. Early scholarly attempts at understanding national development were spurred by a practical desire to help the less developed nations transform into prosperous capitalist, industrial, urban societies. The belief that the entire development project (McMichaels, 1996) rested upon was captured by a 1963 speech in which President John F. Kennedy stated, "a rising tide lifts all boats." They believed each nation in the world could imitate successful development in North America and Europe.

From Modernization to Dependency

By the mid-twentieth century, two streams of social scientific thought came together in a way that not only supposed a progression from the primitive to the modern but largely equated the city as the apogee of such progress. Of course, this view was nothing new: the *Epic of Gilgamesh* ends with the great king coming to the same conclusion about the city walls of ancient Uruk. One would like to suppose a difference between social science and myth.

Anthropology had been a home for evolutionary thought applied to human culture since the nineteenth century. The field found itself at the center of

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

the debate between evolutionists and conservative creationists as a result. Indeed, the claims of many social scientists at the time were overly simplistic. Edward Tyler, whose *Anthropology* (2019 [1881]) was one of the first books to employ the term, posited that social institutions were rooted in "ruder states, and [became] in the course of ages, more intelligent, more systematic, more perfectly arranged or organized, to answer their purposes" (15). This assumption of progress precludes the possibility of fluctuations in the social complexity that we see throughout this book. In a sense, progress would rule out such an event as the end of the Bronze Age, the fall of Rome, or (perhaps more comfortably) our own system's eventual demise.

The somewhat notorious application of Darwinian evolution to social policy proposed by the sociologist Herbert Spencer (1893) seemingly justified the callous refusal to intervene in famines and other natural disasters by insisting upon "survival of the fittest." This term, often falsely attributed to Darwin himself, was applied by Spencer to the study of human societies and became part of a sequence of events that would one day inform scientific racism and the eugenics movement (Baker, 1998). Despite his warning of class and political bias in *The Study of Sociology*, Spencer very much fell into this trajectory.

While religious arguments against evolutionism were rampant in broader society, as some argued against it on scientific terms within the social sciences. Franz Boas (2012 [1922]), for example, argued that a society's development could only be understood as a particular entity of itself and that the elaborate stages proposed by evolutionists could not stand up to the evidence. Norman Yoffee (2005), discussing the work of Stewart (1955), argues that the concerns of evolutionists and Boas are on opposite ends of a continuum and that the principal problem of explaining human cultural evolution is not evolution per se, but rather the *specific theory* of how the evolution took place.

In sociology, the stream of work dating to Emile Durkheim (1984 [1893]) in *The Division of Labor in Society* continued to influence functionalist thought. In common with the anthropologists, twentieth-century sociologists typically viewed societies as passing in a singular direction from something old, inferior, and rural into something new, superior, and urban. If it was not formally postulated, an implied inevitable transition was expected to prompt primitive and rural to become civilized and urban countries. For example, Levy (1967) claimed that a non-modernized nation is one in which there is a one-way flow of goods from rural to urban areas, whereas modernized nations exhibit a two-way flow between towns and villages. This view implies that in the modern world, rural is completely erased. Smelser's (1964) theory of structural differentiation indicated that modernization would cause a shift from complicated structures performing multiple functions to multiple

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

structures performing simple functions. The primitive rural family is responsible for all functional needs, including farming, educating children, practicing religion, caring for the elderly, and so on. Different institutions take on these separate functions in modern urban society, thereby rendering the rural family obsolete. Employment in commerce replaces farming; schools take over education, the welfare system provides for the elderly; churches take on religious functions. In other words, rural multi-function families are replaced by modern urban single-function institutions.

Rostow's (1964) Modernization theory of economic take-off involved five different stages that promised to transform primitive rural economies into urban industrial societies with international linkages. What is the spark that puts this into motion? The road to modernization begins with the first step of taking meager resources away from rural people and giving them to urban populations to create industry. He illustrates this by pointing to Meiji Japan. A hefty tax was placed on peasant farmers, creating a resource flow from the countryside to the city, which could be invested in industrial development. Once industry is established on this foundation of dispossessed rural resources, it is only a matter of time before the economic take-off. Put differently, for Rostow, to modernize requires colonizing the countryside.

For Lipset (1963), the process of political modernization begins with urbanization. He felt this was a prerequisite since it would lead to higher literacy levels, the proliferation of media, and eventual capacity for democracy. The implication is that rural nations are stuck in perpetual illiteracy, political backwardness, and insufficient capacity for democracy—thus, they cannot become politically modernized. To modernize, for Lipset, is to overcome rurality.

In short, the Modernization paradigm views tradition and rurality as the central barrier to national progress. It must be overcome to enjoy the benefits of an urban industrial society. This unabashed urban bias (Lipton, 1977) found throughout the development literature was rarely questioned. Indeed, the dependence of urbanites on the resources of rural communities was barely recognized or acknowledged. In contrast, it was widely accepted for at least three decades before being challenged.

Modernization theory was problematic on a variety of levels, its urbanormativity expressing itself as implausible assumptions. The notion that all nations could or should eliminate rurality may seem advantageous for individual nations—urban advantages are undeniable—but the result would be a world economy without natural resources that would be incapable of functioning. The logical possibility that nations may be both advanced and rural is rejected by Modernization theory out of hand. With this starting point, investing in rural communities is viewed as a foolish act that will reverse progress, trapping nations in a condition of primitive inferiority. Further,

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

Modernization theorists generally blame rural nations for their poor conditions, perhaps owing to a lack of motivation or entrepreneurialism (Inkless, 1964). This view is equally problematic because it ignores the exploitative trade relations that rural nations and communities must negotiate to make the privileged life of urban society possible. This point is where the critics from the Dependency school of thought offer valuable critique.

Dependency theory emerged as a critique of Modernization theory in general but was sparked by the United Nations Economic Commission's failed program on Latin America (ECLA). The ECLA recommended that the countries of Latin America build their economies around the export of food and raw materials (rural production) to trade for industrial items from wealthy Northern countries. When Prebisch (1950) took over the ECLA, he wanted a new strategy that involved bringing industrialization (urban production) to Latin American countries while maintaining raw materials' existing production. This strategy came up short in the face of widespread economic and political problems. In turn, development strategists in Latin America began turning to more radical neo-Marxian solutions. One scholar in Latin America who brought the Dependency theory concerns to the English-speaking world was Andre Gunder Frank (1967, 1969). He theorized the condition of underdevelopment through his metropolis-satellite hypothesis. This model would become the crucial foundation for understanding city-to-city trade in the global economy.

Frank (1967) saw development through a different lens than modernizationists, shifting focus from internal drivers to external development obstacles. Rather than blame poor and "primitive" conditions on rural communities and nations, Frank saw their exploitation by wealthy urbanized nations as the primary cause of their woes. He observed that nations like India were more advanced before contact with such colonial powers as Great Britain, who fostered underdevelopment to make their domestic industries in textiles more competitive (evidence for this may be found in the pioneering study by Baran, 1957). Moreover, he outlined the process by which this colonial model worked through metropolis-satellite exploitation. In short, it begins with a powerful nation invading a less powerful nation. Then, to facilitate the transfer of rural resources from the countryside of the conquered nation to the metropolis in the home country, the invader would set up a satellite city headquartered in the conquered land to function as a conduit. Rural villages would produce food and other resources and transport them to the national conduit (often the capital), then sent to either a regional city or global metropolis of a Western country. Put differently, Frank envisioned a world of hierarchically networked settlements. At the top were supreme Western cities; these were fed by subordinate satellite cities worldwide; at the bottom were rural communities dispossessed of their resources either coercively (under colonialism)

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

or out of a desperate need to earn money through export-oriented trade. Frank was on the right path in theorizing the underlying urban-rural systems that characterized the bourgeoning world economy. His theory of metropolis-satellite relations takes into consideration critical urban-rural dynamics both within and between nations. His idea of dominant and subordinate satellite cities comports with our notion of cities' global hierarchy. He was not as clear or explicit about the unfortunate role of rural communities.

An additional contribution from Dependency theory came from Dos Santos (1971), who outlined different types of dependency as colonial, financial-industrial, and technological-industrial. For our purposes, the most valuable is his explanation for the devaluing of rural production—a monopolized international market that tends to replace raw with synthetic materials. Further, as Frank noted, a more powerful nation's control of the economy promotes the siphoning off of any potential profits through such means as transportation, royalties, and technical assistance. The resulting trade deficit leads to greater dependency and control. Once again, what is missing is an explicit statement about the internal colonization of the countryside by the proximate satellite and distant metropolis.

Many Dependency theorists (see, for instance, Dos Santos, 1971; Amin, 1976), turned attention away from city-city trade and toward nation-nation trade. While an aggregate national or international focus is workable, it ignores the fundamental substructure pointed out by Frank—the transfer of resources from rural to urban areas within the peripheral nations and the subsequent transfer from peripheral satellite cities to the core metropolis cities—sometimes with intermediary breaks in lower-level cities. In other words, Dependency theorists did not embrace one of the most valuable ideas it produced. Subsequent research in this tradition, following Cardoso (1973), would emphasize the role of multinational corporations (MNCs) as the agents responsible for transferring resources from peripheral to core nations, with scant attention paid to the underlying urban-rural dynamics within which the MNC acts. The transfer of rural resources to urban centers is facilitated by multinational corporations, especially when they act within a peripheral nation via Foreign Direct Investment (FDI). Lipton (1977) noted that the transfer from rural to urban was facilitated and even forced by the state.

From World-System to World-City System

A flaw of both the Neo-Evolutionists in anthropology and the Modernization theorists was the tendency to confuse accelerating system dynamics with contractions of time. Large stretches of human prehistory were often lumped together as a phase or stage, their time periodization shortening as our own time approached. Rapid changes in system dynamics, such as the increased

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

use of cereals at the end of the last Ice Age in multiple parts of the world or the spread of cities 5,000 years ago, were presented as shifts from one form of human existence to another. The particulars that could be presented in minute detail by twentieth-century Dependency theorists grew more general as one peered back in time.

Generally, the research agenda of Dependency theorists was subsumed by the later development of World-Systems theory. Wallerstein (1974, 1979) was influenced by and later transformed Dependency theory into a novel framework, informed by the French Annales School and by Fernand Braudel (1977). Philosophically, Braudel's influence was expressed in Wallerstein's desire for a more unified social science that took history as its foundation—over the *Longue durée*.

One idea unique to Wallerstein's (1974, 1987) framework was his unit of analysis—not the country or the city, but the historical system. This approach begins with mini-systems, then moves up to world-empires, and finally, world-economies. The first of these, which he claimed lasted until 8000 BCE, were conceived as small homogenous societies that included hunter-gatherers, pastoral, and horticultural societies. These were defined as self-provisioning units that were disengaged from trade. Of course, we saw in part 2 that Paleolithic societies such as the Natufians were, indeed, engaged in trade. Indeed, many (not all) Natufians were also sedentary hunter-gatherers before the Younger Dryas climatic event that forced many villagers back into a nomadic lifestyle.

Similarly, after agricultural villages became more common during the Pre-Pottery Neolithic, they built their economies on the use of cereals that had likely been informally cultivated for generations by simply spreading seeds in useful environments to be gathered at a later time. As the Neolithic continued, the linkages between the villagers and the nomadic population—hunter-gatherers early on but eventually pastoral nomads—allowed for a form of rural production in which nomads could "specialize" in some products (e.g., meat and goods obtained at a distance) while villagers concentrated on cultivated foods. We would problematize the grouping of nomadic foragers with the first settlements of horticulturalists and pastoralists. The assumption that trade was not part of this early period is also untrue. Moreover, there is evidence for the presence of a vibrant gift economy that prompted early trade in luxury goods over surprisingly great distances during this time. The early establishment of such trade relations should be equated with urbanization. Urbanization—as a mode of production that begins with rural products exchanged through trade with rural producers—sets the stage for the growth of the first urban market towns and cities at critical nodes in the existing network.

The historical period of world-empires roughly corresponds to what we identify as the beginning of urban-rural systems. The central urban settlement

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

comes to heavily rely upon trade with rural settlements for its natural resources. Rural settlements, primarily composed of farmers, would export surplus natural resources such as food in exchange for urban products, such as crafted figurines. These urban-rural systems emerged from older trade networks forged between self-sufficient agrarian settlements that eventually relied more heavily on trade with the city—to the point that they were no longer trading surplus resources but the bulk of all resources. Wallerstein's assumption that self-sufficient mini-systems did not trade prevents us from seeing how world-empires came to be. Rather than viewing them as a more elaborate and advanced extension of trade established by mini-systems, he simply envisioned the formation of a tribute system in which subordinate rural settlements would be forced overnight to cede their bounty to the seat of empires—cities. In essence, Wallerstein ignores the Ubaid period. While there is evidence of coercion and war for rural resources, there was more conflict between emerging world-empire cities than between the city and the countryside. There are, thus, good reasons to think that trade may have also occurred in less coerced forms, which would have functioned more smoothly and been less costly for emerging cities that would gain an advantage in being spared the need to engage in constant surveillance and forced extraction.

Finally, Wallerstein's notion of world-economies supplanted world-empires and mini-systems through a process of incorporation. In other words, the world-economies were a network of sub-systems. The logical conclusion of the incorporation process was the eventual creation of a single world economy—itself a network of smaller regional economies (urban-rural systems). As Wallerstein's focus is, in the footsteps of many Dependency theorists, external-looking, he was not primarily interested in urban-rural dynamics. We would offer insight here, however, that at the time of competing world-economies, what we saw were competing advanced urban-rural systems. The unified global economy, understood in this light, is a worldwide network of urban-rural systems. It has focal points in several global cities (Sassen, 1991), networked through extensive trade to a foundation of lower-order satellite cities, networked in turn to countless rural communities and laborers in the hinterland.

Taken together, Dependency and World-Systems theory advanced the thinking of international development beyond the unilinear trajectory assumed by Modernization theory from primitive (rural) to advanced (urban) society by postulating that movement may be upward, downward, or remain stable within the world-system. This move effectively removes the urban bias (Lipton, 1977) from development thinking. Wallerstein specifies how nations might advance to a higher level in the world-system, for instance, by controlling domestic markets through policies such as import-substitution in peripheral nations to allow upward mobility into the semiperiphery. The notions of

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

core, periphery, and semiperiphery could easily be applied at the sub-national level in a way that might mirror Frank's (1967) metropolis-satellite hypothesis. Cities are at the core, surrounding regions are in the semiperiphery, and rural areas fall in the periphery—Wallerstein applied these concepts to entire nations. The hierarchy of settlements we offer (first-order, second-order, and so on) may correspond to this logic. While examining the aggregate country level has some advantages, it misses the fundamental internal urban-rural dynamics within nations, often a continuation of much older trade and settlement patterns, pre-dating the modern world-system by centuries or millennia.

Further, even the wealthiest and most powerful nations in the core may contain peripheral regions that have conditions not unlike what may be found in peripheral nations. Conversely, peripheral nations often have a bustling urban center that offers a quality-of-life fit for a core or semiperipheral nation, even while the rural hinterland suffers under extreme poverty. These internal differences are lost at the aggregate level and thereby hide important urban-rural dynamics. Further, urban-rural dynamics do not always respect national boundaries. This position is clear when a city in one nation comes to rely on the rural production of another—a dynamic that can become coercive, resulting in such outcomes as land grabs (Fulkerson & Thomas, 2021).

Not all world-system scholars are content to remain at the aggregate level. Chase-Dunn and Hall (1997) applied the theory to explore what they refer to as "very small" world-systems—such as the pre-contact Wintu of Northern California. This notion may be likened to Wallerstein's idea of mini-systems. From our perspective, Chase-Dunn and Hall are examining a network of agrarian (self-sufficient) settlements that were beginning to develop trade networks both internally (between Wintu villages) and externally (with neighboring tribal groups). One could see how this agrarian trade system might eventually lead to at least one dominant settlement developing an advantageous position in the trade network, allowing it to grow large, urban, and more dependent on trade. Eventually, this could result in what we refer to as an urban-rural system, with its associated hierarchy of settlement. Though this had not yet fully materialized, in the Wintu case, it was perhaps prevented by the disruption of European contact that led to underdevelopment.

Another advance was made through the combined efforts of urban studies scholars (mainly in the field of geography) and world-systems scholars (mainly in sociology and political science) around the notion of the "world-city hypothesis," first articulated by Friedmann (1986), but developed by the subsequent study of world-cities (Knox & Taylor, 1995; Smith & Timberlake, 1995; Mahutga et al., 2010; Alderson & Beckfield, 2004). The underlying concept of the world-city hypothesis is that cities are situated as nodes within a global network. Indeed, this intercity network is hierarchical (Smith & Timberlake, 2001). Smith and Timberlake (1995) provided some of the first evidence

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

showing linkages between the global cities map to the world-system's spatial organization through an analysis of air travel. This study was updated more recently by Mahutga et al. (2010), who found the world-city system continues to map to the broader world-system, based on new air travel data, but further evidenced by their analysis of global commodity trade data. Evidence of the hierarchical world-city system was also found by Alderson and Beckfield (2004) and Alderson, Beckfield, and Sprague-Jones (2009), who took as their unit of analysis the multinational corporation, explored the locations of headquarters and branch offices. The hierarchy of MNC offices provides a skeleton of the global intercity hierarchy. Perhaps the most compelling evidence of the world-city network is offered by Taylor and Derudder (2016), who also examine corporations and their various offices' locations. They take it a step further and use this data to sort MNCs into 526 cities that are each assigned a "global connectivity" score, providing a clear view of where each city falls in the global hierarchy. Their focus is, however, mainly on the top 152 highest-tier cities. For example, New York City is identified as one of the most connected globally, second only to London. They further outline what they call the "hinterworld" of cities that includes connections to less connected, lower-tier cities and other horizontally linked global cities. This term should not be confused with "hinterland," which would imply rural connectedness.

As we review the world-city literature contributions, from Friedman to Taylor and Derudder, we find that a crucial part of the matrix is missing. The illusion is perpetuated that the world economy is a network of cities trading with one another, leaving the impression that rural areas are external to the world economy, unimportant, and perhaps inconsequential. Even a preeminent global city such as New York could not exist to this day if it were not for the steady-flowing clean water supply that originates in the nearby Catskills, where rural communities have been sacrificed to create reservoirs. Nor would New York City exist if it had historically been unable to rely upon the adjacent hinterland for a reliable food supply.

Perhaps the problem with the world-city literature may be found in the source of data they rely upon—the location of MNC offices (Alderson & Beckfield, 2004; Taylor & Derudder, 2016) or global patterns of air travel (Smith & Timberlake, 1995; Mahutga et al., 2010). Both are urban-centric data sources that ignore the resource flows from rural to urban areas, including freshwater, fossil fuels, forestry products, and agricultural products. In other words, this body of literature has excelled at telling part of the story of globalization by focusing on urban systems. It could also be a function of the lack of data on rural communities, who are often overlooked or ignored by national governments—sometimes by design. Even in the United States, the American Community Survey (ACS) provides imprecise estimates for rural areas due to a lower frequency of data collection than in urban areas.

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

Rural Linkages

A logical question to ask is where rural sociologists and other rural scholars come into this discussion of development and world-city systems. Generally speaking, while rural sociologists have embraced a Political Economy perspective to understand global trade and the place of rural communities, they have been less embracing of world-system approaches. There are only two published articles in the journal, *Rural Sociology*, that even mention World-Systems theory. Most studies by rural sociologists take commodities as the unit of analysis, as part of a broader case study of nations. Gellert's (2010) examination of Indonesian development over thirty years, finds evidence of what he calls an "extractive regime." The idea here is that many peripheral nations form economic and political structures around extractive industries propped up and supported by a global network that includes the World Bank and International Monetary Fund. Gellert reveals this through an investigation of timber- and fishery-based commodities.

Much rural sociological research is on the role of food commodities in national development, as is the case in the recent study by Tobin and Glenna (2018) on Peru's potato production value-chain development. The study addresses the potential for capturing more of the value of agricultural commodities for smallholder farmers as a strategy for national economic and social development. Their implications are primarily found at the individual level, noting that the way actors respond to these initiatives is predictive of outcomes. Bowen (2010) examines Geographic Indication (GI) as a strategy for enhancing food commodities' value through her comparative analysis of tequila in Mexico and Comté cheese in France. Her findings suggest that national governments play an essential role in cultivating GI programs.

Another way rural has come into the discussion of international development is through the examination of environmental destruction. For example, Austin's (2010) analysis of the impacts of the beef industry on the Amazon rainforest—the "Hamburger Connection"—highlights the critical role rural production plays in supporting typical urban fare—fast-food hamburgers. In short, as urban consumers enjoy cheap hamburgers, distant rural people are put in conflict over land-use in a sensitive ecosystem. For instance, cattle ranchers targeted indigenous populations, in some cases leading to death. This was the case for Chico Mendes, who became an icon of the Xapuri rural labor union that opposed the expansion of grazing land into the rainforest. Jorgenson, Dick, and Austin (2010) offered a more general analysis of primary sector exports and deforestation finding compelling evidence that urban consumption is fueled by rural ecological degradation and, we can infer, social conflict.

One of the most impressive collections of studies to consider the impacts of global trade on rural communities is an edited volume by Kapoor (2017).

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

The contributions in this volume each explore case studies of rural dispossession that highlights the critical fact that rural people are resistant and highly mobilized to maintain their ways of life even in the face of economic pressures. The cases examine indigenous groups' experiences, peasant farmers, vulnerable capitalist farmers, those laboring in mines, forest dwellers, pastoralists, and those who make a living from fishing. The theme of resistance and mobilization was selected to highlight that rural people are not merely passive or willing participants in exploiting their resources or the brutality they often face as they resist it. Instead, they are active agents of social change, sacrificing a great deal to achieve a level of social justice. For instance, the study by Swamy and Revathi (2017) shows how the government of India attempted to use reconstruction from a 2004 tsunami as a pretense to relocate traditional rural fishing communities further inland and clear the way for commercial uses such as shrimp aquaculture and tourism. Traditional fishers resisted through mass political mobilization, protests, direct action, and legal action. While case studies such as this provide a valuable contribution to our understanding of rural struggles in the context of national development, the causality points to an abstract notion of neoliberal policy. While not wrong, this obscures the role of urban interests. For instance, as Mookerjea and Misra (2017) studied rural protestors gunned down by police as they objected to a potential coal power plant in Rampal, Bangladesh. While they point to the primacy of neoliberal policies, they did not point out that the ultimate reason for this power plant and those policies was the powerful urban productive and consumption interests in Bangladesh and beyond. Most of the commodity analyses with a rural focus place ultimate blame on global capitalism and neoliberal free trade policies but fall short of identifying urban dominance over the countryside—the internal urban-rural dynamic—as the ultimate cause.

Over the last seventy years, development thinking has circled the issue's crux—urban-rural system dynamics—without fully addressing it. While initially motivated by a desire to help rural people, communities, and countries, scholars of the Modernization perspective believed the best way to do so would be to urbanize and eliminate any trace of rurality. The notion of a modern rural community was thus outside the scope of their paradigm. When Dependency scholars critiqued modernizationists, they did not do so based on their urban bias but on ignorance of external international relations. Frank's metropolis-satellite hypothesis highlighted important city-to-city trade dynamics but left rural-urban trade in the background. When Dependency theory subsumed under World-Systems theory, the international picture became more elaborate due to the semiperipheral category's addition. However, once again, there was no call to incorporate an understanding of urban-rural linkages. Advances in understanding city-to-city trade were made

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

by world-system scholars who searched within nations to identify a global hierarchical network. Once again, the perspective did not take up the issue of urban-rural exploitation, leaving it in the background. Finally, while rural scholars brought to the foreground the damage experienced by rural people in various locations, explicating what this means for national development, they have not always drawn a clear connection between rural exploitation and its chief driver—urban production or consumption. The missing piece in all of this literature is urban-rural systems—not just urban systems or separate rural systems.

THE WORLD AS NEW YORK'S HINTERLAND

New York is not, of course, the only global city. Saskia Sassen concentrated on New York, London, and Tokyo in her classic (2001 [1987]) *The Global City*. In contrast, Abrahamson (2004) focused on these and added such cities as Paris. Nevertheless, the twentieth-century later witnessed such a coalescence of cities and their urban-rural systems into one pre-eminent system that the contours of past system mergers are today appearing on a global scale. As complex systems coalesce, they take advantage of economies of scale and agglomeration and trend toward corporate mergers and wealth concentration—typically among a few global cities. Production can be spread across the world, with a phone perhaps assembled in China with parts originating in the United States, Germany, and South Korea, and composed of raw materials mined in Africa and South America. The ability to produce more with fewer workers in fewer places increased profits while casting untold millions out of work. The capitalist drive for profit can easily explain this phenomenon, and hence our Neo-Marxist critique of capitalism is safe. There is a fly in the proverbial ointment, however: the United States, Germany, and South Korea have different forms of capitalism, and China still carries the mantle of communism.

There has been, for the past generation and a half, tacit agreement upon the need for a post-Marxist paradigm. Stated simply, social scientists have been debating capitalism for many decades now. For the capitalists, the system's success is evident in its progress forward despite its flaws. For the anti-capitalists, the system's failure leads to the immiseration of the masses and destruction of indigenous communities. For some, its overthrow is a modern messiah: development driven by a desire to elevate humanity rather than a contemptible drive for profit. In a sense, our question is simple: Were capitalism to end somehow, would the dynamics found in the world-system foster a utopia? To the extent that capitalism is a late manifestation of much older urban-rural dynamics, the answer must be no.

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

Let us consider the core of urban-rural dynamics. Rather than profit-seeking, this core involves the caloric well—the sheer weight of a population—and its subsequent demand for food and other resources. We should expect the geographical expansion to (approximately) mirror population expansion. There is evidence of expansion, augmented by periods of technological innovation that redefined the contours of the caloric well: the broad spectrum revolution, the agricultural revolution and subsequent domestication of animals other than dogs, and the evolution of cities. Urban-rural systems were born of this continued expansion as population pressure required it, and our world continues to build on this expansion as the global population increases exponentially. Capitalism is the modern incarnation of these dynamics, and with it comes some unique attributes.

Capitalism demands a surplus of money, not rural resources. In this way, capitalism is perhaps uniquely able to command urban production across the globe. It is not so much new as it is evolved. This warping of a surplus was likely felt in the earliest money economies, and indeed, the Romans created a highly complex economy with the use of their ancient banking system. However, the scale of the modern money economy is far beyond the imagination of a Roman citizen as it globalizes production and has developed financial instruments that can seemingly create wealth where nothing but money existed before. Of course, this is illusory: the system only provides the well-monied resources when those who sell, whether food, labor, or any other product, deem their paper bills or digital currency (e.g., cryptocurrency) of some value. In principle, food or water can be valued above money—think of the hoarding during a pandemic, for instance.

Rural production is at the root of industrial capitalism, just as it was at the root of ancient Uruk or Cuzco's economy. The current spatial and epistemic distance found between rural producers and finished products is far beyond the imagination of an ancient Roman. Precious metals are mined in sub-Saharan Africa, refined through a complex commodity chain and countless production circuits, then finished as a cellular phone leaving a factory in China for sale in the United States. The consumer in a developed country can, as a result, remain smug in their superior treatment of their labor force and the clean water and air in the atmosphere. Indeed, a New Yorker can bask in the environmental triumph of a reforested Catskill Mountains and the ability to once again swim in the Mohawk River. However, the sense of superiority is poorly placed as these victories are evidence of the further externalization and distancing of environmental impacts. Forests return because local farms are no longer viable in a globalized world. The park-like landscapes close to home are testimony to the distant depletion of the Ogallala Aquifer or deforestation in South America. The air has again become breathable as the most noxious production practices find new homes in the developing world.

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

Harmful or dirty production practices continue afoot, though removed from view, working their way down the global hierarchy to cities that will embrace them.

If the effect of epistemic and spatial distance dividing rural and urban production aggravates environmental disparities, the impact on labor is similarly more severe. Rural labor has been alienated from the surpluses they produced since the rise of the first urban-rural systems. Ubaid temples allowed for a dedicated caste of sages to study, administer, and rule. Field laborer gave their surplus to the temple—a dynamic that accelerated into the Uruk and later periods. We today highlight these dynamics as problems affecting the developing world, noting the vast disparity between, for example, the cost of a cup of coffee and the low price paid to the coffee farmer. Capitalism organizes this exploitation under the logic of profit, but it is a continuation and upscaling of earlier dynamics. Were capitalism to end tomorrow, urbanites might find the price of a cup of coffee declines as the farmer received a higher price. However, the basic dynamic of taking a surplus from one region for the benefit of another would still be in place. Capitalism organizes production and trade, sometimes over a great distance, but it does not free a city from its reliance on rural places and people.

Even in urban production, capitalism seeks out rural labor due to its cost-effectiveness. Historically, this involved importing rural laborers, many of whom were displaced, for urban factories. The earliest textile mills of New England and upstate New York relied on farmers or former farmers, followed by teenage children living in boarding houses and later by immigrants of rural Europe displaced by famine or war. As rural labor became proletarianized and labor costs rose, capital sought new labor markets free of unions or regulation. We saw this in the deindustrialization of Utica's textile industry as it moved south and, later, to Central America. As we write, rural workers' movement to China's largest cities similarly provides global capitalism with newly proletarianized labor, an ironic situation given the communist government. However, even now, transnational corporations are seeking out even lower-wage labor in rural Africa. As in the United States and China, it is fueled by the migration of rural laborers to urban centers where the workers outnumber available jobs—a boon for capitalists. Here, the capitalist obsession with profit most severely warps and builds upon the underlying urban-rural dynamics.

The expansion of urban-rural systems across national boundaries increased spatial and epistemic distance and extends the existing dynamics of urban dependency and domination across the globe. Urban domination was achieved during the Uruk Period by combining outright conquest and trade in urban goods to the periphery that became necessary. In effect, the organic solidarity suggested by Durkheim as a consequence of an expanding division

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

of labor was also related to the increasing social complexity of the urban-rural trade network, and this fertilized increased rural dependence not on individual cities but on the network as a whole. This situation was also found during the Roman Empire. By the twentieth-century, this dynamic was described by Dependency theorists who accurately perceived the dependence of developing economies on the network but failed to see the root of those networks in the more profound logic of urban dependency. Empire building and colonization can thus be seen as an expansion of the urban-rural network across vast distances. The colonized territory is part of a super-hinterland beholden not to a given city but to the network that superordinate cities depend on for survival.

The fate of the colonized abroad is ultimately tied to the internally colonized. More research is needed on how colonization differed in the past from the capitalist model. In theory, an urban-rural system will expand until a caloric balance is met: the calories obtained from the periphery match the core's demands, including all sub-systems. We saw in part 2 that this is unlikely the case, and was not the case even with hunter-gatherers, as human populations tend to split when they *perceive* a potential for a shortage. As such, some degree of rural surplus is to be expected. Given the warping that a money economy introduces to caloric balance, this demand for surplus should grow with the introduction of a media of exchange—and in fact, did seem to do so during the Classical Greek and Roman periods. With an almost exclusive focus on monetary exchange and surplus, capitalism would demand even higher rural surplus levels, as is necessary to drive commodity prices ever lower. If this is the case, then capitalist models of colonization would be particularly exploitative of colonized regions. In essence, the stark differences in wealth and development between core regions and the periphery are expected aspects of a global urban-rural system.

Due to the capitalist drive for profit, the urban-rural system's overexpansion is meant to take advantage of less costly regions. It thus pits internal hinterlands in competition with those in the developing world. This feature appears to be unique to capitalism: the immiseration of external colonies and the inner hinterlands. Kennedy (1989) describes the effect of world empires overextending and collapsing from the inside out. While internal weakness has arguably always been a component of collapse, a capitalist society may be uniquely vulnerable. It may be remembered that even the ancient Romans, in their colonization of North Africa and Egypt and subsequent use of the region as the empire's breadbasket, also involved their incorporation into the political boundaries of the empire. As vulnerable as Rome was to a potential food shortage by losing Africa, it was safely part of the empire to the Roman mind. It is primarily in capitalist countries that a stated reliance on the trade network for food staples is found, and the manufacturing economy is even more vulnerable.

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

As early as 1981, Bluestone and Harrison (1984) wrote of the "deindustrialization of America." Throughout the 1970s and 1980s, large swaths of the manufacturing economy of North America were transformed by a combination of new technologies (computers and robots in particular) and the externalization of assembly to low-wage, low-regulation nations such as Mexico and China. By pursuing the higher profit margins, American firms accelerated the decline, not of individual cities but rather the entire Great Lakes region. The loss of manufacturing jobs, particularly unionized jobs, in turn, placed more significant downward pressure on wages. Adjusted for inflation, median hourly wages for men stagnated throughout the remainder of the twentieth-century, while working- and middle-class families relied on two incomes. By the early twenty-first century, credit card and mortgage debt spirals reflected a working-class trying desperately to maintain a middle-class standard of living while basic infrastructure suffered from a lack of investment and essential maintenance (Reich, 2010; Temin, 2018). By 2016, for the first time in American history, the life expectancy of working-class whites, in rural communities in particular, actually declined (Case & Deaton, 2020). Perhaps unsurprisingly, a coalition of long maligned rural workers and those in rust belt cities, as many African Americans simply sat out the election, responded to calls to "Make America Great Again." They flipped once reliably Democratic Pennsylvania, Michigan, and Wisconsin for the Republicans. As a result, Donald Trump won the electoral vote and the presidency (Fulkerson & Thomas, 2019).

URBANORMATIVE POLITICAL ECONOMY

As World-System theory was redefining how social scientists understood the global economy, urban sociology's influence was profound. The Political Economy school was a response to limitations in earlier Human Ecology models, and as such, blended the Neo-Marxist and world-systems approaches to form the new perspective. Political Economists saw the city as a node in the broader network of cities, but this focus on the network typically looked city-to-city. An urban hierarchy was assumed, but most often, it was the global cities that received attention. Many of the pioneers were located in the northeastern United States and particularly in New York State. The celebrated couple, known simply as "The Fainsteins" (e.g., Fainstein & Fainstein, 1986; Fainstein, 2001), was in New York City. John Logan (*Urban Fortunes*, Logan & Molotch, 1987) and Nancy Denton (*American Apartheid*, Massey & Denton, 1993) were at the University at Albany upstate. Wallerstein himself was at Binghamton University in between. Given the centrality of New York State, upstate and down, in the emerging Political Economy school, it

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

is baffling that so little work was done in upstate New York when deindustrialization was actively transforming the entire Great Lakes region. Instead, much of the work on deindustrialization, particularly in non-elite cities, focused on the Midwestern United States (e.g., Markusen et al., 1999; Ofori-Amoah, 2007; Connolly, 2010).

There was, of course, some work, but it often reflected Neo-Marxist interests. Rabrenovic (1996), for example, compared the fates of neighborhood associations in the service sector of Albany, the state capital, to deindustrialized Schenectady 15 miles away. The comparable size and proximate locations made the two cities an ideal region to study the focus of her interest: community organization. The result was empirical evidence that economic hardship of the kind that hit Schenectady during the 1980s and early 1990s hurt organizations in both elite and more impoverished neighborhoods due to the lack of funds citywide. In the process, we learned something about the impact of economic restructuring itself on internal politics. The discussion of economic issues mirrored the discussions of political-economists who examined larger cities and regions.

More squarely in the Great Lakes, the deindustrialization of Buffalo was, due to the sheer size of the city compared with New York's Capital District, was even more dramatic, and two books focused on the fate of the city. Goldman (2007) focused nearly exclusively on the city's politics and personalities, positing an explanation that can be summarized as the "idiot theory." Individuals' misdeeds and bad decisions are essential, but the structural conditions that lead people to behave as they do are missing in such explanations. Dillaway (2006) told a similar story but focused more on the macroeconomic forces and their impact on corporate decision making. Similarly, policy decisions were also contextualized. Both books stress the impact of the Saint Lawrence Seaway on the Port of Buffalo. The significance was profound—Buffalo would lose its first-order status—though it was not fully realized.

Thomas (2003) seized on the urban-rural dimension in his economic restructuring study in Utica and two communities in the hinterland. The approach allowed an analysis of cultural mechanisms underlying urban renewal-like operations in smaller towns and differences in the experience. Nonetheless, Thomas failed to grasp the broader patterns. Utica's hinterland to the southeast was stripped away by trade directly with New York and the rise of Oneonta as a third-order center. The building of Interstate 88 during the 1970s solidified a relationship of the territory immediately south of his study area with other cities: Albany and Binghamton. Similarly, the analysis of Utica's loss of status to competitor Syracuse 45 miles away stressed corporate investment but did not dig deeper. Perhaps most damning, he failed to analyze more recent demographic trends around Bosnian and Vietnamese immigration in the city (e.g., Bass, 1996; Smith et al., 2013).

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

The struggles of upstate New York were a microcosm of the wider Great Lakes region. A lack of significant social events cannot explain the region's apparent disinterest for the Political Economy school. The focus on global cities to the near exclusion of second- (and third- and fourth-) order centers reflects an urbanormative worldview. New York, Chicago, and Los Angeles provided exciting research opportunities and fine restaurants, not to mention lots of sites to see. Deindustrialization in cities such as Utica and even Buffalo inspired pity but little desire to visit, subjects of lofty prose meant to elicit sympathy.

AN UNDERLYING DYNAMIC

By and large, the Political Economists got the story right—the quest for profit combined with new technologies and capital mobility to dramatically restructure the American economy. Chasing capitalists around the world, analyses of real estate rackets (e.g., Feagin, 1983), and the influence of public policy (e.g., Mollenkopf, 1983) were all logical and understandable avenues of research. The manifestation of urban-rural dynamics in today's capitalism, and the issues affecting the world today cannot be understood without knowing the advantages and complications of capitalism. Underlying capitalism, however, are older and more fundamental urban-rural dynamics rooted in real environmental and biological facts. Should we enter a new post-postmodern world of urban utopias and freedom from capitalist oppression, we will still need to eat. Malthus wins again.

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

Chapter 14

Urban-Rural Dynamics Revisited

From our modern perspective, it is tempting to think of various social categories as stable and natural, but as social scientists, we know this not to be true. We see this in every sort of categorization. A Catholic or Jew in the United States was not necessarily considered "white" in 1950, but few in that nation would characterize a descendent of Irish or Polish immigrants as anything else today. Nation-states such as France and Japan are seemingly stable and natural polities reflective of cultural and geographical sameness, but this ignores the presence of cultural minorities and a history of the same territory containing many different polities before the rise of the French royal line or Tokugawa Japan. In this book, we have argued for a different approach, one in which failing states are not so much fractured as simply decaying to their constituent parts: urban-rural systems. From this perspective, the modern world-system is a late incarnation of an ancient pattern indeed, and this pattern is rooted not in sociocultural constructions but in the morphology of the natural world of which we are all a part.

If we accept the notion that the world-system in which we live today is a globalized urban-rural system, then we should expect a similar set of system dynamics that acquire characteristics that have emerged from the greater complexity of our own time. With this in mind, it helps to return to our original hypotheses.

> **Hypothesis 1:** *Humans are agents, and more agents in interaction involve more energy in terms of consumption and requirements.*

It would be difficult to argue that the world's population and its constituent world-systems did not expand during the modern era. If there is a dominant story of the period since 1600, it is global population growth. As each

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

individual is an agent interacting with other individuals and the system overall, energy demands have expanded exponentially. In fact, we increasingly forget that energy is ultimately at the service of human metabolism, and the wars fought over oil supplies are ultimately outward expressions of a highly complex network that have evolved to not only feed humans but to give them the wherewithal to buy the food.

As social scientists, we have stressed the caloric wells of human settlements. This is a simplification: human settlements have been home to non-humans since the Paleolithic, and non-humans are also part of the caloric well. Moreover, since humans are hardly the only creatures with caloric wells, this model should, in principle, apply across the natural world. For example, in terms of their ability to alter their natural environments, beavers might actually be more destructive than Paleolithic hunter-gatherers. Of course, nature adapts: beavers build aquatic ecosystems, and human cities are splendid environments for rats. Similarly, the caloric well of a large hive of bees or nest of ants exhibits social stratification and broad resource horizons. It is possible that the distinguishing feature of human settlements is the propensity for settlement hierarchies made possible by human language and culture. It is a potentially fascinating avenue for further research.

Hypothesis 2: *The pattern of settlements reflects the efficiencies as discussed with the "caloric well."*

We have traced the development of settlement hierarchies back to the Ubaid period over 7,000 years ago. This means that they were in existence long before even the most historical of world-systems researchers begin their analysis (e.g., Chase-Dunn & Hall, 1997; Chew, 2001; Frank & Gills, 1996). From these early hierarchies, themselves building on earlier interdependencies between Neolithic villages and pastoral nomads, social complexity grew. This evolution should not be seen as a progression; however, decay occurred at various points throughout subsequent history when system parameters experienced change. This change could be environmental or political or otherwise, but decay relies not on a single cause but instead on the interactions within and between each parameter reacting to the changes. Decay is, in other words, a matter of decelerating dynamics in contradistinction to the accelerating dynamics so celebrated during periods of growth and increasing complexity.

Settlement hierarchies, like the systems they reflect, are thus not stable. They are continually evolving, and from the perspective of the *longue duree,* the rise and fall of great cities is quite discernible. Popular interest is often focused on the major cities within a system—Ur, Jerusalem, Rome, etc.—but it reflects changes throughout the entire system. This was evident in New

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

York's hinterland. Throughout the twentieth century, the Greater New York City region continued to grow even during periods of population decline in the inner city due to suburbanization—a matter of internal organization of the wider settlement. During the same period, however, the urban-rural systems underwent considerable changes as Buffalo transitioned from a first-order to a second-order city, the wider Great Lakes region suffered tremendous deindustrialization as manufacturing found new homes in New York's expanded hinterland (i.e., the world), and even a simple change such as Oneonta overtaking Cooperstown as a third-order center south of the Mohawk.

Throughout Part II of this book, we utilized the classifications of settlements in New York as they are today: New York as a first-order, Utica as a second, Oneonta as a third, and so on. In doing so, we have ourselves oversimplified the evolving dynamism in the service of literary consistency. Perhaps more accurately, we should picture a time before the American Revolution when even New York City looked into the hinterland as much as out, a colonial port city on the coast trading with a first-order Albany that traded with the Iroquois, the Palatine Germans, and the French for the wares of the interior. We can even see a continuation of this status into the nineteenth century as a load of cotton on its way to textile centers around Utica and Cooperstown could pass by Manhattan and dock at Albany. We can even discern a time early in the century when small frontier settlements such as Utica, Cooperstown, and Fort Plain were largely self-supporting and thus functioned as first-order centers with particularly local resource horizons. It was the economic integration of the region into a cohesive whole, the intermingling of their respective caloric wells, and increased need for cash to facilitate trade throughout the region that resulted in the coalescence into one urban-rural system. That coalescence allowed for the recentering on one first-order center, the largest city and its global port, and the hierarchies that resulted.

As the New York urban-rural system resulted in a realignment of the settlement hierarchy, globalization is doing the same. We can intuit a reshuffling of global cities into a new hierarchy of first-order centers: New York, London, Tokyo, as Sassen (2001 [1991]) put it. In time, even such important national centers as Boston and Chicago could eventually be seen as second-order centers, with every other city taking, in a sense, a step down. But as New York continues to expand its exurbs deeper into the hinterland, such cities as Albany and perhaps even Oneonta may in the coming decades become part of the extended settlement that is New York. Many newer developments in the Catskill Mountain region are today on large residential lots, challenging our notion of "urban space" as houses appear as islands in the forest canopy, and the mountains are chewed up five acres at a time. Such major global cities as Tokyo and Hong Kong have expanded their settlement structures similar

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

distances with the use of high-speed rail, allowing authorities in those countries to pre-plan development and protect environmentally sensitive areas by simply not placing stations nearby. In contrast, American urban planning has not approached this level of foresight, and such grand schemes are regularly dismissed as pipe dreams proffered by the likes of Robert Moses and his intellectual heirs.

Of course, such integration with its tendency toward system centralization, particularly in economics, has downsides. Interruptions to supply chains, for instance, can be irritating when the product is coffee, but as discovered by New York State during the COVID-19 pandemic, it can be deadly when the product is personal protective equipment and testing supplies. As during the Great Catastrophe of the Late Bronze Age, such events can force the reemergence of more localized production and distribution, trading efficiency for increased stability. Almost as breath, urban-rural systems grow, peak, and decay over time: such as the laws of nature.

Hypothesis 3: *The system as a whole exhibits scaling and self-similarity.*

We have seen self-similarity at varying scales in each urban society we have discussed. As early as Uruk, monumental temples were upscaled versions of religious nooks and high places found in non-elite settings. By the dawn of the literary record during the Early Bronze Age, it is evident that there is a relationship between cultural practices and the built environment. As we saw, this can also have a political dimension, and as such, the attempt by Judahite kings during the Iron Age to centralize worship at the elite temple in Jerusalem is understandable.

We see similar effects in our own time, though the heightened social complexity might obscure this impact through ubiquity. A future archaeologist may someday pronounce 2020 as being in the iPhone era. The mechanism for this ubiquity is the corporate system, but the ubiquity itself is reminiscent of other cultural and technological periods. The profusion of similar pottery styles over such a large region during the Halaf Period was a similar phenomenon, although the mechanisms were more likely ideological as well as technological. In a like manner, the beveled-rim bowl of the Uruk period had a technological influence (they were mass-produced) and served economic (but not Capitalistic) need. There were scaling effects as well: larger settlements had more of both.

Scaling effects are prevalent in the corporate economy as well. This is evident, for instance, in the retail sector. The flagship Macy's Department Store, the world's largest, stands in New York's Herald Square. Throughout the wider region are a number of smaller Macy's, and larger cities typically contain either larger stores, more of them, or both. This dynamic is found

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

throughout the economy, and in twenty-first-century America, the presence of such outlets as McDonald's is often perceived to be a requirement of a community.

> **Hypothesis 4:** *Stability in the system parameters at a particular scale will result in stability at the said scale*, and **Hypothesis 5**: *Changes in system parameters will result in changes in systems dynamics*.

We had earlier discussed Hypotheses 4 and 5 separately, but they are logically linked. Stability in system parameters at a particular level of organization yields stability at that level even when lower levels exhibit variation. We see this in the world-system today. World energy consumption relies heavily on the extraction of fossil fuels, and this is based to varying degrees on coercion. This system is by and large stable, although it rests on continual coercive control of populations found in those nations, often both sparking and suppressing significant social unrest. Regions willing to participate in this system of extracting local resources and selling them for money rather than their own power needs are defined as "allies" regardless of how undemocratic and authoritarian they are. Those viewed as problematic, particularly those too attuned to local needs rather than the wider system demands, are often isolated, undermined, or targets of warfare. In other words, the maintenance of stability at one level (world-system) can translate into instability on another (nation-state). Notably, a capitalist economy is not necessary. In principle, if localized instability (war and oppression) does not affect higher-order parameters (i.e., the global economy or superpower status), then the system remains stable. However, world history is full of localized conflicts that, in fact, did grow enough to affect system parameters at higher levels.

Stability should not be seen as inherently "good." The global stability of fossil fuel consumption, even in the face of localized attempts to switch to more environmentally responsible energy sources, is affecting a global system parameter: the climate (Emanuel, 2018). As a system parameter at the world-system level of organization, as the climate continues to change, it will affect the wider system dynamics of polity, economy, and culture. This could take form in a variety of ways. The preferred course for many people would be to reorganize the global economy to consume energy more responsibly. This necessarily also means a reduction in consumption overall, and we would also stress a downsizing of the global caloric well through population decreases. This seems rather unlikely, however, as the global economy is based on continual demographic expansion. Capitalism relies on continual growth, and both politicians and business leaders live in mortal fear of economic contraction. Capitalism rests on profit accumulation through the warping of costs that accrue across a resource horizon that creates an oversupply

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

of labor and resources that drive down prices; its overthrow might mitigate the more toxic effects of the current order but not fully remedy the situation. In other words, to the extent that a post-Capitalist economy would still rely on surplus rural labor and resources to support burgeoning cities, the exploitation of people and nature will continue. As we noted in the Introduction, we have often said to one another, "once again, Malthus wins."

Hypothesis 6: *Continual contact between adjoining systems results in the system coalescing into a new and higher-order system.*

We have witnessed the coalescence of urban-rural systems from their inception. Before the rise of the first cities, they were small and numerous, and as their success deepened the caloric well and forced the resource horizon further still the settlements grew larger and the hierarchies more elaborate. A regionalized urban dependency was the impetus behind the Uruk Expansion and the earliest aggressive war during the fourth millennium BCE. These dynamics were found in all subsequent urban societies as the underlying dynamics were the same, even in regions with different historical trajectories and cultural traditions. That such dynamics were evident in distant China and Mesoamerica points to not a cultural but rather a natural root cause: urban dependency. What more could be said?

The modern world-system has globalized labor and rural production, but the full cost is not yet realized. Past societies expanded their boundaries to meet caloric demands. All too often, the coalescence was bloody, or rooted in inadvertent epidemics among populations not previously exposed to disease, or even merely through trade that, whether at the point of a bayonet or usurious lending, benefited the dominant power. In practice, agricultural populations are dispossessed of their land or encouraged to grow cash crops and in this way are brought into the cash economy, and once established, the dispossessed are forced to work in extractive industries or manufacturing for wages that may or may not afford a living beyond subsistence, the profits gleaned from their products accruing to urban elites in core countries. No matter the level of living, they are now dependent on the cash economy of the world-system. Coalescence has historically been used as a safety valve, a mechanism to control growth through the addition of territory, resources, or new labor. Of course, success only further deepens the well and requires further expansion. With the world-system, we near the end of that cycle, millennia in the making, and enter a world where there are no more safety valves. We will do our best to convert desert into farmland, divert rivers, and despoil the environment on a regional scale. One day, we may find it necessary to foul our natural preserves in places like the Catskills where farmland has been reforested. We will entertain fantasies about urban farming with skyscrapers

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

filled with corn and cows, and we might even turn to the humble cockroach not as a pest but as a source of protein. And when we have done all we could do to intensify production to support our cities, our success will be rewarded by nature whispering in our ears, "Malthus wins."

HUMANS ARE NATURE

As a society we have grown accustomed to thinking ourselves to be above or apart from nature, but we are not. We evolved from a last common ancestor with squirrels and have occupied similar environmental niches for millions of years—it is no wonder that our cities are so ideally suited to rats! Our diets remain eerily similar to other apes, and our tool ability is shared with chimpanzees and our ability to negotiate through a power structure shared with gorillas. Our own human ancestors built on these gifts inherited from our last common ancestors with other primates eventually developed languages and the complex cultures they enable. Our accumulation of knowledge and new technologies has proceeded exponentially, but we are little different in our biology and intelligence from our Paleolithic ancestors. If we seem different from our kin living at Ohalo II many years ago, it is because our world, the modern World- System, has been evolving not for 500, or even 5,000, but for 20,000 years and more. When we acknowledge our own place in nature and the depth of our social evolution, we can better understand ourselves and our societies. As in any of the sciences, this goal is complicated by a preeminent consideration: measurement.

Measurement is at the heart of the scientific method: no hypothesis can be tested without the measure of change or lack thereof. To the extent that a theory conceptualizes a variable that can be measured, we can be confident in the results. The introduction of complex multivariate relationships and/or scaling effects limit theory testing. Experimental methods become unfeasible, and predicting the behavior of higher levels of organization from aggregated agents cannot capture emergent characteristics. The passage of time and the evolution of a system must be discerned from longitudinal data, forfeiting the precision available to cross-sectional studies. This is not unique to the social sciences: any science rooted in the study of complex adaptive systems faces these issues. This limits meteorology's ability to predict weather far into the future and evolutionary biology to predict the human species' eventual capabilities in a hundred thousand years. For social science, we can be sure of the current world-system's eventual decay but not predict the day or time. Just as scientists had long predicted a pandemic but not the date of its arrival.

The system parameters of urban-rural dynamics consist of a mix of variables that are measurable to differing degrees. The economy is home to

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

any number of measurable variables: costs in money, interest rates, profit margins, agricultural output, value-added by manufacturing, and so on. Smil (2017) has worked through the energy produced by varying technologies, from human labor to water wheels to modern fossil fuels. We started this work with the daily caloric needs of humans plus energy expended to attain those calories. The other parameters, however, present bigger issues.

Most environmental factors are similarly measurable, but the sheer number of environmental variables is difficult to fathom, much less measure. Whether of humans or other organisms, population is simply counts, and based on counts, such numbers as the daily caloric need can be calculated. We can trace resources from their natural source to settlements and even measure diverse environmental factors such as ambient temperature, amount of available water, and aspects of the built environment. These measures can be used to model more comprehensive elements of the system, such as climate change.

On the other hand, polity and culture being rooted in the subjective experience of interacting agents, present significant challenges to measurement. Direct measurement, even in a cross-sectional study, is difficult. Even in studying a complex organization, the bureaucratic structure is strongly correlated with power, but it is not an exact relationship. A president's secretary's power will often outweigh the power of middle management, in at least some issues, despite an organizational table indicating the contrary. Measuring such variables can be approximated through the use of indicators: occupational prestige studies conducted by the National Opinion Research Center, for example, have shown remarkable stability in the status hierarchy since the mid-twentieth century. They are, nevertheless, indirect measures.

The intersection of the power structure and culture further complicates measurement. To gain and maintain power requires the utilization of culture: ideologies, religious beliefs, symbols both sacred and profane. This is most evident at the top of the hierarchy, but it is found throughout a society, community, or complex organization. The inauguration of a president, for example, typically weighs heavily with symbols of group unity: flags, stylized icons mimicking symbols such as a Stars and Stripes banner, of seals of the organization. A leader wishing to project corporate unity would likely highlight such symbols. In contrast, a leader wishing to promote their unitary power might add an icon symbolizing their persona or leadership, such as their pictures or their own personal symbol, thus subtly though powerfully tying their persona to the well-being of the organization. The effects of such cultural manipulations are not easily measured but can be profound—an opinion survey will likely miss the emotive response no matter how well designed.

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

Though the emergent property of social interaction patterns and knowledge exchange, culture exerts an influence on individual agents through a feedback mechanism. As a complex adaptive system, a society or organization develops a logic and agency dependent upon individuals' interaction but emergent over them. As such, an individual can impact the trajectory of social evolution only to the degree that they understand and build upon such dynamics. Hence, the importance of understanding history. However, working at cross-purposes is a myth prevalent among members of the managerial classes: the unitary executive. Such a leader can be successful to the extent that their subordinates share a belief in the myth, and this requires a combination of cultural beliefs and the leader's ability to convince others that they are such a leader. This is a careful dance as overstatement can result in unrealistic expectations that are ultimately unmet, but understatement can fail to send a message of legitimate and competent leadership as well. As events unfold over time, a feedback loop can emerge. To wit: a new executive believes they have a unique ability to solve organizational problems. This belief causes them to believe subordinates' attempts to educate the executive as a mere complaint, resulting in executive dismissals of the earlier history. If this opinion is expressed, their dismissiveness is perceived as arrogance or disrespect, potentially limiting the executive's future effectiveness.

Our difficulty, though not impossibility, of measuring polity and culture ultimately limits our ability to measure urban-rural systems more broadly. Just as in meteorology, this introduces a severe limitation on prediction. We can predict that the current world-system will end but not know when or under what circumstances. We can predict that another world-destroying comet such as that which destroyed the dinosaurs will strike again but not when. We can predict that there will be another epidemic or war but not how many will die or when. Environmental demography is complex, and we know that eventually Malthus wins, but we cannot know when.

POST-SCRIPT

Since the late twentieth century, social constructionist explanations of social structure and change have grown popular, even dominant. Across the social sciences, such explanations offer insight that a purely Social Structuralist perspective cannot. For instance, Cauvin's (2000) discussion of the influence of cultural and cognitive shifts that lead to the earliest agricultural villages cannot be ignored, and the insights from such sites as Gobekli Tepe even strengthen such an argument. Nevertheless, it is worth considering what social constructionism offers individual scholars on a psychological level that social structuralism cannot.

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

To read Malthus is to read lengths of scientific prose pockmarked by crazed fits leveled at the supposedly immoral poor he held responsible for overpopulation. Consider the significance: in the face of an argument about the limitations of demographic expansion in a naturally constrained environment, overpopulation cannot be solved without famine, war, or disease. Faced with this dilemma of urban dependency, the eventual price of success is ultimately a resumption of scarcity. This Social Structuralist reality presented Malthus with psychological stress, and that stress was relieved by appeal to a social constructionist solution: changing the morality of the masses. Hemmed in by the iron bars of ecological reality, a cultural change, as difficult as it can be, is at least in the realm of the possible.

In *1984*, faced with the reality of an intractable totalitarian machine, Winston observes, "If there is hope, it lies in the proles" (Orwell, 1950, 69). In the line and paragraph that followed, Orwell was critiquing a central axiom of Marxism: the eventual class-consciousness of the proletariat and subsequent political revolution to overthrow capitalism. The appeal of social movements and the political and cultural change they invoke is that they occur. Our scan of world history is replete with such changes: the role of Christianity in the eventual collapse of the Roman Empire, for example, or the overthrow of monarchies that resulted from the American and French Revolutions. Social movements can indeed be great harbingers of positive social change, but like any messianic hope can also instill a fervor and certainty that can serve as justification for almost anything. We should remember that Christianity's ascendency did not merely seek to coexist with other faiths in the Roman World but consciously destroyed temples throughout the Mediterranean basin, their gods redefined as demons. Even in the absence of such overcompensation for past oppression, social constructionist answers to social issues, whether poverty or oppression or even urbanormativity, must consider social structural realities. Overpopulation and urban dependency, dynamics fueling system expansion and trade and war and epidemics, are part of nature. The effects of these dynamics can be postponed but not avoided indefinitely, but as Malthus and Marx and countless other scientists have intuited for centuries, life requires some hope, and it is social constructionism that offers hope for positive change that the laws of nature cannot.

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

Further Reading

A book like this might be considered an adequate entrée into the study of environmental demography, but the varied sources of data and the extensive timespans require further reading. The research literature discussed in chapters 2 and 3 gives an overview of the classical social science traditions from which we have drawn inspiration, but there are many other books and other literature that have informed our work.

The enigma of the micro-macro link early on inspired us, and the interested reader might peruse the readings found in the 1987 book of that name edited by Jeffrey Alexander, Bernhard Giesen, Richard Munch, and Neil Smelser. Our own approach was heavily influenced by the formulation by Randall Collins in his 1975 work *Conflict Sociology*. He applies this approach in understanding sociological theory as itself networked across space and time, explored in *The Sociology of Philosophies* (1998). The economist Thomas Schelling also explored the micro-macro link in his 1978 monograph, *Micromotives and Macrobehavior*. Although we have not explicitly utilized Game Theory in this work, it is useful in understanding both micro-macro linkages and the way social structures influence individual and institutional behavior; *A Course in Game Theory* is a fine introduction (Osborne & Rubenstein 1994).

We have based our work on an application of Complexity Theory to understanding patterns of human settlement. For those interested in learning more about this and Chaos Theory more broadly, the classic introduction has been since its 1987 publication James Gleick's *Chaos: Making a New Science*, now in a twentieth-anniversary edition. A good and easy-to-read introduction to the mathematics is Manfred Schroeder (1991) *Fractals, Chaos, Power Laws*. A more recent treatment, and one that deals heavily with social phenomena broadly and cities in particular, is Geoffrey West (2017) *Scale*. Applications specific to the social sciences also tend to lean heavily

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

on the math, and a good start is David Byrne's (1998) *Complexity Theory and the Social Sciences* as well as the readings in Eve et al. (1997) *Chaos, Complexity, and Sociology*. Economics has arguably made better use of Chaos Theory than other social sciences, and one of the masters of the field, Benoit Mandelbrot, contributed *The (Mis)Behavior of Markets* (Mandelbrot & Hudson 2004). Complexity Theory has been instrumental in critiques of theories with a base in Rational Choice Theory, and Ormerod's (1994) *The Death of Economics* is an excellent introduction. In *The Myth of a Rational Market* (2009), Justin Fox puts such concerns into a historical perspective. Complexity theory is also useful for understanding the formation of early civilizations, and the interested reader should peruse the readings in Sabloff and Sabloff (2018) *The Emergence of Premodern States*.

We have been most engaged with the literature that examines human social evolution, albeit focusing on urbanization and its environmental consequences. A fine introduction to the topic is Nolan and Lenski (2014), *Human Societies: An Introduction to Macrosociology.* The complexity that led to our current world has been explored in a variety of ways. For example, Dartnell (2019) examined human history from the standpoint of geological changes in *Origins*, whereas for Wilson (2012), in *The Social Conquest of Earth*, it is a deeper pattern of sociability understood broadly, including other mammals and social insects, that captured his attention. Bonner (1980) nicely summarized the evolution of sociability in animals in *The Evolution of Culture in Animals*, and Runciman (2000) examined human sociability in deep perspective in *The Social Animal*. Merlin Donald's (1991) classic *Origins of the Modern Mind* discusses particular stages during the separation of human-like cultures from our ape ancestors, and Klein and Edgar (2002) offer a similar discussion in *The Dawn of Human Culture*. Frans DeWaal (2005) analyzes our commonalities in *The Inner Ape* and many other books. In *Reflections of our Past*, John Relethford (2003) discusses a number of enigmas and questions, some of which have since been answered, relating to our genetic history.

Other scientists have focused more heavily on human social evolution as a consequence of these deeper biological trends. A good introduction, and remarkably detailed given the modest length, to human evolution is Ian Tattersall (2012) *Masters of the Planet*. David Reich's (2019) *Who we Are and How we got Here* is a fine update of Relethford's work on the genetic story of humanity. Social evolution was the core subject of Johnson and Earle (1987) *The Evolution of Human Societies*, a significant source for Maryanski and Turner (1992) *The Social Cage*. Sanderson (2001) focused on the role of biology and social conflict in *The Evolution of Human Society*, echoing in some respects Lenski's (1984) classic *Power & Privilege*. A more current discussion of social inequality's evolution is Flannery and Marcus (2012) *The*

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

Creation of Inequality. A good start on understanding human economic evolution can be found in Frederic Pryor (2005) *Economic Systems of Foraging, Agricultural, and Industrial Societies*. The role of cultural evolution, particularly regarding religion, is central to Bellah's (2011) *Religion in Human Evolution*. A good introduction to the *Annales School* is Fernand Braudel's (1993) *A History of Civilizations*.

We are hardly the first to examine urban-rural dynamics, and chapters 2 and 3 review the classical and contemporary literature. For those looking for further reading on the subject, a good overview of demographic factors' influence on human social change is Paul Morland (2019), *The Human Tide*. If one is looking for the specific influence of epidemic disease in the course of human events, the modern classic is McNeill (1998 [1976]) *Plagues and Peoples*. Vaclav Smil (2018) has examined the influence of energy needs throughout human history, offering conversion of such technologies as waterwheels and the plow into watts. The relationship of cities with their respective environments is the focus of Boone and Modarres (2006) *City and Environment*, and a good history of the topic is Ian Douglas (2013) *Cities: An Environmental History*. A good introduction to urban-rural economics in developing countries is Kenneth Lunch (2005), *Rural-Urban Interaction in the Developing World*. World-Systems researchers have had much to offer on this topic as well, and our vote for perhaps the most audacious yet prescient title is Sing Chew (2001) *World Ecological Destruction*, and of course, a classic read is Chase-Dunn and Hall (1997) *Rise and Demise*. For readings rather specific to the relationship between cities and countryside, consult the readings of Deifendorf and Dorsey (2005) *City, Country, Empire*. Two specific studies of such relationships that offer a comparison between time periods and cultural zones are Pomeranz (1993) *The Making of a Hinterland*, a study of nineteenth-century China, and Morley (1996) *Metropolis and Hinterland*, a study of ancient Rome. The readings in Rich and Wallace-Hadrill (1991) *City and Country in the Ancient World* similarly examine the relationship between Greco-Roman cities and their hinterlands. A fascinating experimental study of the effects of overpopulation, albeit not in humans, is John Calhoun (1962), *The Ecology and Sociology of the Norway Rat*.

There are several good scholarly overviews that cover the birth of the city in Southwest Asia. Charles Maisels has summarized the archaeology and history of this transition in the Fertile Crescent in *The Emergence of Civilization* (1990), and his (1999) *Early Civilizations of the Old World* covers a broader range of regions. Hans Nissen's (2001) *The Early History of the Near East* provides a good discussion of the archaeology of the region between 9000 and 2000 BCE, cover the transition from the Neolithic to the Early Bronze Age. Susan Pollock's (1999) *Ancient Mesopotamia* provides a similar discussion for the period between 5000 and 2000 BCE, and Georges Roux (1992)

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

Ancient Iraq provides a somewhat dated but nonetheless good overview of the region from the Paleolithic through the Roman period. The period after 3000 BCE through the Hellenistic Period is covered in Marc Van de Mieroop (2004) *A History of the Ancient Near East*. A similar archaeological overview for Northern Mesopotamia is found in Akkermans and Schwartz (2003) *The Archaeology of Syria*. The readings in Smith (2012) *The Comparative Archaeology of Complex Societies* provides an overview of similar issues around the world, as do the readings in Feinman and Marcus (1998) *Archaic States*. Monica Smith concentrates on micro-level trends in *A Prehistory of Ordinary People* (2010) and in *Cities: The First 6,000 Years* (2019).

The cultural relationship between Southwest Asia and Ancient Greece is the focus of Burkert's (2004) *Babylon, Memphis, Persepolis*. Van de Mieroop (2011) *A History of Ancient Egypt* is a comprehensive history of that country, and his (1999) *The Ancient Mesopotamian History* is a detailed look at ancient cities in the region. The Uruk Expansion as a world-system is the focus of Guillermo Algaze (1993) *The Uruk World System*, and both Stein's (1999) *Rethinking World-Systems* and the readings in Rothman (2001) *Uruk Mesopotamia and its Neighbors* over rejoinders and debate. Mario Liverani's (2006) *Uruk: The First City* addresses the debate but focuses more on the city itself. Jonathon Tubb (1998) *Canaanites* is a fine overview of Ancient Canaan/Israel, and the Amihai Mazar (1990) *Archaeology of the Land of the Bible, 10,000–586 BCE* is a comprehensive guide to the region's archaeology. MacQueen provides an overview of the Hittites in the appropriately named *The Hittites* (2001). A comprehensive discussion of Mesopotamian religion is Jean Bottero (2004) *Religion in Ancient Mesopotamia*, and many of the significant works can be found in Stephanie Dalley (2000) *Myths from Mesopotamia*. A brief introduction to Canaanite religion can be found in Michael Coogan (1978) *Stories from Ancient Canaan*, and a detailed examination can be found in del Olmo Lete (2004) *Canaanite Religion According to the Liturgical Texts of Ugarit*.

The collapse of the Late Bronze Age world after 1200 BCE is the focus of Robert Drews (1995) *The End of the Bronze Age*, and Eric Cline examines the same period in *1177BC: The Year Civilization Collapsed* (2014). Joseph Tainter (1988) *The Collapse of Complex Societies* provides an overview of societal collapse, and the readings in Schwartz and Nichols (2006) *After collapse* focus on how societies rebuild. The religious importance of ancient Israel has ensured an extensive textual record of the rebuilding during the Iron Age in the Southern Levant. William Devers has written extensively on the topic, and his (2002) *What Did the Biblical Writers Know and When Did They Know It?* and (2003) *Who Were the Early Israelites and Where Did They Come From?* provide a comprehensive discussion of not only the events but of the scholarly arguments surrounding them. Richard Elliott Freidman

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

has also written extensively on the topic, and whereas Dever tends to focus more on the archaeology, Friedmann focuses more on the test: his (1997) *Who Wrote the Bible?* and (2017) *The Exodus: How it Happened and Why it Matters* are both good introductions to the topic. Similarly, Israel Finkelstein and Neil Silberman (2002) *The Bible Unearthed* is also a good introduction to the literature. An excellent study of the origins of Israel is Avraham Faust (2007) *Israel's Ethnogenesis*. Donald Redford's (1992) *Egypt, Canaan, and Israel in Ancient Times* discusses the relationship between Israel and Egypt before and after the Great Catastrophe, and Matthews and Benjamin look in detail at the literary relationship between the two regions in *Old Testament Parallels* (1997). Richard Hess (2007) covers the archaeology of polytheism in Israel in *Israelite Religions*, and a good introduction to the Samaritans, a variant of Judaism that evolved with its center in the environs of Schechem (and thus not Jerusalem) is Anderson and Giles (2002). A good discussion of the earliest phase of Jewish monotheism is found in Blenkinsopp (2009) *Judaism: The First Phase*.

The evolution of ancient cities focusing on the classical world is the subject of Richard Tomlinson (1992) *From Mycenae to Constantinople*. A good introduction to the Roman Republic and Empire is Mary Beard (2015) *SPQR*. John Stambaugh (1988) covered the development and functioning of the Roman city in *The Ancient Roman City*. Those interested in the functioning of the Roman economy should consult Peter Temin (2013) *The Roman Market Economy*, and the connections between the Rome and the Indian Ocean economy can be found in Raoul McLaughlin (2018) *The Roman Empire and the Indian Ocean*. The particular relationship between Rome and its Levantine conquests is found in Martin Goodman (2007) *Rome and Jerusalem*. The fall of the Roman Empire or, more precisely, the Western Empire has been the topic of numerous scholars over the years. A concise introduction to the topic is Bryan Ward-Perkins (2006) *The Fall of Rome and the End of Civilization*, and a more detailed discussion is found in Adrian Goldsworthy (2009) *How Rome Fell*. The specific contribution of Christianity to Rome's fall is discussed by Catherine Nixey (2018) *The Darkening Age*, and a broader "complexity theory" approach is Kyle Harper (2017) *The Fate of Rome*. The aftermath of the fall in the Byzantine Empire is covered by Lars Brownworth (2009) *Lost to the West*, and Chris Wickham (2009) a similar timeframe in the West in *The Inheritance of Rome*.

The expansion of the Mediterranean world-system to encompass all of Eurasia and Africa was a period of significant change for all the affected societies. A good place to start is the histories of China and India by John Keay: *China: A History* (2009) and *India: A History* (2010). A more detailed discussion of the importance of transcontinental trade is found in several works dealing with the "silk roads." Valerie Hansen (2012) *The Silk Road: A New*

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

History provides a good overview of the history of the trade, as does Peter Frankopan (2017) *The Silk Roads: A New History of the World*. Perhaps the classic study of the trade from a World-Systems Theory perspective is Janet Abu-Lughod (1991) *Before European Hegemony*, and Andre Gunner Frank (1998) *ReOrient* is a fine follow-up study of the same topic. Sven Beckert (2014) touches on the same trade through the lens of cotton in *Empire of Cotton*, tying the trade to the (later) Atlantic slave trade and the Industrial Revolution in Great Britain and America. A general overview of the period in Western Europe is Peter Wells (2008) *Barbarians to Angels: The Dark Ages Reconsidered*.

The Common Era has been heavily influenced by the rise and fall of various religions. For those interested in a good overview of ancient religions, *Religions of the Ancient World* is a good edited reader (Johnston, 2004). John Dominic Crossan has written extensively on Christianity's emergence, his magnum opus being (1998) *The Birth of Christianity*; an easier to read synopsis is *Jesus: A Revolutionary Biography* (1994). Crossan analyzes the relationship with Rome, and the resistance of those living in the Levant to Roman rule, in *God and Empire* (2007). Other good sources include Vermes (2000) *The Changing Face of Jesus*, Stark (1997) *The Rise of Christianity*, and Romer (2015) *The Invention of God*. The spread of Christianity outside of the Roman world is covered in Jenkins's (2008) *The Lost History of Christianity* and Baumer (2006) *The Church of the East*. The relationship between Christianity and Judaism is covered in Peter Schafer (2007) *Jesus in the Talmud*. David Levering Lewis (2008) examines traces the impact of Islam on European events in *God's Crucible*, and Fred Donner concentrates on the spread of Islam itself in *Muhammad and the Believers* (2010). Other major religions competed for the souls of the faithful in Late Antiquity as well, including the Cult of Mithras (Beck, 2006), the Manichaeans (BeDuhn, 2000), the Mandaeans (Lupieri, 2002), and the Zoroastrians (Nigosian, 1993).

The development of the Atlantic Slave Trade expanded an already grotesque slave trade to previously unheard-of proportions. A good though now dated introduction to the subject that spans thousands of years is Milton Meltzer (1993) *Slavery: A World History*. The history of Africa more broadly, and West Africa has historically been downplayed despite being home to highly advanced societies; two correctives worth reading are Herman Bennett (2019) *African Kings and Black Slaves* and Michael Gomez (2018) *African Dominion*. Two good introductions to the history of slavery in Africa, expanding on the work already noted about the development of the Indian Ocean trade above, are Paul Lovejoy (2012) *Transformation in Slavery: A History of Slavery in Africa* and Sean Stilwell (2014) *Slavery and Slaving in African History*. The role of Africans in the trade is covered by Rebecca Shumway (2014), *The Fante and the Transatlantic Slave Trade,* and

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

Randy Sparks (2014), *Where the Negroes are Masters*. The interested reader should also consult Herbert Klein (1999) *The Atlantic Slave Trade*. Edward Baptist covers the role of slavery in the creation of the American Industrial Revolution (2016) *The Half has Never been Told*.

The civilizations of the Americas and the impact of the arrival of Europeans is a vast literature. A good introduction to the material is two books by Charles Mann, *1491* (2006) and *1492* (2012). A good general introduction to the archaeology and history of Mesoamerica is Robert Carmack et al. (2006), *The Legacy of Mesoamerica*. Christopher Pool (2007) *Olmec Archaeology and Early Mesoamerica* is a good introduction to the region's earliest complex societies. Houston and Inomata (2009) *The Classic Maya* is a good discussion of that civilization, and Frances Berdan (2014) *Aztec Archaeology and Ethnohistory* contains a good discussion of the Aztecs, and Leon-Portilla (2006) *The Aztec Account of the Conquest of Mexico* is exactly what the title implies. A comprehensive discussion of the Valley of Mexico's earliest urbanization can be found in George Cowgill (2015) *Ancient Teotihuacan: Early Urbanism in Central Mexico*. Glowacki and McEwan (2020) *The Wari Civilization and their Descendants* provides a good discussion of issues in understanding emerging social complexity in South America. Alan Covey (2020), *Inca Apocalypse,* discusses the arrival of the Spanish in South America. Stephen Plog's (1997) *Ancient People of the American Southwest* is a good introduction to that region, and Timothy Pauketat (2003) *Ancient Cahokia and the Mississippians* is a good introduction to the Mississippi Valley.

The New York urban-rural system encompasses the history of the city and state, and a great deal has been written. A good introduction to the state's history is Joanne Reitano (2015) *New York State: Peoples, Places, and Priorities*, and an earlier history by David Maldwyn Ellis (1990) is also a good start. Gerard Koeppel has written extensively on the history of New York City, and his (2015) *City on a Grid* is a good introduction, while *Water for Gotham* (2000) explores the city's need for Catskill water. Two very complete histories of the city include *Gotham* (Burrows & Wallace, 1999) and *Greater Gotham* (Wallace, 2017); a more concise history is George Lankevich (1998) *New York City: A Short History*. Max Mintz has explored the interactions between the colonists and the Iroquois in some detail in (1999) *Seeds of Empire*. David Stradling has written extensively about the relationship between New York's cities and the environment. A general environmental history is *The Nature of New York* (2010), and a study of the Catskills is (2007) *Making Mountains*. If there was one project that transformed New York into the city and state it is, it was building the Erie Canal. Two good histories include Peter Bernstein's (2006) *Wedding of the Waters* and Carol Sherriff (1997) *The Artificial River*. Koeppel similarly discusses

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

the canal in (2010) *Bond of Union*. A comprehensive account of New York's frontier focusing on the area near Cooperstown is Alan Taylor (1995) *William Cooper's Town*. An excellent study of immigration and politics in Utica is Philip Bean (2010), *The Urban Colonists*.

Much of the discussion of the industrial revolution in upstate cities and towns is covered in various local histories, but there are many good general works. The technological advances were centered mainly in England and, not surprisingly, several works focus on the impact of the British industrial revolution. A classic in the field is Eric Hobsbawm (1999 [1968]) *Industry and Empire*, and Robert Allen (2009) *The British Industrial Revolution in Global Perspective* is an updated telling of the story. Walter Licht (1995) focuses on American industrialization in the nineteenth century in *Industrializing America*. David Hounshell focuses on the transition to twentieth-century-style mass production in *From the American System to Mass Production* (1984). Mary Ryan (1981) tells of industrialization's impact on the family and consumption patterns in *Cradle of the Middle Class*, a book that focuses heavily on such changes in Utica. Paul Rivard (2002) has a good overview of technology and social changes, with the added benefit of pictures and diagrams, in *A New Order of Things*.

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

Appendix A

Definition of Population-Related Municipalities

The federal definition of a *metropolitan area* is based on commuting patterns between counties, except for those in New England where metropolitan areas are defined by Minor Civil Division (town and city), and a separate category called a New England County Metropolitan Area (NECMA) is also defined. Commute to work is undoubtedly a reliable measure of metropolitan influence, but there are also some limitations to this approach. By utilizing such a large unit of measure (the county), the details to be gleaned at a more precise unit of analysis (e.g., a township) is lost. For example, the village of Old Forge in northern Herkimer County is technically part of the Utica metropolitan area, but such communities as Richfield Springs and Edmeston in Otsego County are not even though there are more commuters from these places. Similarly, a number of municipalities between 15 and 25 miles west of Utica exhibit a high degree of commuters to both Utica and the Syracuse area; because Madison County has more residents commuting to Onondaga County than Oneida (9,693 vs. 4,362), it is classified as part of the Syracuse Metropolitan Area. Further, by measuring commuting as a "pull" factor, it does not measure the population that may be tightly integrated culturally and economically but not explicitly employed in the home county. This disadvantages metropolitan areas with weaker economies, and as such, must be taken into account when considering the potential impact of economic vitality on a region.

This study examines metropolitan influence by utilizing Population-Related Municipalities (PRMs). Based on the assumption of concentric zone theory that cities grow outward, a region that has matured demographically—that is, leveled in terms of population growth—will experience an outward limit of population expansion. PRMs are municipalities that experience the outward growth until the peak population of the region occurs and are thus tied to the

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

city by the wider demographic pattern. In each of the cases examined in this book, the central city faced population loss even as the exurban ring gained in population. By examining communities that are seemingly connected in terms of growth (and decline), we can better understand the population shifts since World War II.

For example, utilizing the raw data and maps of growth rates at each decennial census yields four different zones connected to the Utica metropolitan area. The first is the region's cities for which this study takes a legal definition: the five cities include Utica, Rome, Oneida, Little Falls, and Sherrill. A second zone is the Utica-Rome suburbs, townships that are in whole or part congruously urbanized with the region's cities. A third zone is the exurbs, townships that have displayed a degree of dependence on the metropolitan area in terms of population growth and decline, although some (such as the Town of Richfield) have experienced varying degrees of independence in specific periods. A fourth zone includes the suburbs shared with Syracuse.

It should be noted that the exurban zone is surrounded by rural communities that exhibit a degree of population independence but are likely strongly influenced in other ways. For example, such communities as Boonville, Cooperstown, and Hamilton all experienced population shifts that likely reflect population declines in the central villages and growth in the rural areas surrounding them; these communities are not analyzed as part of the Population-Related Municipalities but should nevertheless be considered as part of the wider metropolitan region as there is some evidence that residents in these regions are influenced by Utica media and shopping (see, for example, Thomas et al., 2002). Indeed, had historical trends mirrored their early mid-twentieth-century patterns, these communities would be far more integrated into the Utica metropolitan system than they currently are.

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

Appendix B

Coding Downtowns

The data on changes in the composition of downtown Cooperstown were collected in the following way.

A list of addresses in each downtown area was assembled, data was collected for each year at two-year intervals beginning in 1973, utilizing lists supplied by the Cooperstown Chamber of Commerce and permit applications supplied by the Village of Cooperstown. Each business recorded was then coded according to the scheme outlined below. For earlier years, interviews with residents and members of the business community supplemented the record.

Businesses classified as "general" sell goods that are of use to the general population on a regular basis. This definition is inclusive of grocery, pharmaceutical supply, and other such general merchandise. Such businesses often sell items related to tourism, but the primary purpose of such stores is to sell general merchandise. General stores that supply automotive fuels are designated "General-Fuel" (Thomas 2003, 163–164).

Specialty stores sell goods that are intended for aesthetic or symbolic use, such as jewelry or souvenirs. Boutiques that sold clothes in addition to a number of other specialty items were classified as specialty stores, although the store selling only clothes is classified "general." Businesses that did not have as a primary orientation baseball-related merchandise were classified "specialty, non-baseball." A "Specialty, baseball" designation was applied to those stores that do have a primary orientation toward baseball-related items (Thomas, 2003, 164).

Food Service establishments include businesses whose primary purpose was the preparation and service of food for consumption (Thomas, 2003, 164).

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

Local (and General) Services include businesses whose primary purpose is to provide a specific service, such as financial services, real estate, or minor production services such as printing, photocopying, or customer service.

A sixth category—art and antique gallery—was also coded and is self-evident.

Bars and taverns were coded separately from food service establishments. In addition, adult-oriented retail outlets, such as "head shops," were also separately coded. Similarly, amusements, including movie theaters and museums, were given separate codes.

Civic institutions, such as the post office, city offices, and the offices of non-profit community groups, were classified as "civic." Private clubs, such as the Elks Club, were classified as Private Clubs.

Car dealers and automobiles service shops were classified under "Car/ Implement Dealer." Manufacturing and milling were classified under "Industrial," whereas warehousing was classified separately.

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

References

Abrahamson, M. (2004). *Global cities*. New York: Oxford University Press.

Abu-Lughod, J.L. (1991). *Before European hegemony: The world system A.D. 1250-1350*. New York: Oxford University Press.

Adams, R. McC. (1981). *The heartland of cities*. Chicago: University of Chicago Press.

Adorjan, M., Christensen, T., Kelly, B. & Pawluch, D. (2012). Stockholm syndrome as vernacular resource. *The Sociological Quarterly, 53,* 3, 454–474.

Akkermans, P.M.M.G. & Schwartz, G.M. (2003). *The archaeology of Syria: From complex hunter-gatherers to early urban societies (c.16,000-300 BC).* New York: Cambridge University Press.

Alderson, A.S. & Beckfield, J. (2004). Power and position in the world city system. *American Journal of Sociology, 109,* 4, 811–851.

Alderson, A.S., Beckfield, J. & Sprague-Jones, J. (2009). Intercity relation and globalization: The evolution of the global urban hierarchy, 1981–2007. *Urban Studies, 47,* 9, 1899–1923.

Alexander, D. (1990). Bioregionalism: Science or sensibility? *Environmental Ethics*, *12*, 2, 161–173. doi:10.5840/enviroethics199012217.

Alexander, J.C. (1988). *Action and its environments: Toward a new synthesis*. New York: Columbia University Press.

Alexander, J.C., Giesen, B., Munch, R. & Smelser, N.J. (Eds.). (1987). *The micro-macro link*. Berkeley, CA: University of California Press.

Algaze, G. (1989). The Uruk expansion: Cross-cultural exchange in early mesopotamian civilization. *Current Anthropology, 30,* 5, 571–608.

_____. (1993). *The Uruk world system*. Chicago: University of Chicago Press.

Allen, O.E. (1993). *The tiger: The rise and fall of tammany hall*. New York: de Capo Press.

Allen, R.C. (2009). *The British industrial revolution in global perspective*. New York: Cambridge University Press.

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

Amin, S. (1976). *Unequal development: An essay on the social formations of peripheral capitalism.* New York: Monthly Review Press.

_____. (1991). The ancient world-systems versus the modern capitalist world-system. *Review (Fernand Braudel Center)*, 349–385.

_____. (1996). The ancient world-systems versus the modern capitalist world-system. Pp. 247–277 in Frank, A.G. & Gills, B.K. (Eds.), *The world system: Five hundred years or five thousand?* New York: Routledge.

Anderson, R.T. & Giles, T. (2002). *The keepers: An introduction to the history and culture of the Samaritans*. Peabody, MA: Hendrickson Publishers.

Anthony, D.W. (2007). *The horse, the wheel, and language*. Princeton, NJ: Princeton University Press.

Aquila, R. (1977). *The Iroquois restoration: A study of Iroquois power, politics, and relations with Indians and Whites*. Ph.D. Dissertation, Ohio State University.

Arndt, K.J.R. (1937). John Christopher Hartwick: German pioneer of Central New York. *New York History, 18*, 3, 293–303.

Assembly, United Nations General. (3 February 2016). *Report of the special rapporteur in the field of cultural rights.* New York: United Nations.

Aurenche, O., Galet, P., Regagnon-Caroline, E. & Evin, J. (2001). Proto–Neolithic and Neolithic cultures in the Middle East—the birth of agriculture, livestock raising, and ceramics: A calibrated C14 chronology 12,500–5,500 cal BC. *Radiocarbon, 43,* 3, 1191–1202.

Austin, K. (2010). The "hamburger xonnection" as ecologically unequal exchange: A cross-national investigation of beef exports and deforestation in less-developed countries. *Rural Sociology, 75*, 2, 270–299.

Avery, L. & Fortunato, M.W.P. (2016). Reframing rural education: Implications of the rural mystique and its absence in educational policy. Pp. 161–178 in Thomas, A.R. & Fulkerson, G.M. (Eds.), *Reinventing rural: New realities in an urbanizing world*. New York: Lexington Books.

Avery, L. & Sipple, J. (2016). Common core, STEM, and rural schools: Views from students and states. Pp. 123–146 in Fulkerson, G.F. & Thomas, A.R. (Eds.), *Reimagining rural: Urbanormative portrayals of rural life*. New York: Lexington Books.

Bachenheimer, A. (2018). *Gobekli Tepe: An introduction to the world's oldest temple*. Revised Edition. Ardross: Birdwood.

BAEK (British Archaeological Expedition to Kuwait). (2012). *Excavations at H3: A summary*. Retrieved Match 2, 2012, from British Archaeological Expedition to Kuwait http://www.ucl.ac.uk/archaeology/kuwait/sitefind.htm

Baines, J. & Yoffee, N. (1998). Order, legitimacy, and wealth in ancient Egypt and Mesopotamia. In Feinman, G.M. & Marcus, J. (Eds.), *Archaic states*. Sante Fe, NM: School for Advanced Research Press.

Baker, L.D. (1998). *From savage to negro: Anthropology and the construction of race, 1896–1954*. Berkeley, CA: University of California Press.

Bakker, J.I. (Ed.). (2015). *The methodology of political economy: Studying the global rural–urban matrix* . New York: Lexington.

Balter, M. (2006). *The goddess and the bull*. New York: Free Press.

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

Baptist, E.E. (2016). *The half has never been told*. New York: Basic Books.
Baran, P. (1957). *The political economy of growth*. New York: Monthly Review Press.
Barnstone, W. (2005). *The other Bible*. Revised Edition. New York: Harper Collins.
Barrett, J.H. (2008). What caused the Viking Age? *Antiquity, 82,* 317, 671–685.
Barton, G.A. (1995). Inscription of Entemena #7. Pp. 30–31 in Nagle, D.B. & Burstein, S.M. (Eds.), *The ancient world: Readings in social and cultural history*. Englewood Cliffs, NJ: Prentice Hall.
Bar Yosef, O. (1980). Prehistory of the Levant. *Annual Review of Anthropology, 9,* 101–133.
———. (1986). The walls of Jericho: An alternative explanation. *Current Anthropology, 27,* 157–162.
Bar Yosef, O., Gopher, A., Tchernov, E. & Kislev, M.E. (1991). Netiv Hagdud: An Early Neolithic village site in the Jordan Valley. *Journal of Field Archaeology, 18*, 4*,* 405–424.
Bar Yosef, O. & Mayer, D.E. (1994). Neolithic shell bead production in Sinai. *Journal of Archaeological Science, 24***,** 97–111.
———. (1998). The Natufian culture in the Levant, Threshold to the origins of agriculture. *Evolutionary Anthropology, 6,* 159–177.
Bar Yosef, O. & Valla, F. (1990). The Natufian culture and the origin of the Neolithic in the Levant. *Current Anthropology, 31,* 4, 433–436.
_____ (Eds.). (1991). *The Natufian culture in the Levant*. Ann Arbor, MI: International Monographs in Prehistory.
Bar Yosef, O., Vandermeersch, B., Arensburg, B., Belfer-Cohen, A., Goldberg, P., Laville, H., Meignen, L., Rak, Y., Speth, J.D., Tchernov, E., Tillier, A-M, Weiner, S., Clark, G.A., Garrard, A., Henry, D.O., Hole, F., Roe, D., Rosenberg, K.R., Schepartz, L.A., Shea, J.J., Smith, F.H., Trinkaus, E., Whalen, N.M. & Wilson, L. (1992). The excavations in Kebara Cave, Mt. Carmel. *Current Anthropology, 33,* 5, 497–550.
Bass, T.A. (1996). *Vietnamerica: The war comes home*. New York: Soho Press.
Bates, V.C. (2016). "Big city turn me loose and set me free:" A critique of music education as urbanormative. *Action, Criticism, and Theory for Music Education, 15*, 4, 161–177.
Baumer, C. (2006). *The church of the east: An illustrated history of Assyrian Christianity*. New York: I.B. Tauris.
Bean, P.A. (1991). The role of community in the unionization of Italian immigrants: The Utica strike of 1919. *Ethnic Forum, 12,* 36–55.
_____. (1994). The Irish, the Italians, and machine politics. *Journal of Urban History, 20,* 2, 205–239.
_____. (2010). *The urban colonists*. Syracuse, NY: Syracuse University Press.
Beard, M. (2015). *SPQR: A history of ancient Rome*. New York: Liveright.
Beauregard, R. (2003). City of superlatives. *City and Community, 2,* 3, 183–199.
Beck, R. (2006). *The religion of Mithras cult in the Roman Empire*. New York: Oxford University Press.
Beckert, S. (2014). *Empire of cotton: A global history*. New York: Vintage.

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

BeDuhn, J.D. (2000). *The Manichaean body*. Baltimore: Johns Hopkins University Press.

Belfer-Cohen, A. (1991). The Natufian in the Levant. *Annual Review of Anthropology, 20,* 167–186.

Bellah, R.N. (1957). *Tokugawa religion*. Boston: Beacon.

_____. (2011). *Religion in human evolution*. Cambridge, MA: Belknap.

Bellwood, P. (2005). *First farmers: The origins of agricultural societies*. New York: Cambridge University Press.

_____. (2013). *First migrants: Ancient migration in global perspective*. New York: Blackwell.

Bennett, H.L. (2019). *African kings and black slaves: Sovereignty and dispossession in the early modern Atlantic*. Philadelphia: University of Pennsylvanbia Press.

Bennett, S.A. (2014). "Taking the cure:" The rural as a place of health and wellbeing in New York State during the late 1800s and early 1900s. Pp. 87–96 in Fulkerson, G.M. & Thomas, A.R. (Eds.), *Studies in urbanormativity: Rural community in urban society*. Lanham, MD: Lexington.

Benson, E.P. (2012). *The worlds of the Moche on the north coast of Peru*. Austin, TX: University of Texas Press.

Berdan, F.F. (2014). *Aztec archaeology and ethnohistory*. New York: Cambridge University Press.

Berger, P.L. & Luckmann, T. (1967). *The social construction of reality: A treatise in the sociology of knowledge*. New York: Anchor Books.

Bernstein, P.L. (2006). *Wedding of the waters: The Erie Canal and the making of a great nation*. New York: Norton.

Bettancourt, L.M.A. (2013). The origin of scaling in cities. *Science, 340,* 6139, 1438–1441.

Bettencourt, L.M.A., Lobo, J., Helbing, D., Kuhnertm, C. & West, G.B. (2007). Growth, innovation, scaling, and the pace of life in cities. *Proceedings of the National Academies of Science, 104,* 7301–7306.

Bianchi, G.G. & McCave, I.N. (1999). Holocene periodicity in North Atlantic climate and deep-ocean flow south of Iceland. *Nature, 397,* 515–517.

Binford, L.R. (1969). Post-Pleistocene adaptations. Pp. 313–341 in L.R. Binford & S.R. Binford (Eds.), *New perspectives in archaeology*. Chicago: Aldine de Gruyter.

Birdsall, R. (1925). *The story of Cooperstown.* New York: Scribner's.

Blenkinsopp, J. (2009). *Judaism: The first phase*. Grand Rapids, MI: Eerdmans.

Block, D. & Dupuis, E.M. (2001). Making the country work for the city: Von Thünen's ideas in geography, agricultural economics and the sociology of agriculture. *The American Journal of Economics and Sociology,* Retrieved 1/26/2021 from https://doi.org/10.1111/1536-7150.t01-2-00055.

Bluestone, B. & Harrison, B. (1984). *The deindustrialization of America.* New York: Basic Books.

Blumer, H. (1969). *Symbolic interactionism: Perspective and method*. Berkeley, CA: University of California Press.

Boag, A.E., Hamilton, L.E., Hartter, J., Stevens, F.R., Palace, M. & Ducey, M.J. (2016). Shifting environmental concern in rural Eastern Oregon: The role of

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

demographic and place-based factors. *Population and Environment, 38*, 2, 207–216.
Boas, F. (2012[1922]). *The mind of primitive man*. New York: Forgotten Books.
Bodenheimer, S. (1970). The ideology of developmentalism. *Berkeley Journal of Sociology, 15*, 95–137.
Bohls, C. (1991). *Industrial order in leather stocking country: Textile mills and mill workers in Otsego County, New York*. M.A. Thesis, State University of New York College at Oneonta.
Bonner, J.T. (1980). *The evolution of culture in animals*. Princeton, NJ: Princeton University Press.
Boone, C.G. & Modarres, A. (2006). *City and environment*. Philadelphia: Temple University Press.
Bottero, J. (2004). *Religion in ancient Mesopotamia*. Translated by Fagan, T.L. Chicago: University of Chicago Press.
Boulding, K.E. (1951). Human behavior and the principle of least effort (review). *American Economic Review*, *41*, 3, 449–450.
Bourdieu, P. (1972). *Outline of a theory of practice*. New York: Cambridge University Press.
_____. 1986 [1979]. *Distinction*. International Edition. New York: Routledge.
Boyarin, D. (2013). *The Jewish Gospels*. New York: New Press.
Braudel, F. (1977). *Afterthoughts on material civilization and capitalism*. Translated by Ronaum, P.M. Baltimore: Johns Hopkins University Press.
_____. (1982). *On history*. Chicago: University of Chicago Press.
_____. (1992a). *Civilization and capitalism, 15th-18th Century, vol. I: The structure of everyday life*. Berkeley, CA: University of California Press.
_____. (1992b). *Civilization & capitalism, 15th-18th Century, vol. 2: The wheels of commerce*. Berkeley, CA: University of California Press.
_____. (1992c). *Civilization & capitalism, 15th-18th Century, vol. 3: The perspective of the world*. Berkeley, CA: University of California Press.
_____. (1993). *A history of civilizations*. Translated by Mayne, R. New York: Penguin.
Bridger, J.C., Brennan, M.A. & Luloff, A.E. (2011). The interactional approach to community. Pp. 85–100 in Robinson, J.W., Jr. & Green, G.P. (Eds.), *Introduction to community development: Theory, practice, and service-learning*. Thousand Oaks: Sage.
Brown, D.L. (2015). Review of *Studies in urbanormativity: Rural communities in urban society,* edited by Fulkerson, G.M. & Thomas, A.R. *American Journal of Sociology*, *121*, 1, 295–297.
Brown, N. (2001). *History and climate change: A Eurocentric perspective*. New York: Routledge.
Brownworth, L. (2009). *Lost to the West*. New York: Three Rivers Press.
Burger, R.L. & Van Der Merwe, N.J. (1990). Maize and the origin of ighland Chavín civilization: An isotopic perspective. *American Anthropologist*, *92*, 1, 85–95.
Burgess, E. (1925). The growth of the city: An introduction to research project. Pp. 47–62 in Park, R.E., Burgess, E.W. & McKenzie, R.D. (Eds.), *The City*. Chicago: University of Chicago Press.

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

Burrows, E.G. & Wallace, M. (1999). *Gotham: A history of New York City to 1898*. New York: Oxford University Press.

Byrd, B.F. (1994). Public and private, domestic and corporate: The emergence of the southwest Asian village. *American Antiquity, 59,* 4, 639–666.

Byrd, B.F. & Monahan, C.M. (1995). Death, mortuary ritual, and Natufian social structure. *Journal of Anthropological Archaeology, 14,* 251–287.

Byrne, D. (1998). *Complexity theory and the social sciences*. New York: Routledge.

Cain, C. (2014). Negotiating with the growth machine: Community benefits agreements and value-conscious growth. *Sociological Forum*, *29*, 4, 937–958.

Calhoun, J.B. (1962). *The ecology and sociology of the Norway Rat*. Washington, DC: U. S. Government Printing Office.

Calvert, P. (2001). Internal colonisation, development and environment. *Third World Quarterly, 22, 1,* 51–63.

Cannon, J. & Griffiths, R. (2000). *The Oxford illustrated history of the British monarchy*. New York: Oxford University Press.

Cardoso, F.H. (1973). *Associated dependent-development: Theoretical and practical implications. Authoritarian Brazil*. New Haven, CT: Yale University Press.

Carmack, R.M., Gasco, J.L. & Gassen, G.H. (Eds.). (2006). *The legacy of Mesoamerica*. Second Edition. New York: Routledge.

Carneiro, R.L. (1981). The chiefdom: Precursor of the state. Pp. 37–79 in Jones, G.D. & Kautz, R.R. (Eds.), *The transition to statehood in the New World*. New York: Cambrdige University Press.

Carter, R. & Crawford, H. (2003). The Kuwait-British archaeological expedition to As-Sabiyah: Report on the fourth season's work. *Iraq, 65*, 77–90.

Case, A. & Deaton, A. (2020). Deaths of despair and the future of capitalism. Princeton, NJ: Princeton University Press.

Castells, M. (1977). *The urban question: A Marxist approach*. Cambridge, MA: MIT Press.

———. (1985). *The city and grassroots*. Berkeley, CA: University of California Press.

Catton, W.R., Jr. (1980). *Overshoot: The ecological basis of revolutionary change*. University of Illinois Press.

Cauvin, J. (2000). *The birth of the Gods and the origins of agriculture*. Translated by Trevor, Watkins. New York: Cambridge University Press.

Cavalli-Sforza, L.L. & Cavalli-Sforza, F. (1996). *The great human diasporas: The history of diversity and rvolution.* Translated by Thorne, S. New York: Perseus.

Celik, B. (2011). Karahan Tepe: A new cultural centre in the Urfa Area in Turkey. *Documenta Praehistorica*, *XXXVIII*, 241–253.

Chase-Dunn, C. & Hall, T.D. (1997). *Rise & demise: Comparing world systems*. Boulder, CO: Westview.

Chase-Dunn, C. & Mann, K.M. (1998). *The Wintu and their neighbors: A small world-system in Northern California*. Tucson: University of Arizona Press.

Chernow, R. (2005). *Alexander Hamilton*. New York: Penguin.

Chew, S. (2001). *World ecological degradation: Accumulation, urbanization, and deforestation, 3000BC–AD2000.* New York: Alta Mira.

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

Cheyney, E.P. (1887). *The anti-rent agitation in the state of New York, 1839—1846*. Philadelphia: University of Pennsylvania Press.

Childe, V.G. (1950). The urban revolution. *Town Planning Review, 21,* 3–17.

Ching, B. & Creed, G. (2014). Eaten up: Urban foraging and rural identity. Pp. 111–128 in Fulkerson, G.M. & Thomas, A.R. (Eds.), *Studies in urbanormativity: Rural community in urban society*. New York: Lexington.

Chirot, D. (2012). *How societies change*. Second Edition. Thousand Oaks, CA: Sage.

Chomsky, N. & Barsamian, D. (2015). *Propaganda and the public mind*. Second Edition. New York: Haymarket Press.

Christaller, W. (1933). *Die zentralen Orte in Süddeutschland (The central places in southern Germany)*. Jena: Gustav Fischer.

Christman, H. (1945). *Tin horns and calico: A decisive episode in the emergence of democracy*. New York: Henry Holt & Company.

Cintas-Pena, M. & Sanjuan, L.G. (2019). Gender inequalities in Neolithic Iberia: A multi-proxy approach. *European Journal of Archaeology, 22,* 4, 499–522.

Claudian. (Undated). Of an old Man of Verona who never left his home. Retrieved 11/15/2019 from http://penelope.uchicago.edu/Thayer/E/Roman/Texts/Claudian/Carmina_Minora*/20.html

Clement, M. (2010). Urbanization and the natural environment: An environmental sociological review and synthesis. *Organization and Environment, 23*, 3, pp. 291–314.

Clement, M., Pattison, A. & Habans, R. (2017). Scaling down the "Netherlands Fallacy": A local level quantitative study of the effects of affluence on the carbon footprint across the United States. *Environment Science and Policy, 78,* 1–8.

Clements, F.E. (1916). *Plant succession: An analysis of the development of vegetation*. Carnegie Institute of Washington Publication, No. 242. Washington, DC: Carnegie Institution.

Cline, E.H. (2014). *117 B.C.: The year civilization collapsed*. Princeton, NJ: Princeton University Press.

Coleman, J. (1968). Equality of educational opportunity. *Equity & Excellence in Education*, *6*, 5, 19–28.

_____. (1988). Social capital in the creation of human capital. *American Journal of Sociology*, *94*(Supplement), S95–S120.

Collins, R. (1975). *Conflict sociology: Toward an explanatory science*. New York: Academic Press.

_____. (1998). *The sociology of philosophies: A global theory of intellectual change*. Cambridge, MA: Belknap.

Comte, A. (1988). *Introduction to positive philosophy*. Translated by Ferre, F. Indianapolis, IN: Hackett Publishing.

Connolly, J.J. (Ed.). (2010). *After the factory: Reinventing America's industrial small cities*. New York: Lexington.

Coogan, M.D. (1978). *Stories from ancient Canaan*. Louisville, KY: Westminster Press.

Cooley, C.H. (1894). The theory of transportation. *Publications of the American Economic Association*, *9*, 3, 13–148.

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

Cooper, W. (1810). *A guide in the wilderness.* Dublin: Gilbert & Hodges.
Covey, R.A. (2020). *Inca apocalypse*. New York: Oxford University Press.
Cowgill, G.A. (2015). *Ancient Teotihuacon: Early urbanism in Central Mexico*. New York: Cambridge University Press.
Craven, P. & Wellman, B. (1973). The network city. *Sociological Inquiry, 43,* 57–88.
Crisafulli, V. (1960). *An economic analysis of the Utica-Rome area*. Utica, NY: Utica College.
Cross, F.M. (1997[1973]). *Canaanite myth and Hebrew legend*. Cambridge, MA: Harvard University Press.
Crossan, J.D. (1994). *Jesus: A revolutionary biography*. New York: Harper.
_____. (1998). *The birth of Christianity: Discovering what happened in the years after the execution of Jesus*. New York: Harper.
_____. (2007). *God and empire*. New York: HarperCollins.
Dalley, S. (2000). *Myths from Mesopotamia*. Revised Edition. New York: Oxford University Press.
Dartnell, L. (2019). *Origins: How Earth's history shaped human history*. New York: Basic Books.
Davis, K. (1945). The world demographic transition. *Annals of the American Academy of Political and Social Science*, *237*, 1–11.
_____. (1955). The origin and growth of urbanization in the world. *American Journal of Sociology, 60*, 5, 429–437.
Davis, M. (1990). *City of Quartz: Excavating the future in Los Angeles*. New York: Verso.
_____. (2007). *Planet of slums*. New York: Verso.
Dear, M. (2002). Los Angeles and the Chicago School: Invitation to a debate. *City & Community*, *1,* 1, 5–32.
———. (2003). Superlative urbanisms: The necessity for rhetoric in social theory. *City & Community*, *2*, 201–204.
Dear, M. & Flusty, S. (1998). Postmodern urbanism. *Annals of the Association of American Geographers*, *88*, 50–72.
Del Olmo Lete, G. (2004). *Canaanite religion according to the liturgical texts of Ugarit*. Winona Lake, IN: Eisenbrauns.
Dever, W.G. (2002). *What did the biblical writers know and when did they know it?* Grand Rapids, MI.: Eerdmans.
———. (2003). *Who were the early Israelites and where did they come from?* Grand Rapids, MI.: Eerdmans.
_____. (2005). *Did god have a wife? Archaeology and folk religion in ancient Israel*. Grand Rapids, MI.: Eerdmans.
_____. (2012). *The lives of ordinary people in ancient Israel*. Grand Rapids, MI: Eerdmans.
de Waal, F. (2005). *Our inner ape.* New York: Riverhead.
_____. (2007). *Chimpanzee politics: Power and sex among apes.* Baltimore: Johns Hopkins University Press.
Diamond, J. (2006). *The third chimpanzee: The evolution and future of the human animal.* New York: Harper.

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

_____. (2011). *Collapse: How societies choose to fail or succeed. Revised Edition* . New York: Penguin.
Diefendorf, J.M. & Dorsey, K. (Eds.). (2005). *City, country, empire: Landscapes in environmental history*. Pittsburgh: University of Pittsburgh Press.
Dillaway, D. (2006). *Power failure: Politics, patronage, and the economic future of Buffalo, New York*. Amherst, NY: Prometheus Books.
Donald, M. (1991). *Origins of the modern mind: Three stages in the evolution of culture and cognition*. Cambridge, MA: Harvard University Press.
Donner, F.M. (2010). *Muhammad and the believers*. Cambridge, MA: Belknap.
Dos Santos, T. (1971). The structure of dependence. Pp. 226–236 in Kan, K.T. & Hodges, D.C. (Eds.), *Readings in the U.S. Imperialism.* Boston: Extending Horizons.
Douglas, I. (2013). *Cities: An environmental history*. New York: I. B. Tauris.
Drews, R. (1995). *The end of the Bronze Age*. Princeton, NJ: Princeton University Press.
DuBois, W.E.B. (1898). The negroes of Farmville, Virginia: A social study. *Bulletin of the Department of Labor, No. 14* (January), 1–38. Retrieved 4/12/17 from https://books.google.com/books?id=-MtGAQAAIAAJ&dq=editions%3ASRVXN5OY9q0C&pg=PA1#v=onepage&q&f=false
_____. (1899). *The Philadelphia negro: A social study*. University of Pennsylvania Press.
Dunlap, R. & Catton, W.R., Jr. (1978). Environmental sociology: A new paradigm. *American Sociological Review, 13,* 41–49.
_____. (1979). Environmental sociology. *Annual Review of Sociology, 5,* 243–273.
Durham, W.H. (1991). *Coevolution: Genes, culture, and human diversity*. Stanford: Stanford University Press.
Durkheim, E. (1984, [1893]). *Division of labor in society*. New York: The Free Press.
Earle, T.K. (1980). A model of subsistence change. Pp. 1–29 in Earle, T.K. & Christenson, A.L. (Eds.), *Modeling change in prehistoric subsistence economies*. New York: Academic Press.
_____. (1987). Chiefdoms in archaeological and ethnohistorical perspective. *Annual Review of Anthropology, 16,* 279–308.
_____ (Ed.). (1993). *Chiefdoms : Power, economy, and ideology.* New York: Cambridge University Press.
Ehrenhalt, A. (1992). *The United States of ambition*. New York: Times Books.
Ehrman, B. (2003). *Lost Christianities*. New York: Oxford University Press.
_____. (2014). *How Jesus became God*. New York: HarperOne.
Elliot, J.R. & Clement, M.T. (2014). Urbanization and carbon emissions: A nationwide study of local countervailing effects in the United States. *Social Science Quarterly, 95,* 795–816.
Ellis, D.M. (1990). *New York: State and city*. Second Edition. Ithaca, NY: Cornell University Press.
Emanuel, K. (2018). *What we know about climate change*. Cambridge, MA: MIT Press.

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

Emberling, G. (1997). Ethnicity in complex societies: Archaeological perspectives. *Journal of Archaeological Research*, *5*, 4, 295–344.

_____. (2010). Urban social transformations and the problem of the "first city". Pp. 254–268 in Smith, M. (Ed.), *The social construction of ancient cities*. Washington: Smithsonian Press.

Emmanuel, A. (1972). *Unequal exchange: A study of the imperialism of trade*. Translated by Pearce, B. Monthly Review Press.

Engels, F. (1969 [1845]). *Conditions of the working class in England*. Panther Edition, from text provided by the Institute of Marxism-Leninism, Moscow; First Published: Leipzig in 1845; The English edition (authorised by Engels) was published in 1887 in New York and in London in 1891; Transcription/Markup: Zodiac Tim Delaney in 1998; Proofed and corrected by Mark Harris, 2010. Retrived 5/25/2017 from https://www.marxists.org/archive/marx/works/download/pdf/condition-working-class-england.pdf.

Eve, R.A., Horsfall, S. & Lee, M.E. (Eds.). (1997). *Chaos, complexity, and Sociology: Myths, models, and theories*. New York: Sage.

Fagan, B. (2004). *The long summer: How climate changed civilization*. New York: Basic Books.

Fainstein, N. & Fainstein, S.S. (1986). *Restructuring the city: The political economy of urban redevelopment*. New York: Addison-Wesley.

Fainstein, S.S. (1994). *The city builders: Property development in New York and London, 1980–2000*. Lawrence, KS: University of Kansas Press.

Faust, A. (2007). *Israel's ethnogenesis: Settlement, interaction, expansion, and resistance*. London: Equinox.

Feagin, J.R. (1983). *The urban real estate game: Playing monopoly with real money*. Englewood Cliffs, NJ: Prentice.

———. (1988). *The free enterprise city: Houston in political–economic perspective*. New Brunswick, NJ: Rutgers University Press.

Feinman, G.M. & Marcus, J. (Eds.). (1998). *Archaic states*. Sante Fe, NM: School for Advanced Research Press.

Ferguson, R. (2009). *The Vikings: A history*. New York: Viking.

Finkel, I. (2014). *The ark before Noah: Decoding the story of the flood*. New York: Doubleday.

Finkelstein, I. & Silberman, N.A. (2002). *The bible unearthed*. New York: Free Press.

———. (2007). *David & Solomon*. New York: Free Press.

Finkelstein, I. & Na'aman, N. (2005). Shechem of the Amarna period and the rise of the northern kingdom of Israel. *Israel Exploration Journal, 55,* 2, 172–193.

Firebaugh, G. (1979). Structural determinants of urbanization in Asia and Latin America, 1950–1970. *American Sociological Review, 44*, 199–215.

Fischer, C. (1975). Toward a subcultural theory of urbanism. *American Journal of Sociology, 80*, 1319–1341.

Fitchen, J.M. (1991). *Endangered spaces, enduring places*. San Francisco, CA: Westview Press.

Fitton, R.S. (1989). *The Arkwrights: Spinners of fortune*. Manchester: Manchester University Press.

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

Flannery, K. (1969). Origins and ecological effects of early domestication in Iran and the Near East. pp. 73–100 in Ucko, P.J. & Dimbleby, G.W. (Eds.), *The domestication and exploitation of plants and animals*. Chicago: Aldine Publishing Co.

_____. (1986). *Guila Naquitz: Archaic foraging and early agriculture in Oaxaca, Mexico.* New York: Academic Press.

Flannery, K. & Marcus, J. (2003). The origin of war: New C14 dates from ancient Mexico. *Proceedings of the National Academies of Science, 100,* 20, 11801–11805.

_____. (2012). *The creation of inequality*. Cambridge, MA: Harvard University Press.

Flora, C.B. & Flora, J.L. (2015). *Rural communities: Legacy and change*. Fourth Edition. Iowa State University: Waveland Press.

Foley, J. (2013). It's time to rethink America's corn system. *Scientific American*, March 5. Retrieved 6/2/2017 from https://www.scientificamerican.com/article/time-to-rethink-corn/.

Foster, C.P. (2012). The Uruk phenomenon: A view from the household. Pp 437–472 in Parker, B.J. & Foster, C.P. (Eds.), *New perspectives on Household archaeology*. Winona Lake, IN: Eisenbrauns.

Foster, J.B. (1999). Marx's theory of metabolic rift: Classical foundations for environmental sociology. *American Journal of Sociology*, *105*, 2, 366–405.

Foster, J.B. & Clark, B. (2020). *The robbery of nature: Capitalism and the ecological rift*. New York: Monthly Review Press.

Fox, J. (2009). *The myth of a rational market: A history of risk, reward, and delusion on Wall Street*. New York: Harper Business.

Frangipane, M. (2007). Different types of egalitarian societies and the development of inequality in early Mesopotamia. *World Archaeology, 39,* 2, 151–176.

_____. (2010a). Different models of power structuring at the rise of hierarchichal societies in the near east: Primary economy versus luxury and defence management. Pp 79–86 in Bolger, D. & Maguire, L.C. (Eds.), *Development of pre-state communities in the ancient near East*. Oxford: Oxbow Books.

_____. (2010b). Politics, economy, and political economy in early centralized societies: Theoretical debate and archaeological evidence. Pp. 11–22 in Frangipane, M. (Ed.), *Economic centralization in formative states: The archaeological reconstruction of the economic system in fourth millennium Arslantepe*. Rome: Sapienze Universita di Rome.

Frank, A.G. (1966). *The development of underdevelopment*. New York: Monthly Review Press.

_____. (1967). *Capitalism and underdevelopment in Latin America*. New York: Monthly Review Press.

_____. (1969). *Latin America: Underdevelopment or revolution.* New York: Monthly Review Press.

_____. (1998). ReORIENT: *Global economy in the Asian age*. Berkeley, CA: University of California Press.

Frank, A.G. & Gills, B.K. (1996). *The world system: Five hundred years or five thousand?* New York: Routledge.

Frankopan, P. (2017). *The silk roads: A new history of the world*. New York: Vintage.

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

Freebairn, D.K. (1995). Did the green revolution concentrate incomes? A quantitative study of research reports. *World Development, 23*, 2, 265–279.

Freud, S. (1961). *Civilization & its discontents*. New York: Norton.

Freudenburg, W.R. (1986). The density of acquaintanceship: An overlooked variable in community research? *American Journal of Sociology*, *92*, 1, 27–63.

Friederici, A.D. (2017). *Language in our brain: The origins of a uniquely human capacity*. Cambridge. MA: MIT Press.

Friedman, R.I. (1997). *Who wrote the bible?* New York: HarperOne.

_____. (2003). *The bible with sources revealed*. New York: Harper Collins.

_____. (2017). *The exodus: How it happened and why it matters*. New York: Harper Collins.

Friedmann, J. (1986). The world city hypothesis. *Development & Change, 17,* 69–83.

Fuensanta, J.G. & Martin, A.M. (2018). The late PPNB "world" systems in northern Mesopotamia and south Levant: Agglomeration, control of long distance exchange and the transition of early religious centers to central villages. *Anejos a CuPAUAM, 3,* 45–68. Retrieved 1/26/21 from http://dx.doi.org/10.15366/ane3.rubio2018.004.

Fukuyama, F. (2006). *The end of history and the last man*. Reissue edition. New York: Free Press.

Fulkerson, G. & Seale, E. (2012). The case of Cooperstown, New York: The makings of a perfect village in an urbanising world. *Sociological Research Online 17,* 4. Retrieved from online http://www.socresonline.org.uk/17/4/9.html.

Fulkerson, G.M. & Thomas, A.R. (2019). *Urbanormativity: Reality, representation, and everyday life*. New York: Lexington Books.

_____. (2021). *Urban dependency: The inescapable reality of the energy economy*. New York: Lexington Books.

Galili, E., Benjamin, J., Eshed, V., Rosen, B., McCarthy, J. & Horowitz, L.K. (2019). A submerged 7000-year-old village and seawall demonstrate earliest known coastal defense against sea-level rise. *PLoS ONE, 14,* 12, e0222560. doi:10.1371/journal.pone.0222560.

Gallego-Llorente, M., Connell, S., Jones, E.R., Merrett, D.C., Jeon, Y., Eriksson, A., Siska, V., et al. (2016). The genetics of an early neolithic pastoralist from the Zagros, Iran. *Scientific Reports, 6,* 31326, doi: 10.1038/srep31326.

Galpin, C.J. (1918). *Rural life*. New York: The Century Company.

Ganshof, F.L. (1996). *Feudalism*. Translated by Grierson, P. Toronto: University of Toronto Press.

Gao, F., Bailes, E., Robertson, D.L., Chen, Y., Rodenburg, C.M., Michael, S.F., Cummins, L.B., et al. (1999). Origin of HIV-1 in the chimpanzee pan troglodytes troglodytes. *Nature, 397,* 436–441.

Garfinkel, H. (1996[1967]). *Studies in ethnomethodology*. Cambridge, MA: Polity Press.

Garreau, J. (1992). *Edge city: Life on the new frontier*. New York: Doubleday.

Gelb, I.J., Steinkeller, P. & Whiting, R. (1991). *Earliest land tenure systems in the Near East: Ancient kudurrus*. Chicago: Oriental Institute.

Gellert, P.K. (2010). Extractive regimes: Toward a better understanding of Indonesian development. *Rural Sociology*, *75*, 1, 28–57.

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

Gell-Mann, M. (1994). Complex adaptive systems. Pp. 17–45 in Cowan, G.A., Pines, D. & Meltzer, D. (Eds.), *Complexity: Metaphors, models, and reality*. New York: Addison-Wesley.

Gibbon, E. (2015 [1788]). *The history of the decline and fall of the Roman Empire*. All six volumes. Kindle Edition.

Gibson, J.C.L. (1971). *Textbook of Syrian Semitic Inscriptions, vol.1*. New York: Oxford University Press.

Gimbutas, M. (1982). *The goddesses and gods of old Europe*. Updated Edition. Berkeley, CA: University of California Press.

Gleick, J. (2007[1987]). *Chaos: Making a new science*. New York: Penguin.

Glowacki, M. & McEwan, G.F. (Eds.). (2020). *The Wari civilization and their descendants*. New York: Lexington Books.

Goebel, T., Walters, M.R., & O'Rourke, D.H. (2008). The late Pleistocene dispersal of modern humans in the Americas. *Science, 319,* 5869, 1497–1502.

Goffman, E. (1959). *The presentation of self in everyday life*. New York: Doubleday.

Goldman, M. (2007). *City on the edge: Buffalo, New York*. Amherst, NY: Prometheus Books.

Goldsworthy, A. (2009). *How Rome fell: Death of a superpower*. New Haven, CT: Yale University Press.

Gomez, M.A. (2018). *African dominion: A new history of empire in early and medieval west Africa.* Princeton, NJ: Princeton University Press.

Goodall, J. (1996). *My life with the chimpanzees.* Revised Edition. New York: Alladdin.

Goodman, M. (2007). *Rome and Jerusalem*. New York: Knopf.

Gottwald, N.K. (1979). *The tribes of Yahweh*. New York: Orbis.

Gouldner, A. (1970). *The coming crisis of western wociology*. New York: Basic Books.

Grada, C.O. (1975). A note on nineteenth emigration statistics. *Population Studies, 29,* 1, 143–149.

Graeber, D. (2011). *Debt: The first five thousand years.* New York: Mellville House.

Granovetter, M. (1973). The strength of weak ties. *American Journal of Sociology, 78*, 6, 1360–1380.

_____. (1985). Economic action and social structure: The problem of embeddedness. *American Journal of Sociology, 91*, 481–510.

Greenberg, G. (2000). *101 myths of the Bible*. Naperville, IL: Sourcebooks.

Gresky, J., Haelm, J. & Clare, L. (2017). Modified human crania from Gobekli Tepe provide evidence for a new form of Neolithic Skull Cult. *Science Advances, 3,* 6, e1700564. doi:10.1126/sciadv.1700564.

Griffin, K., Kahn, A.R. & Ickowitz, A. (2002). Poverty and distribution of land. *Journal of Agrarian Change, 2,* 3, 279–330.

Grosman, L., Munro, N.D. & Belfer–Cohen, A. (2008). A 12,000-year-old shaman burial from the southern Levant (Israel). *Proceedings of the National Academy of Science, 105,* 46, 17665–17669.

Haas, J., Creamer, W., Mesia, L.H., Goldstein, D., Reinhard, K. & Rodriguez, C.V. (2013). Evidence for maize (Zea mays) in the late Archaic (3000-1800 BC) in the

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

Norte Chico Region of Peru. *Proceedings of the National Academies of Sciences*, *110*, 13, 4945–4949.

Habermas, J. (1971). *Knowledge and human interests.* Boston: Beacon Press.

_____. (1984). *The theory of communicative action (vol.1): Reason and the rationalization of society.* Boston: Beacon Press.

Haer, J.L. (1952). Conservatism and the urban-rural continuum. *Rural Sociology*, *17*, 343–347.

Hamilton, L.C., Hartter, J., Safford, T.G. & Stevens, F.R. (2012). Rural environmental concern: Effects of position, partisanship, and place. *Rural Sociology, 79*, 2, doi:10.1111/ruso.12023.

Hansen, C.W., Jensen, P.S. & Skovsgaard, C.V. (2015). Modern gender roles and agricultural history: The Neolithic inheritance. *Journal of Economic Growth, 20,* 365–404.

Hansen, I.L & Wickham, C. (2000). *The long eighth century: Production, distribution, and demand*. New York: Brill.

Hansen, V. (2012). *The silk road: A new history*. New York: Oxford University Press.

Harper, K. (2017). *The fate of Rome: Climate, disease, and the end of an empire*. Princeton, NJ: Princeton University Press.

Harris, C.D. & Ullman, E.L. (1945). The nature of cities. *The Annals of the American Academy of Political and Social Science*, *242*, 7–17.

Harvey, D. (1973). *Social justice and the city*. Baltimore: Johns Hopkins University Press.

_____. (1982). *The limits to capital*. New York: Blackwell.

_____. (2011). *The enigma of capital and the crises of capitalism.* New York: Oxford University Press.

Haslip-Viera, G., Ortiz de Montellano, B. & Barbour, W. (1997). CA forum on anthropology in public: Robbing native American cultures: Van Sertima's afrocentricity and the Olmec. *Current Anthropology*, *38*, 3, 419–441.

Hassan, F.A. (1981). *Demographic archaeology*. New York: Academic Press.

Hawley, A. (1951). *Human ecology: A theory of community structure*. New York: The Ronald Press Company.

Hayden, K. (2014). Inbred horror: Degeneracy, revulsion, and fear of the rural community. Pp. 181–206 in Fulkerson, G.M. & Thomas, A.R. (Eds.), *Studies in urbanormativity: Rural community in Urban society*. New York: Lexington.

_____. (2021). *The rural primitive.* Studies in Urban-Rural Dynamics Series. Lanham, MD: Lexington.

Heather, P. (2005). *The fall of the Roman Empire*. New York: MacMillan.

Helbaek, H. (1972). Samarran irrigation agriculture at Choga Mami in Iraq. *Iraq, 34*, 1, 35–48.

Henry, D.O. (1989). *From foraging to agriculture: The levant at the end of the Ice age.* Philadelphia: University of Pennsylvania Press.

Hershkowitz, I., Spiers, M., Frayer, D., Nadel, D., Wish-Baratz, S. & Arensburg, B. (1995). Ohalo II—a 19,000 years old skeleton from a water–logged site at the Sea of Galilee. *American Journal of Physical Anthropology, 96,* 215–234.

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

Hess, R.S. (2007). *Israelite religions: An archaeology and biblical survey*. Grand Rapids, MI: Baker Academic.

Hiendleder, S., Kaupe, B., Wassmuth, R. & Janke, A. (2002). Molecular analysis of wild and domestic sheep questions nomenclature and provides evidence for domestication from two Different Subspecies." *Proceedings of the Royal Society of London, 269,* 893–904.

Hillman, G.C. & Davies, M. (1990). Measured domestication rates in wild wheat and barley. *Journal of World Prehistory, 4,* 157–222.

Hobsbawm, E. (1999 [1968]). *Industry and empire: The birth of the industrial revolution*. New York: New Press.

Hodder, I. (2006). *The Leopard's Tale: Revealing the mysteries of Catalhoyuk*. New York: Thames & Hudson.

Hohmann, G. & Fruth, B. (2002). Dynamics in social organization of Bonobos (*Pan paniscus*). Pp. 138–150 in Boesch, C., Hohmann, G. & Marchant, L.F. (Eds.), *Behavioural diversity in Chimpanzees and Bonobos*. Cambridge University Press.

Hole, F. (1994). Environmental instabilities and urban origins. Pp. 121–151 in Stein, G. & Rothman, M.S. (Eds.), *Chiefdoms and early states in the Near East: The organizational dynamics of complexity*. Madison: Prehistory Press.

Hooper, P.L., Smith, E.A., Kobler, T.A., Wright, H.T. & Kaplan, H.S. (2018). Ecological and social dynamics of territoriality and hierarchy formation." Pp. 105–132 in Sabloff, J.A. & Sabloff, P.L.W. (Eds.), *The emergence of premodern states*. Sante Fe: Sante Fe Institute.

Hornbeck, F. (2002). Common schools. Pp. 143–156 in Town of Hartwick Historical Society, *Hartwick: The Heart of Otsego County*. Hartwick, NY: Syllables Press.

Hounshell, D.A. (1984). *From the American system to mass production, 1800–1932*. Baltimore, MD: Johns Hopkins University Press.

Houston, S.D. & Inomato, T. (2009). *The classic Maya*. New York: Cambridge University Press.

Hoyt, H. (1939). *The structure and growth of residential neighbourhoods in American cities.* Washington: Federal Housing Administration.

Hui, Cang. (2006). Carrying capacity, population equilibrium, and environment's maximal load. *Ecological Modelling, 192*, 1–2, 317–320.

Hymer, S. (1972). The internationalization of capital. *Journal of Economic Issues, 6*, 1, 91–111.

Iamoni, M. (2016). Larger site, better life? Site dimensions and the path to socio-economic complexity in Upper Mesopotamia across the Halaf and Ubaid periods. Pp. 57–84 in Iamoni, M (Ed.), *Trajectories of Complexity: Socio-economic Dynamics in Upper Mesopotamia in the Neolithic and Chalcolithic Periods*. Wiesbaden: Harrassowitz Verlag.

Ingstad, H. & Ingstad, A.S. (2000). *The Viking discovery of America: The excavation of a norse settlement in L'Anse Aux Meadows.* Saint Johns, NF: Breakwater Books.

Inkeles, A. (1964). Making men modern: On the causes and consequences of individual change in six developing countries. Pp.342–361 in Etzioni, A & Etzioni, E. (Eds.), *Social change*. New York: Basic Books.

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

_____. (1969). Making men modern: On the causes and consequences of individual change in six developing countries. *American Journal of Sociology, 75*, 2, 208–225.

Issar, A.S. & Zohar, M. (2004). *Climate change: Environment and civilization in the middle east.* New York: Springer.

Jackson, K. (2009). *Crabgrass frontier*. Second Edition. New York: Oxford University Press.

Jacobs, J. (2009). *The colony of New Netherland: A Dutch settlement in seventeenth-century America*. Ithaca, NY: Cornell University Press.

_____. (1961). The death and life of great American cities. New York: Vintage Books, a division of Random House.

_____. (1969). *The economy of cities*. New York: Vintage Books.

Jacobsen, T. (1978). *The treasures of darkness: A history of Mesopotamian religion*. Revised Edition. New Haven, CT: Yale University Press.

Jencks, C. (1993). *Heteropolis: Los Angeles, the riots, and the strange beauty of Heteroarchitecture*. New York: St. Martin's.

Jenkins, P. (2008). *The lost history of Christianity*. New York: Harper.

Johnson, A.W. & Earle, T. (1987). *The evolution of human societies*. Stanford, CA: Stanford University Press.

Johnston, S.I. (Ed.). (2006). *Religions of the ancient world: A guide*. Cambridge, MA: Belknap.

Jorgenson, A. (2006). Unequal ecological exchange and environmental degradation: A theoretical proposition and cross-national study of deforestation, 1990–2000. *Rural Sociology, 71*, 4, 685–712.

Jorgenson, A., Dick, C. & Austin, K. (2010). The vertical flow of primary sector exports and deforestation in less-developed countries: A test of ecologically unequal exchange. *Society and Natural Resources, 23*, 9, 888–897.

Josephus, F. (1999). *The new complete works of Josephus*. Translated by Whiston, W. Grand Rapids, MI: Kregel.

Kagan, R. (2009). *The return of history and the end of dreams*. New York: Vintage.

Kahneman, D. (2011). *Thinking, fast and slow*. New York: Farrar, Straus, and Giroux.

Kahneman, D. & Tversky, A. (1979). Prospect theory: An analysis of decision under risk. *Econometrica, 47,* 2, 263–291.

Kaplan, D. (2000). The darker side of the "original affluent society". *Journal of Anthropological Research, 56,* 3, 301–324.

Kapoor, D. (2017). *Against colonization and rural dispossession: Local resistance in South and East Asia, the Pacific and Africa*. London: ZED.

Kasdulias, P.N. (1996). Multiple levels in the Aegean Bronze Age world-wystem. *Journal of World-Systems Research, 2*, 11, 1–36.

Kaufman, H.F. (1959). Toward and interactional conception of community. *Social Forces, 38,* 8–17.

Keay, J. (2009). *China: A history*. New York: Basic Books.

_____. (2010). *India: A history*. Revised Edition. New York: Grove Press.

Keeley, L.W. (1996). *War before civilization: The myth of the peaceful savage*. New York: Oxford University Press.

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

Kelly, J. (2012). *The graves are walking: The great famine and the saga of the Irish people*. New York: Henry Holt.

Kennedy, P. (1989). *The rise and fall of the great powers*. New York: Vintage.

Kenyon, K.M. (1954). Excavations at Jericho. *The Journal of the Royal Anthropological Institute of Great Britain and Ireland, 84,* 103–110.

_____. (1957). *Digging Up Jericho*. New York: Praeger.

King, L.W. (trans.). (2015). *The code of Hammurabi*. New York: CreateSpace Independent Publishing.

Kingston Daily Freeman. (1963). Layoffs new blow to depressed Utica. *Kingston Daily Freeman*, 25 February.

Kintisch, E. (2016). Why did Greenland's Vikings disappear? *Science*, doi:10.1126/science.aal0363.

Kislev, M.E., Nadel, D. & Carmi, I. (1992). Epipalaeolithic (19,000) cereal and fruit diet at Ohalo II, Sea of Galilee, Israel. *Review of Palaeobotany and Palynology, 73,* 161–166.

Kislev, M.E., Simchoni, O. & Weiss, E. (2002). Reconstruction of the landscape, human economy and hut use according to seeds and fruit remains from Ohalo II. Pp. 21–30 in D. Nadel (Ed.), *Ohalo II,a 23,000 Year–Old Fisher–Hunter–Gatherers Camp on the Shore of the Sea of Galilee*. Haifa: Hecht Museum.

Kislev, M.E., Hartmann, A. & Bar Yosef, O. (2006a). Early domesticated fig in the Jordan Valley. *Science, 312,* 5778, 1372–1374.

———. (2006b). Response to comment on "Early domesticated fig in the Jordan Valley". *Science, 314,* 1683b.

Klein, H.S. (1999). *The Atlantic slave trade*. New York: Cambridge University Press.

Kleniewski, N. & Thomas, A.R. (2019). *Cities, change, and conflict: A political economy of urban life*. Fifth Edition. New York: Routledge.

Knohl, I. (2000). *The messiah before Jesus: The suffering servant of the Dead Sea Scrolls*. Berkeley, CA: University of California Press.

Knox, P. & Taylor, P.J. (Eds.). (1995). *World-cities in a world system*. New York: Cambridge University Press.

Koeppel, G. (2000). *Water for Gotham*. Princeton, NJ: Princeton University Press.

_____. (2010). *Bond of union*. New York: De Capo Press.

_____. (2015). *City on a grid*. New York: De Capo Press.

Kubba, S. (1990). The Ubaid Period: Evidence of architectural planning and the use of a standard unit of measurement—the "Ubaid cubit" in Mesopotamia." *Paléorient,* 16(1), 45–55.

Kuhl, S. (2013). *For the betterment of the race: The rise and fall of the international movement for eugenics and racial hygiene*. New York: Palgrave-MacMillan.

Lake, R.W., Sui, D.Z. & Jackson, P. (1999). Postmodern urbanism and the ethnographic void. *Urban Geography, 20,* 167–176.

Laneri, N. (2015). The lifestyle of ancient entrepreneurs: Trade and urbanization in the ancient near east during the early second millennium BC. In Laneri, N. (Ed.), *My life is like a summer rose: Papers in honor of Maurizio Tozi for his 70th Birthday*. Oxford: Archaeopress.

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

Lankevich, G.J. (1998). *New York City: A short history*. New York: New York University Press.
Lansing, J.S. (2003). Complex adaptive systems. *Annual Review of Anthropology, 32*, 183–204.
Lawler, A. (2012, March/April). The pearl trade. *Archaeology*, 46–51.
Lefebvre, H. (1991[1974]). *The production of dpace*. Translated by Donald-Nicholson-Smith. New York: Blackwell.
_____. (1995). *Writings on cities*. New York: Blackwell.
Leick, G. (2003). *Mesopotamia: The invention of the city*. New York: Penguin.
Lekson, S.H. (2009). *A history of the ancient southwest*. Santa Fe, NM: SAR Press.
Lenski, G. (1984[1966]). *Power & privilege*. Chapel Hill, NC: University of North Carolina Press.
_____. (2005). *Ecological-evolutionary theory: Principles and applications*. New York: Routledge.
Leon-Portilla, M. (2006). *The broken spears: The Aztec account of the conquest of Mexico*. Updated edition. Translated by Kemp, L. Boston: Beacon Press.
Levin, A.-J. (2007). *The misunderstood Jew*. New York: HarperOne.
Levine, D.N. (1971). *Georg Simmel: On individuality and social forms*. Chicago: University of Chicago Press.
Levy, M.J. (1967). Social patterns (structures) and problems of modernization. Pp. 198–208 in W. Moore & R.M. Cook (Eds.), *Readings on social change*. Englewood Cliffs, NJ: Prentice Hall.
Lev-Yadun, S., Gopher, A. & Abbo, S. (2000). The cradle of agriculture. *Science, 288,* 5471, 1602–1603.
Lev-Yadun, S., Ne'eman, G., Abbo, S. & Flaishman, M.A. (2006). Comment on "Early domesticated fig in the Jordan Valley." *Science, 314,* 1683a.
Lewin, R. (1988). New views emerge on hunters and gatherers. *Science, New Series, 240,* 4856, 1146–1148.
Lewis, D.L. (2008). *God's crucible: Islam and the making of Europe, 570-1215*. New York: Norton.
Licht, W. (1995). *Industrializing America: The nineteenth century*. Baltimore, MD: Johns Hopkins University Press.
Lichter, D.T. & Ziliak, J.P. (2017). The rural-urban interface: New patterns of spatial interdependence and inequality in America. *Annals of the American Academy of Political and Social Science, 672*, 1, 6–25.
Lipset, S. (1963). Economic development and democracy. Pp. 27–63 in S.M. Lipset (Ed.), *Political Man*. Garden City, NY: Anchor.
Lipton, M. (1973). Transfer of resources from agriculture to non-agricultural activities: The case of India. Communication 109, Institute of Development Studies, University of Sussex.
_____. (1977). *Why poor people stay poor: A study of urban bias in world development*. Cambridge: Harvard University Press.
_____. (1984). Urban bias revisited." *Journal of Development Studies, 20,* 3, 139–166.
Liverani, M. (2006). *Uruk: The first city*. Translated by Bahrani, Z. & van de Mieroop, M. London: Equinox.

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

Lobao, L.M., Hooks, G. & Tickamyer, A.R. (2007). *The sociology of spatial inequality*. Albany: SUNY Press.

Logan, J.R. & Molotch, H. (1987). *Urban fortunes: The political economy of place*. Berkeley, CA: University of California Press.

Lovejoy, P.E. (2012). *Transformation in slavery: A history of slavery in Africa*. New York: Cambridge University Press.

Lu, H., Zhang, J., Liz, K.-b., Wu, N., Li, Y., Zhou, K., Ye, M., Zhang, T., Zhang, H., Yang, X., Shen, L., Xu, D. & Li, Q. (2009). Earliest domestication of common millet (panicum miliaceum) in East Asia extended to 10,000 years ago. *Proceedings of the National Academy of Science, 106*, 18, 7367–7372.

Luhmann, N. (1996). *Social systems*. Stanford: Stanford University Press.

Luloff, A.E. & Bridger, J.C. (2003). Community agency and local development. Pp. 203–213 in Brown, D.L. & Swanson, L.E. (Eds.), *Challenges for rural American in the twenty-first century*. University Park: Pennsylvania State University Press.

Lupieri, E. (2002). *The Mandaeans: The lost gnostics*. Grand Rapids, MI: Eerdmans.

Lynch, K. (2005). *Rural-urban interaction in the developing world*. New York: Routledge.

Lyon, L. & Driskell, R. (2012). *The community in urban society*. Long Grove, IL: Waveland Press.

Maasho, A. & Hunt, W.M. (2019). Coffee price slump leaves farmers earning less than a cent a cup. *Company News,* 14 January. Retrieved 1/16/19 from https://www.reuters.com/article/coffee-farmers/coffee-price-slump-leaves-farmers-less-than-a-cent-a-cup-idUSL8N1YJ4D2.

Macqueen, J.G. (2001). *The Hittites and the contemporaries in Asia Minor*. New York: Thames & Hudson.

Mahutga, M., Ma, X., Smith, D.A. & Timberlake, M. (2010). Economic globalisation and the structure of the world city system: The case of airline passenger data. *Urban Studies*, *47*, 9, 1925–1947.

Maisels, C.K. (1990). *The emergence of civilization*. New York: Routledge.

_____. (1999). *Early civilizations of the old world*. New York: Routledge.

Malthus, T.R. (2008[1798]). *Essay on the principles of population*. New York: Oxford University Press.

Mandelbrot, B. & Hudson, R.L. (2004). *The (mis)behavior of markets: A fractal view of risk, ruin, and reward.* New York: Basic Books.

Mann, C. (2006). *1491*. New York: Vintage.

_____. (2012). *1493*. Revised Edition. New York: Vintage.

Mann, M. (1986). *The sources of social power*. New York: Cambridge University Press.

Markusen, A.R. (1987). *Regions: The economics and politics of territory*. Totowa, NJ: Rowman & Littlefield.

Markusen, A.R., Lee, Y.-S. & DiGiovanna, S. (Eds.). (1999). *Second tier cities: Rapid growth beyond the metropolis*. Minneapolis: University of Minnesota Press.

Martineau, H. (1896). *The positive philosophy of Auguste Comte*. Trübner.

Marx, K. (1981[1894]). *Capital: A critique of political economy*, Volumes 1-3. Translated by Fernbach, D. New York: Penguin Classics.

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

Marx, K. & Engels, F. (1985 [1848]). *The communist manifesto*. Translated by Taylor, A.J.P. New York: Penguin.
Maryanski, A. & Turner, J. (1993). *The social cage: Human nature and the evolution of society.* Stanford, CA: Stanford University Press.
Maslow, A.H. (1968). *Toward a psychology of being*. Second edition. New York: Van Nostrand Reinhold.
Massey, D. (2005). *Strangers in a strange land: Humans in an urbanizing world*. New York: Norton.
Massey, D. & Denton, N. (1993). *American apartheid: Segregation and the making of the underclass*. Cambridge: Harvard University Press.
Matthews, V.H. & Benjamin, D.C. (1997). *Old testament parallels*. Second edition. New York: Paulist Press.
Maturana, H.R. & Varela, F.J. (1980). On machines, living and otherwise. Pp. 77–84 in H.R. Maturana & F.J. Varela, *Autopoiesis and cognition: Boston studies in the philosophy and history of science, vol 42*. Dordrecht: Springer.
Mazar, A. (1990). *Archaeology of the land of the bible, 10,000–586 BCE*. New York: Doubleday.
McClelland, D. (1964). Business drive and national achievement. Pp. 165–178 in Etzioni, A. & Etzioni, E. (Eds.), *Social Change*. New York: Basic Books.
McCorriston, J. (1992). The Halaf environment and human activities in the Khabur drainage, Syria. *Journal of Field Archaeology, 19,* 315–333.
———. (1997). The fiber revolution: Textile extensification, alienation, and social stratification in ancient Mesopotamia. *Current Anthropology, 38*, 4, 517–535.
McKinney, L.A. (2016). Reinventing rural environmental justice. Pp. 57–76 in Thomas, A.R. & Fulkerson, G.M. (Eds.), *Reinventing rural: New realities in an urbanizing world*. Lanham, MD: Lexington Books.
McLaughlin, R. (2018). *The Roman Empire and the Indian Ocean*. Philadelphia: Pen and Sword Maritime.
McLemore, S.D. (1994). *Racial and ethnic relations in America*, 4th ed. Boston: Allyn and Bacon.
McMichaels, P. (1996). *Development and social change*. Thousand Oaks, CA: Pine Forge Press, Sage Publications.
McMillan, E. (2004). *Complexity, organizations and change.* New York: Routledge.
McNeill, W.H. (1998 [1977]). *Plagues and peoples*. Anchor Edition. New York: Anchor.
Mead, G.H. (1934). *Mind, self, and society: From the standpoint of a social behaviorist.* Chicago: University of Chicago Press.
Mellaart, J. (1967). *Catal Hoyuk: A neolithic town in Anatolia*. New York: Thames & Hudson.
Meltzer, Milton. (1993). *Slavery: A world history, volume 1: From the rise of western civilization to the Renaissance*. Updated edition. New York: DeCapo Press.
_____. (1993). *Slavery: A world history, volume 2: From the Renaissance to today.* Updated edition. New York: DeCapo Press.
Mendenhall, G.E. (1962). The Hebrew conquest of Palestine. *Biblical Archaeologist, 25,* 66–87.

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

Mercader, J., Huw, B., Gillespie, Harris, J., Kuhn, S., Tyler, R. & Boesch, C.. (2007). 4,300-year-old chimpanzee sites and the origins of percussive stone technology. *Proceedings of the National Academies of Science, 104,* 9, 3043–3048.

Mertz, Barbara. (2007). *Temples, tombs, and hieroglyphs*. Second edition. New York: William Morrow.

Meyer, W.B. & Graybill, J.K. (2016a). The suburban bias of American society? *Urban Geography,* doi:10.1080/02723638.2015.1118990.

_____. (2016b). Response to comment on "The suburban bias of American society." *Urban Geography*, doi:10.1080/02723638.2016.1250368.

Mills, C.W. (1959). *The sociological imagination*. New York: Oxford University Press.

Mintz, M.M. (1999). *Seeds of empire: The American revolutionary conquest of the Iroquois*. New York: New York University Press.

Mithen, S. (2004). *After the ice*. Cambridge, MA: Harvard University Press.

Mol, A.P.J. (1995). *The refinement of production: Ecological modernization theory and the chemical industry*. Utrecht: Van Arkel.

_____. (2001). *Globalization and environmental reform*. Cambridge, MA: MIT Press.

Mollenkopf, J.H. (1984). *The contested city*. Princeton, NJ: Princeton University Press.

Molotch, H. (2002). School's out: A response to Michael Dear. *City & Community, 1,* 39–43.

Molotch, H., Freudenburg, W. & Paulsen, K.E. (2000). History repeats itself, but how? City character, urban tradition, and the accomplishment of place. *American Sociological Review, 65,* 791–823.

Monthly Review Online. (2019). Why Marx matters: Capitalism and the metabolic rift. Retrieved 1/27/2021 from https://mronline.org/2019/08/14/why-marx-matters-capitalism-and-the-metabolic-rift/.

Mookerjea, S. & Misra, M. (2017). Coal power and the Sundarbans in Bangladesh: Subaltern resistance and convergent crises. Pp. 164–183 in Kapoor, D. (Ed.), *Against colonization and rural dispossession: Local resistance in South and East Asia, the Pacific and Africa*. London: ZED.

Moore, A., Hillman, G. & Legge, A. (2000). *Village on the Euphrates: From foraging to farming at Abu Hureyra*. New York: Oxford University Press.

Moran, W.L. (Ed.). (1992). *The Amarna letters*. Baltimore: Johns Hopkins University Press.

Morland, P. (2019). *The human tide: How population shaped the modern world*. New York: Public Affairs.

Morley, N. (1996). *Metropolis and hinterland: The city of Rome and the Italian economy, 200 BC–AD 200*. New York: Cambridge University Press.

Morris, A. (2015). *The scholar denied: W.E.B. DuBois and the birth of modern sociology*. Oakland, CA: University of California Press.

Munro, D.N. & Grosman, L. (2010). Early evidence (ca. 12,000 B.P.) for feasting at a burial cave in Israel. *Proceedings of the National Academy of Science, 107,* 35, 15362–15366.

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

Murphy, D.J. (2007). *People, plants and genes: The story of crops and humanity.* New York: Oxford University Press.

Nadel, D. & Zaidner, Y. (2002). Upper Pleistocene and mid–Holocene net sinkers from the Sea of Galilee, Israel. *Mitekufat Haeven, Journal of the Israel Prehistoric Society, 32,* 37–59.

Nadel, D., Weiss, E., Simchoni, O. & Kislev, M.E. (2004a). Stone age hut in Israel yields world's oldest evidence of bedding. *Proceedings of the National Academy of Sciences*, *101,* 17, 6821–6826.

Nadel, D., Tsatskin, A., Belmaker, M., Boaretto, E., Kislev, M.E., Mienis, H., Rabinovich, R., et al. (2004b). On the shore of a fluctuating lake: Environmental evidence from Ohalo II (19,500 B.P.). *Israel Journal of Earth Sciences*, *53,* 207–223.

Nadel, D., Grinberg, U., Boaretto, E. & Werker, E. (2006). Wooden objects from Ohalo II (23,000 cal BP), Jordan Valley, Israel. *Journal of Human Evolution, 50,* 644–662.

Nash, J.C. (1989). *From tank town to high tech: The clash of community and industrial cycles*. Albany, NY: State University of New York Press.

Nieuwenhuyse, O.P., Akkermans, P.M.M.G. & van der Plicht, J. (2010). Not so coarse, nor always plain--The earliest pottery of Syria. *Antiquity, 84,* 323, 71–85.

Niewoehner, W.A. (2001). Behavioral inferences from the Skhul/Qafzeh early modern human hand remains. *Proceedings of the National Academy of Sciences, 98,* 6, 2979–2984.

Nigosian, S.A. (1993). *The Zoroastrian faith: Tradition and modern research*. Ithaca, NY: McGill-Queens University Press.

Nishiaki, Y. & Le Mière, M. (2005). The oldest pottery Neolithic of upper Mesopotamia: New evidence from Tell Seker al-Aheimar, The Khabur, Northeast Syria. *Paleorient 31,* 2, 55–68.

Nissen, H.J. (2001). *The early history of the ancient near east, 9000-2000 BC*. Chicago: University of Chicago Press.

Nixey, C. (2018). *The darkening age: The Christian destruction of the ancient world*. New York: Houghton Mifflin Harcourt.

Nolan, P. & Lenski, G. (2014). *Human societies: An introduction to macrosociology.* Twelfth Edition. New York: Oxford University Press.

Norbert, E. (1994). *The civilizing process*. New York: Blackwell.

NYC Planning. (2017). Residence districts. Retrieved 6/2/2017, from https://www1.nyc.gov/site/planning/zoning/districts-tools/residence-districts-r1-r10.page.

Oates, J. (1969). Choga Mami, 1967–1968: A preliminary report. *Iraq, 31*, 2, 115–152.

_____. (1978). Religion and ritual in sixth–millennium B.C. Mesopotamia. *World Archaeology, 10,* 2, 117–124.

———. (1993). Trade and power in the fifth and fourth millennia BC: New evidence from northern Mesopotamia. *World Archaeology, 24,* 3, 403–422.

O'Connor, J. (1973). *The fiscal crisis of the state.* New York: Transaction.

_____. (1988). *Natural causes: Essays in ecological Marxism.* New York: Guilford.

Ofori-Amoah, B. (Ed.). (2007). *Beyond the metropolis: Urban geography as if small cities mattered*. New York: University Press of America.

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

Olszewski, D.I. (1993). Subsistence ecology in the Mediterranean forest: Implications for the origins of cultivation in the Epipaleolithic southern Levant. *American Anthropologist, New Series, 95,* 2, 420–435.
Oman, C. (2017 [1898]). *The dark ages: 476–918*. New York: Augustine Books.
Ormerod, P. (1994). *The death of economics*. New York: St. Martins.
_____. (2001). *Butterfly economics: A new general theory of social and economic behavior*. New York: Basic Books.
Orum, A. (2004). Urbanization. Pp. 853–858 in G. Ritzer, *Encyclopedia of social theory*. Sage Publications.
Orwell, G. (1950). *1984*. New York: Signet Classics.
Osborne, M.J. & Rubinstein, A. (1994). *A course in game theory*. Cambridge, MA: MIT Press.
Ostler, N. (2005). *Empires of the word*. New York: HarperCollins.
Pagels, E. (1989). *The Gnostic Gospels*. New York: Vintage.
_____. (1996). *The origin of Satan*. New York: Vintage.
Pareto, V. (1991[1906]). *The rise and fall of elites: An application of theoretical sociology*. New York: Transaction.
Park, R. & Burgess, E.W. (1925). *The city*. Chicago: University of Chicago Press.
Parsons, T. (1937). *The structure of social action*. New York: Free Press.
_____. (1951). *The social system*. New York: Free Press.
Pauketat, T.R. (2003). *Ancient Cahokia and the Mississippians*. New York: Cambridge University Press.
_____. (2007). *Chiefdoms and other archaeological delusions.* New York: Alta Mira Press.
Perry, D. (1987). The politics of dependency in deindustrializing America: The case of Buffalo, New York. Pp. 113–137 in Smith, M. & Feagin, J. (Eds.), *The capitalist city*. New York: Basil–Blackwell.
Peterson, D. & Goodall, J. (2000). *Visions of Caliban: On chimpanzees and people.* Atlanta: University of Georgia Press.
Peterson, J. (2010). Domesticating gender: Neolithic patterns from the southern Levant. *Journal of Anthropological Archaeology, 29,* 3, 249–264.
Phillips, M. & Smith, D.P. (2018). Comparative ruralism and "opening new windows" on gentrification. *Dialogues in Human Geography, 8,* 1, 51–58.
Piketty, T. (2014). *Capital in the twenty-first century*. Cambridge, MA: Harvard University Press.
Pinderhughes, C. (2011). Toward a new theory of internal colonialism. *Socialism and Democracy, 25,* 1, 235–256.
Piperno, D.R., Weiss, E., Holsti, I. & Nadel, D. (2004). Processing of wild cereal grains in the upper Palaeolithic revealed by starch grain analysis. *Nature, 430,* 670–673.
Pollock, S. (1999). *Ancient Mesopotamia: The Eden that never was.* New York: Cambridge University Press.
Pomerania, K. (1993). *The making of a hinterland*. Berkeley, CA: University of California Press.
Pool, C.A. (2007). *Olmec archaeology and early Mesoamerica*. New York: Cambridge University Press.

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

Potter, J. (2002). *Cemeteries*. Pp. 386–388 in Town of Hartwick Historical Society, *Hartwick: The Heart of Otsego County*. Hartwick, NY: Syllables Press.

Prebisch, R. (1950). *The economic development of Latin America and its principal problems.* New York: United Nations.

Prest, A. (2016). Editorial introduction: Recognizing the rural. [Special issue on rural music education]. *Action, Criticism, and Theory for Music Education*, *15*, 4, 1–11.

Priestland, D. (2014). *Merchant, solider, sage: A new history of power*. New York: Penguin.

Prüfer, K., Munch, K., Hellmann, I., et al. (2012). The bonobo genome compared with the chimpanzee and human genomes. *Nature, 486*, 527–531.

Pruitt, L.R. (2007). Missing the mark: Welfare reform and rural poverty. *Journal of Gender, Race, and Justice, 10*, 439–449.

_____. (2008a). Gender, geography, and rural justice. *Berkeley Journal of Gender, Law, and Justice*, *23*, 338–391.

_____. (2008b). Place matters: Domestic violence and rural difference. *Wisconsin Journal of Law, Gender, and Society*, *23*, 347–416.

_____. (2013). The rural lawscape: Space tames law tames space. Pp. 190–214 in Braverman, I., Blomley, N. & Delaney, D. (Eds.), *The expanding spaces of law: A timely legal geography*. Stanford University Press.

Pruitt, L.R. & Vanegas, M. (2015). Urbanormativity, spatial privilege, and judicial blind spots in abortion law. *Berkeley Journal of Gender, Law & Justice,* 384, 76–153.

Pryor, F.L. (2005). *Economic systems of foraging, agricultural, and industrial societies*. New York: Cambridge University Press.

Przybycien, F.E. & Romanelli, P.A. (1976). *Utica, A city worth saving*. Utica, NY: Dodge-Graphic Press.

Pula, J.S. & Dziedzic, E.E. (1990). *United we stand: The role of Polish workers in the New York Mills textile strikes, 1912 and 1916*. Boulder: East European Monographs.

Putnam, R. (1993). *Making democracy work: Civic traditions in modern Italy*. Princeton University Press.

_____. (2000). *Bowling alone: The collapse and revival of American community*. New York: Simon & Schuster.

Rabinovich, R. (1998). "Drowning in numbers"–gazelles dominance and body size groups in archaeozoological record. Pp. 45–71 in Buitenhuis, H., Bartosiewicz, L. & Choyke, A.M. (Eds.), *Archaezoology of the Near East III*. Groningen: ARC–Publications 18.

Rabrenovic, G. (1996). *Community builders*. Philadelphia, PA: Temple University Press.

Redding, R.W. (1988). A general explanation of subsistence change: From hunting and gathering to food production. *Journal of Anthropological Archaeology, 7*, 1, 56–97.

Redfield, R. (1930). *Tepoztlan, a Mexican village: A study in folk life.* Chicago: University of Chicago Press.

_____. (1947). The Folk Society. *American Journal of Sociology*, *52*, 293–308.

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

Redford, D.B. (1992). *Egypt, Canaan, and Israel in ancient times*. Princeton, NJ: Princeton University Press.
Reich, D. (2019). *Who we are and how we got here: Ancient DNA and the new science of the past*. New York: Vintage.
Reich, R. (2010). *Aftershock: The next economy and America's future*. New York: Knopf.
Reichel, C. (2011). Hamoukar 2005–2010: Revisiting the origins of urbanism in Syria. *The Oriental Institute News and Notes, 211*(Fall), 3–9.
Reissman, L. (1964). *The urban process: Cities in industrial societies*. The Free Press.
Reitano, J. (2015). *New York State: Peoples, places, and priorities*. New York: Routledge.
Relethford, J. (2003). *Reflections of our past: How human history is revealed in our genes*. Boulder, CO: Westview.
Reynolds, S. (1996). *Fiefs & vassals*. New York: Oxford University Press.
Rich, J. & Wallace-Hadrill, A. (Eds.). (1991). *City and country in the ancient world*. New York: Routledge.
Ritzer, G. (1996). *Classical sociological theory*. Second Edition. McGraw-Hill.
Rivard, P.E. (2002). *A new order of things: How the textile industry transformed New England*. Hanover, NH: University Press of New England.
Rogers, E.M. (1995[originally, 1962]). *Diffusion of innovations*. New York: Free Press.
Rollefson, G.O. & Kohler–Rollefson, I. (1993). PPNC adaptations in the first half of the sixth millennium. *Paleorient, 19,* 1, 33–42.
Rollefson, G.O., Simmons, A.H. & Kafafi, Z. (1992). Neolithic cultures at Ain Ghazal. *Journal of Field Archaeology, 19,* 443–470.
Romer, T. (2015). *The invention of God*. Translated by Geuss, R. Cambridge, MA: Harvard University Press.
Rostow, W.W. (1964). The takeoff into self-sustained growth. Pp. 285–300 in Etzioni, A. & Etzioni, E. (Eds.), *Social change.* New York: Basic Books.
Rothman, M.I. (Ed.). (2001). *Uruk Mesopotamia and its neighbors*. Santa Fe, NM: SAR Press.
Runciman, W.G. (2000). *The social animal*. Ann Arbor, MI: University of Michigan Press.
Russell, P. (2001). *Prince Henry 'the navigator': A life*. New York: Princeton University Press.
Ryan, B. & Gross, N. (1943). The diffusion of hybrid seed corn in two Iowa communities. *Rural Sociology*, *8*, 1, 15–24.
Ryan, M. (1981). *Cradle of the middle class: The family in Oneida County, New York, 1790–1865*. New York: Cambridge University Press.
Sabloff, J.A. & Sabloff, P.L.W. (Eds.). (2018). *The emergence of premodern states*. Santa Fe, NM: SFI Press.
Sahlins, M. (2004 [1972]). *Stone age economics.* New York: Routledge.
Salamini, F., Özkan, H., Brandolini, A., Schäfer-Pregl, R. & Martin, W. (2002). Genetics and geography of wild cereal domestication in the Near East. *Nature Reviews Genetics*, *3,* 429–441.

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

Sale, K. (2000). *Dwellers in the land: The bioregional vision.* Athens, GA: University of Georgia Press.

Sampson, R.J. (2012). *Great American city: Chicago and the enduring neighborhood effect*. Chicago: University of Chicago Press.

Sanderson, S.K. (2001). *The evolution of human society*. New York: Rowman & Littlefield.

Sassen, S. (2001 [1991]). *The global city: New York, London, Tokyo*. Second Edition. Prineton, NJ: Princeton University Press.

Schafer, P. (2007). *Jesus in the Talmud*. Princeton, NJ: Princeton University Press.

Scham, S. (2008). The world's first temple. *Archaeology, 61,* 6, 22–27.

Schelling, T.C. (1978). *Micromotives and macrobehavior*. New York: Norton.

Schiffman, L. (2010). *Qumran and Jerusalem: Studies in the Dead Sea Scrolls and the history of Judaism*. Grand Rapids, MI: Eerdmans.

Schmandt–Besserat, D. (1996). *How writing came about*. Austin, TX: University of Texas Press.

_____. (1998). Ain Ghazal monumental figurines: A stylistic analysis. *Bulletin of the American School of Oriental Research, 310,* 1–17.

Schnaiberg, A. (1980). *The environment: From surplus to scarcity*. New York: Oxford University Press.

Schroeder, M. (1991). *Fractals, chaos, power laws*. New York: Freeman.

Schwartz, G.M. (1994). Rural economic specialization and early urbanization in the Khabur Valley, Syria. Pp. 22–38 in Schwartz, G.M. & Falconer, S.E. (Eds.), *Archeological views of the countryside*. Washington: Smithsonian Institution Press.

Schwartz, G.M. & Falconer, S.E. (Eds.). (1994). *Archeological views of the countryside*. Washington: Smithsonian Institution Press.

Schwartz, G.M. & Nichols, J.J. (2006). *After collapse: The regeneration of complex societies*. Tucson, AZ: University of Arizona Press.

Scott, A., Power, R.C., Altmann-Wendling, V., Artzy, M., Martin, M.A.S., Eisenmann, S., Hagan, R., Salazar-Garcia, D.C., Salmon, Y., Yegerov, D., Milevski, I., Finkelstein, I., Stockhammer, P.W. & Warinner, C. (2020). Exotic foods reveal contact between South Asia and the Near East during the Second Millennium BCE. *Proceeding of the National Academies of Science*, https://doi.org/10.1073/pnas.2014956117.

Scott, J.C. (2017). *Against the grain: A deep history of the earliest states*. New Haven, CT: Yale University Press.

Sen, D. (2014). The uncertainty relations in quantum mechanics. *Current Science, 107*, 2, 203–218.

Shady, R., Haas, J. & Creamer, W. (2001). Dating Caral, a pre-ceramic site in the Supe Valley on the central coast of Peru. *Science, 292*, 723–726.

Shandra, J.M., Shor, E. & London, B. (2009). World polity, unequal ecological exchange, and organic water pollution: A cross-national analysis of developing nations. *Human Ecology Review*, 16, 1, 53–63.

Sheehan, R. (1949, December). Take Utica, for instance. *Fortune,* 126–130.

Sheriff, C. (1997). *The artificial river: The Erie Canal and the paradox of progress, 1817–1862*. New York: Hill & Wang.

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

Shorto, R. (2005). *The island at the center of the world*. New York: Vintage.
Shumpeter, J.A. (1984[1942]). *Capitalism, socialism, & democracy*. New York: Harper.
Shumway, R. (2014). *The Fante and the transatlantic slave trade*. Rochester, NY: University of Rochester Press.
Shupe, B., Steins, J. & Pandit, J. (1987). *New York State population: 1790–1980*. New York: Neal-Schuman Publishers.
Simmel, G. (1964). *The sociology of Georg Simmel*. Edited by Wolff, K. New York: Free Press.
Simon, H. (1991). Bounded rationality and organizational learning. *Organization Science, 2,* 1, 125–134.
Simpson, G.G. (1945). *The principles of classification and the classification of mammals.* New York: American Museum of Natural History.
Sinopoli, C.M. (1994). The archaeology of empires. *Annual Review of Anthropology*, *23*, 159–180.
Sjoberg, G. (1955). The preindustrial city. *American Journal of Sociology, 60,* 5, 438–445.
_____. (1960). *The preindustrial city: Past and present*. Glencoe, IL: Free Press.
Smelser, N. (1964). Toward a theory of modernization. Pp. 268–284 in Etzioni, A. & Etzioni, E. (Eds.), *Social change.* New York: Basic Books.
Smil, V. (2017). *Energy and civilization: A history*. Cambridge, MA: MIT Press.
Smith, A. (2018, originally 1776). *The wealth of nations*. CreateSpace Independent Publishing Platform.
Smith, A.T. (2003). *The political landscape: Constellations of authority in early complex polities*. Berkeley, CA: University of California Press.
Smith, D.A. (1995). The new urban sociology meets the old: Rereading some classical human ecology. *Urban Affairs Review, 30,* 432–457.
Smith, D.A. & Timberlake, M. (1995). Conceptualising and mapping the structure of the world system's city system. *Urban Studies*, *32*, 2, 287–302.
_____. (2001). World city networks and hierarchies, 1977–1997. *American Behavioral Scientist*, *44*, 1656–1678.
Smith, M. (2010). *A prehistory of ordinary people*. Tucson, AZ: University of Arizona Press.
_____. (2019). *Cities: The first 6,000 Years*. New York: Viking.
Smith, M.E. (2012). *The comparative archaeology of complex societies*. New York: Cambridge University Press.
Smith, M.E., Ur, J. & Feinman, G.M. (2014). Jane Jacobs' "Cities First" model and archaeological reality. *International Journal of Urban Regional Research 38,* 4, 1525–1535. doi:10.1111/1468-2427.12138.
Smith, P.J., Thomas, A.R. & DeAmicis, J. (2013). *Ethnicity, immigration, and demographic change in upstate New York metropolitan centers*. Utica, NY: Utica College Center for Small Cities and Rural Communities.
Snir, A., Nadel, N., Groman-Yaroslavski, I., Melamed, Y., Sternberg, M., Bar-Yosef, O. & Weiss, E. (2015). The origin of cultivation and proto-eeeds, long before neolithic farming. *PlosOne*. Retrieved 1/28/ 2021, from https://doi.org/10.1371/journal.pone.0131422.

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

Snowden, F.M. (2020). *Epidemics and society: From the black death to the present*. Illustrated Edition. New Haven, CT: Yale University Press.

So, A. (1990). *Social change and development*. London: Sage.

Soja, E. (1987). Restructuring the internationalization of the Los Angeles region. Pp. 113–137 in Smith, M. & Feagin, J. (Eds.), *The capitalist city*. New York: Basil–Blackwell.

_____. (1996a). *Thirdspace: Journeys to Los Angeles and other real-and-imagined places*. New York: Wiley–Blackwell.

_____. (1996b). Introduction to Los Angeles: City and region. Pp. 1–21 in Scott, A. & Soja, E. (Eds.), *The city: Los Angeles and urban theory at the end of the twentieth century*. Berkeley: University of California Press.

_____. (2010). Cities and states in geohistory. *Theoretical Sociology, 39*, 361–376.

Soja, E. & Scott, A. (1996). *The city: Los Angeles and urban theory at the end of the twentieth century*. Los Angeles: UC Berkeley Press.

Sorokin, P.A. & Zimmerman, C. (1929). *Principles of rural-urban sociology*. New York: Henry Holt & Co.

Sorokin, P.A., Zimmerman, C. & Galpin, C.J. (1930). *A systematic sourcebook in rural sociology.* Minneapolis: University of Minnesota Press.

Sparks, R.J. (2014). *Where the negroes are masters: An african port in the era of the slave trade*. Cambridge, MA: Harvard University Press.

Spencer, G. (1983). *The politics of expansion: The Chola conquest of Sri Lanka and Sri Vijaya*. Madras: New Era Press.

Spencer, H. (1873). *The study of sociology*. New York: D. Appleton & Company. https://www.questia.com/read/96277757/the-study-of-sociology; Accessed 23 October 2019.

_____. (1898). *The principles of sociology*. New York: Appleton and Company.

Springwood, C.F. (1996). *From Cooperstown to Dyersville: A geography of baseball nostalgia.* Boulder, CO: Westview.

Stager, L.E. (1985). The archaeology of the family in early Israel. *Bulletin of the American School of Oriental Research, 260,* 1–35.

Stambaugh, J.E. (1988). *The ancient Roman city*. Baltimore, MD: Johns Hopkins University Press.

Stampp, K.M. (1989 [1956]). *The peculiar institution: Slavery in the ante-bellum south*. New York: Vintage Press.

Stapel, C.J. (2014). "Fagging" the countryside? (de)queering rural queer studies. Pp. 151–162 in Fulkerson, G.M. & Thomas, A.R. (Eds.), *Studies in urbanormativity: Rural community in Urban society*. New York: Lexington.

Stark, R. (1997). *The rise of Christianity: How the obscure, marginal Jesus movement became the dominant religious force in the western world in a few centuries*. New York: Harper.

Stathakoupoulas, D. (2017). *Famine and pestilence in the late Roman and early Byzantine empire: A systematic survey of subsistence crises and epidemics*. New York: Routledge.

Statz, M. & Evers, K. (2020). Spatial barriers as moral failings: What rural distance can teach us about women's health and medical mistrust author names and

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

affiliations. *Health & place*, *64*, 102396. https://doi.org/10.1016/j.healthplace.2020.102396.

Stein, G.J. (1998). World systems theory and alternative modes of interaction in the archaeology of culture contact. Pp. 220–255 in Cusick, J. (Ed.), *Studies in culture contact: Interaction, culture change, and archaeology*. Carbondale, IL: Southern Illinois University at Carbondale, Center for Archaeological Investigations.

_____. (1999). *Rethinking world-systems: Diasporas, colonies, and interaction in Uruk Mesopotamia*. Tucson, AZ: University of Arizona Press.

_____. (2001). Indigenous social complexity at Hacinibi (Turkey) and the organization of Uruk colonial contact. Pp. 265–306 in Rothman, M.S. (Ed.), *Uruk Mesopotamia and its neighbors*. Santa Fe, NM: SAR Press.

———. (2010). Tell Zeidan. Pp. 126–137 in *Oriental institute, 2008–2009 Annual Report*. Chicago: University of Chicago Press.

Stein, G. & Ozbal, R. (2007). A tale of two Oikumenai: Variation in the expansionary dynamics of 'Ubaid and Uruk Mesopotamia.' Pp. 329–341 in Stone, E.C. (Ed.), *Settlement and society*. Chicago: Oriental Institute.

Steuart, J, Sir. (1767). Chap. IX: What are the principles which regulate the distribution of inhabitants into farms, hamlets, villages, towns, and city? From *An inquiry in the principles of political economy, Book I*. Retrieved from https://www.marxists.org/reference/subject/economics/steuart/book1_09.htm#ch09.

Stevens, M. (2009). *Creating a class: College admissions and the education of elites*. Harvard University Press.

Stewart, J. (1955). *Theory of culture change*. Urbana: University of Illinois Press.

Stewart, J.J. (1981). Alvin Gouldner's challenge to sociology and Marxism: The problem of bureaucracy. *Pacific Sociological Review, 24*, 4, 441–460.

Steward, O. (2000). *Functional neuroscience.* New York: Springer-Verlag.

Stiebing, W.H., Jr. (2008). *Ancient near eastern history and culture.* Second Edition. New York: Routledge.

Stilwell, S. (2014). *Slavery and slaving in African history*. New York: Cambridge University Press.

Stiner, M.C. (2001). Thirty years on the "broad spectrum revolution" and paleolithic demography. *Proceedings of the National Academies of Sciences, 98,* 13, 6993–6996.

Storper, M. & Walker, R.. (1989). *The capitalist imperative: Territory, technology, and industrial growth*. New York: Basil Blackwell.

Stradling, D. (2007). *Making mountains: New York city and the Catskills*. Seattle, WA: University of Washington Press.

_____. (2010). *The nature of New York: An environmental history of the empire state*. Ithaca, NY: Cornell University Press.

Strayer, J.R. (1992). *The Albigensian Crusades*. Ann Arbor: University of Michigan Press.

Stuart, D.E. (2000). *Anasazi America: Seventeen centuries on the road from center place*. Albuquerque: University of New Mexico Press.

Sui, D.Z. (1999). Postmodern urbanism disrobed: Or why postmodern urbanism is a dead end for urban geography. *Urban Geography, 20*, 5, 403–411.

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

Swamy, R. & Revathi, P. (2017). Dispossession and neoliberal disaster reconstruction: Activist NGO and fisher resistance in Nagapattinam, Tamil Nadu. Pp. 122–144 in Kapoor, D. (Ed.), *Against colonization and rural dispossession: Local resistance in South and East Asia, the Pacific and Africa*. London: ZED.

Swanson, L. (2001). Rural policy and direct local participation: Democracy, inclusiveness, collective agency, and locality-based policy. *Rural Sociology, 66*, 1–21.

Tacitus. (2009). *Annals and histories*. Everyman's Library Edition. New York: Everyman's Library.

Tainter, J. (1988). *The collapse of complex societies*. New York: Cambridge University Press.

Tattersall, I. (2012). *Masters of the planet: The search for our human origins*. New York: MacMillan.

Tauxe, C.S. (1993). *Farms, mines, and main streets: Uneven development in a Dakota county*. Philadelphia: Temple University Press.

Taylor, A. (1995). *Willam Cooper's town*. New York: Knopf.

_____. (2007). *The divided ground: Indians, settlers, and the northern borderland of the American revolution*. New York: Knopf.

Taylor, C.C., Ducoff, L.J., Ensminger, D., Hagood, M.J., Longmore, T.W., McKain, W.C., Jr., Raper, A.F. & Schuler, E.A. (1949). *Rural Life Series*. New York: Alfred A. Knopf.

Taylor, P. & Derudder, B. (2016). *World city network: A global urban analysis.* London: Routledge.

Taylor, P.J. (2012). Extraordinary cities: Early "city-ness" and the origins of agriculture and states. *International Journal of Urban and Regional Research, 36*, 415–447.

Tchernov, E. & Valla, F.R. (1997). Two new dogs, and other natufian dogs, from the southern Levant. *Journal of Archeological Science, 24,* 1, 65–95.

Temin, P. (2013). *The Roman market economy*. Princeton, NJ: Princeton University Press.

_____. (2018). *The vanishing middle class: Prejudice and power in a dual economy*. Cambridge, MA: MIT Press.

Tesser, A. (1980). When individual dispositions and social pressure conflict: A catastrophe. *Human Relations, 33,* 393–407.

Theodori, G. & Luloff, A. (2000). Urbanization and community attachment in rural areas. *Society and Natural Resources, 13*, 399–420.

Thom, R. (1972). *Structural stability and morphogenesis*. New York: Benjamin Press.

Thomas, A.R. (2003). *In gotham's shadow: Globalization and change in central New York*. Albany: SUNY Press.

_____. (2005). *Gilboa: New York's quest for water and the destruction of a small town.* New York: University Press of America.

_____. (2010). *The evolution of the ancient city: Urban theory and the archaeology of the fertile crescent.* New York: Lexington.

_____. (2012). Urbanization before cities: Lessons for social theory from the evolution of cities. *Journal of World Systems Research, 18,* 2, 211–235.

_____. (2014a). Urbanization as the cause of cities: Notes from the near east and the northeast. *Comparative Sociology, 13,* 639–663.

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

_____. (2014b). Historic Hartwick: Reading civic character in a living landscape. Pp. 43–66 in Fulkerson, G.M. & Thomas, A.R. (Eds.), *Urbanormativity: Rural community in urban society*. New York: Lexington Books.

_____. (2014c). *Actual and potential population trends in metropolitan Utica*. Utica, NY: Utica College Center for Small Cities and Rural Studies.

_____. (2016). Urban dependency and urbanormativity. Pp. 13–32 in Thomas, A.R. & Fulkerson, G.M. (Eds.), *Reinventing rural*. New York: Lexington.

_____. (2020). Social systems and community development: Cooperstown, New York, and its imitators. *Community Development, 51*, doi:10.1080/15575330.2020.1737164.

Thomas, A.R. & Fulkerson, G.M. (2016). Urbanormativity and the spatial demography of suburbia: A response to Meyer and Graybill. *Urban Geography,* doi:10.1080/02723638.2016.1250367.

_____. (2019). What makes urban life possible? On the historical evolution of urban-rural systems. *Comparative Sociology, 18,* 5–6, 595–619.

Thomas, A.R., Smith, P.J., Dai, P.A., Coletti, S. & Coletti, V. (2007). *Adjusting to change: The face of downtown Oneonta, 1945–2005*. Oneonta, NY: SUNY Center for Social Science Research.

Thomas, A.R., Lowe, B.M., Fulkerson, G.M. & Smith, P.J. (2011). *Critical rural theory: Structure, space, culture.* New York: Lexington Books.

Thompson, G.H., Jicha, K.A., Rikard, R.V. & Moxley, R.L. (2015). Matrixed inequality, rurality, and access to substance abuse treatment: A community structure analysis of North Carolina communities. Pp. 207–230 in Fulkerson, G.M. & Thomas, A.R. (Eds.), *Studies in urbanormativity: Rural community in Urban society*. New York: Lexington Books.

Thompson, W.S. (1929). Population. *American Journal of Sociology, 34,* 6, 959–975.

Timberlake, M. (1985). *Urbanization in the world economy*. New York: Academic Press.

Tisdale, H. (1942). The process of urbanization. *Social Forces, 20*, 3, 311–316.

Tobin, D. & Glenna, L. (2018). Value chain development and the agrarian question: Actor perspectives on native potato production in the highlands of Peru. *Rural Sociology, 84,* 3, 541–568.

Tomlinson, R. (1992). *From Mycenae to constantinople: The evolution of the ancient city*. New York: Routledge.

Tönnies, F. (2000[1887]). *Gemeinschaft und gesellschaft*. New York: Cambridge University Press.

Town of Hartwick Historical Society. (2002). *Hartwick: The heart of Otsego County*. Hartwick, NY: Syllables Press.

Tsuneki, A. & Miyake, Y. (1996). The earliest pottery sequence of the Levant: New data from Tell El-Kerkh 2, northern Syria. *Paleorient, 22,* 1, 109–123.

Tubb, J.N. (1998). *Canaanites*. Tulsa, OK: University of Oklahoma Press.

Tyler, E.B. (2019 [1881]). *Anthropology; an introduction to the study of man and civilization*. New York: Wentworth Press.

Ur, J.A.. (2002). Settlement and landscape in northern Mesopotamia: The Tell Hamoukar survey 2000–2001. *Akkadica, 123,* 57–88.

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

_____. (2011). *Tell Hamoukar, volume 1. Urbanism and cultural landscapes in northeastern Syria: The Tell Hamoukar survey, 1999–2001.* Chicago: Oriental Institute.
U.S. Bureau of Labor Statistics. (1984). *Employment, hours, and earnings, states and areas, 1939–1982*. Washington, DC: U. S. Government Printing Office.
U.S. Geologic Survey. (2017). *How much water is there on, in, and above the Earth?* Retrieved 6/2/2017 from https://water.usgs.gov/edu/earthhowmuch.html.
U.S. Postal Service. (2020). *Postmaster finder*. https://webpmt.usps.gov/pmt007.cfm?PostOfficeCounty=Otsego&stat_state_name=NEW%20YORK; Accessed 4 April 2020.
van de Mieroop, M. (1999). *The ancient Mesopotamian city.* New York: Oxford University Press.
_____. (2004). *A history of the near east.* New York: Blackwell.
_____. (2011). *A history of ancient Egypt*. New York: Blackwell.
van der Toorn, K. (1990). The nature of the Biblical Teraphim in the light of cuneiform evidence. *Catholic Bible Quarterly, 52,* 203–222.
Van Sertima, I. (2003). *They came before Columbus*. New York: Random House.
Vermes, G. (2001). *The changing face of Jesus*. New York: Penguin.
Vieira, A. (2015). Minority groups and the informal economy: English speakers in Quebec's eastern townships. Pp. 97–110 in Fulkerson, G.M. & Thomas, A.R. (Eds.), *Studies in urbanormativity: Rural community in Urban society*,. New York: Lexington Books.
von Liebig, J. (1862). *Die chemie in ihrer anwendung auf agricultur und physiologie (Chemistry in its application to agriculture and physiology).* Braunschweig.
von Thunen, J.H. (1826). *The isolated state*. Edited by Hall, P. English Edition. London: Permagon Press.
Wallace, M. (2017). *Greater Gotham: A history of New York City from 1898 to 1919*. New York: Oxford University Press.
Wallerstein, I. (1974). *The modern world-system: Capitalist agriculture and the origins of the European world-economy in the sixteenth century*. New York: Academic Press.
_____. (1979). *The capitalist world-economy*. New York: The Cambridge University Press.
_____. (1980). *The modern world-system II: Mercantilism and the consolidation of the European world-economy, 1600–1750*. New York: Academic Press.
_____. (1987). World-system analysis. Pp. 309–324 in Giddens, A. & Turner, J.H. (Eds.), *Social theory today.* Stanford: Stanford University Press.
_____. (1989). *The modern world-system III: The second era of great expansion of the capitalist world-economy, 1730–1840*. New York: Academic Press.
Ward-Perkins, B. (2006). *The fall of Rome and the end of civilization*. New York: Oxford University Press.
Weber, A. (1899). *The growth of cities in the nineteenth century: A study in statistics, Volume 11*. New York: The Macmillan Company, Published for Columbia University.
Weber, M. (1946). *From Max Weber: Essays in sociology*. Edited by Gerth, H.H. & Mills, C.W. New York: Oxford University Press.

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

———. (1947). *The theory of social and economic organization*. Edited by Parsons, T. New York: Free Press.
———. (1958[1921]). *The city.* Translated and Edited by Martindale, D. & Neuwirth, G. New York: The Free Press, MacMillan.
———. (1978). *Economy and society*. Edited by Roth, G. & Wittich, C. Berkeley, CA: University of California Press.
Weeks, P.A. (1981 [1934]). *History of Hartwick (village and town).* Richfield Springs, NY: Heritage Press.
Wellisz, S. (1971). Economic development and urbanization. Pp. 39–55 in Jakobson, L & Prakash, V. (Eds.), *Urbanization and national development*. Beverly Hills, CA: Sage.
Wellman, B. (1979). The community question: The intimate networks of East Yorkers. *American Journal of Sociology, 84*, 5, 1201–1231.
Wells, P.S. (2008). *Barbarians to angels: The dark ages reconsidered*. New York: Norton.
Wengrew, D. (1998). "The changing face of clay": Continuity and change in the transition from village to urban life in the near east. *Antiquity, 72,* 278, 783–795.
West, G. (2017). *Scale*. New York: Penguin.
West-Eberhard, M.J. (2003). *Developmental plasticity and evolution.* New York: Oxford University Press.
Wickham, C. (2009). *The inheritance of Rome: Illuminating the dark ages*. New York: Penguin.
Wilcox, K.C., Angelis, J.I., Baker, L. & Lawson, H.A. (2014). The value of people, place and possibilities: A multiple case study of rural high school completion. *Journal of Research in Rural Education, 29,* 9, 1–18.
Wildman, D.E., Uddin, M., Liu, G., Grossman, L.I. & Goodman, M. (2003). Implications of natural selection in shaping 99.4% nonsynonymous DNA identity between humans and chimpanzees: Enlarging genus Homo. *Proceedings of the National Academy of Sciences 100,* 12, 7181–7188; doi:10.1073/pnas.1232172100.
Wilken, R.L. (2003a). *The Christians as the Romans saw them*. New Haven: Yale University Press.
_____. (2003b). *The spirit of early Christian thought*. New Haven, CT: Yale University Press.
Wilkinson, K. (1991). *The community in rural America*. New York: Praeger.
Wilson, E.O. (2000). *Sociobiology: The new synthesis.* Twenty-Fifth Anniversary Edition. Cambridge: Harvard University Press.
_____. (2012). *The social conquest of Earth*. New York: Liveright.
Wirth, L. (1938). Urbanism as a way of life. *American Journal of Sociology, 44*(January), 1–24.
Wright, E.O. (1998). *Classes*. New York: Verso.
Wright, H.T. (2018). The problem of states: The state of the problem. Pp. 15–32 in Sabloff, J.A. & Sabloff, P.L.W. (Eds.), *The emergence of premodern states*. Sante Fe, NM: SFI Press.
Yoffee, N. (2005). *Myths of the archaic state: Evolution of the earliest cities, states, and civilizations.* New York: Cambridge University Press.

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

Zarins, J. (1990). Early pastoral nomadism and the settlement of lower mesopotamia. *Bulletin of the American School of Oriental Research, 280,* 31–65.

_____. (1992). Pastoral nomadism in arabia: Ethnoarchaeology and the archaeological record. In Bar Yosef, O. & A. Khazanov (Eds.), *Pastoralism in the Levant.* Madison, Wi: Prehistory Press.

Zeder, M.A. (1994). After the revolution: Post–neolithic subsistence in northern mesopotamia. *American Anthropologist, 96,* 1, 97–126.

_____. (2012). The broad spectrum revolution at 40: Resource diversity, intensification, and an alternative to optimal foraging explanations. *Journal of Anthropological Archaeology, 31,* 3, 241–264.

Zeder, M.A. & Hesse, B. (2000). The initial domestication of goats (capra hircus) in the zagros mountains 10,000 years ago. *Science, New Series, 287,* 5461, 2254–2257.

Zegarell, A. (1986). Trade, women, class, and society in ancient western Asia. *Current Anthropology*, *27*, 5, 415–430.

Zhang, J., Lu, H., Gu, W., Wu, N., Zhou, K., Hu, Y., Xin, Y., Wang, C. & Kashkush, K. (2012). Early mixed farming of millet and rice 7800 years ago in the middle yellow river region, China. *PlosONE*, *7*, 12, e52146.

Zhang, S.Q., Zhang, Y., Li, J.S. & Xing, G. (2016). The broad-spectrum adaptations of hominins in the later period of late pleistocene of China—Perspectives from zooarchaeological studies. *Science China Earth Sciences, 59*, 8, 1529–1539.

Zians, J. (2016). Doggonit, people live here: The unmet challenges in rural mental health. Pp. 179–214 in Thomas, A.R. & Fulkerson, G.M. (Eds.), *Reinventing rural: New realities in an urbanizing world*. New York: Lexington Books.

Zipf, G.K. (1940). The generalized harmonic series as a fundamental principle of social organization. *Psychological Record, 4*, 43.

_____. (1949). *Human behavior and the principle of least effort*. Cambridge: Addison-Wesley.

Zohar, I. (2002). *In Ohalo II—A 23,000 year-old fisher-hunter–gatherers' camp on the shore of the sea of galilee.* Edited by Nadel, D. Haifa: Hecht Museum.

Zukin, S. (1991). *Landscapes of power: From Detroit to Disney World*. Berkeley: University of California Press.

———. (1995). *The cultures of cities*. Cambridge, MA: Blackwell Publishers.

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

Index

abolitionism, 292
Abu Hureyra, 119, 121, 126, 269
Adirondacks, 278, 330, 332
Africa, 83, 111, 166–67, 211, 215, 220, 221, 226, 230, 237–41, 243–44, 246–48, 250, 252–60, 262, 266–67, 270, 292, 400–403, 421
Age of Discovery, 263
agrarian farming, 15, 19, 24, 34–38, 45, 47, 85, 96, 98, 120–21, 133, 134, 148, 149, 153, 157–60, 162–63, 166–67, 261, 267, 269–70, 300, 310, 395–96
Ain Ghazal, 127, 129
Akkadian Empire, 164–65, 168, 171–72, 214, 270
Albany, 274, 278, 279, 281, 285, 286, 293, 294, 297, 302, 307, 317, 329, 332, 341, 342, 347, 351, 354, 355, 364, 365, 378, 404, 405, 409
Alexander the Great, 208, 218, 240, 241, 248
Alexandria, 222, 223, 226, 235–36
Algonquian, 261, 277, 278, 336
alienated rural labor, 36, 292, 387
Amarna Letters, 191–92, 202, 211, 217
American Civil War, 51, 292, 311, 343, 358
American Revolution, 144, 278, 283, 286, 310, 321, 324, 342, 409, 416
Americas, 51, 108, 258–64, 266, 268, 271, 273, 274, 283, 292, 383
animal domestication, 47, 119, 125, 130, 145, 166, 270, 401
Anti-Rent Wars, 284–85
Antonine Plague, 229–33, 238, 260
Arabia, 166, 203, 211, 244–48
Arabic, 246
Aramaean, 189, 202–3, 205
Arkwright, Richard, 288–89
Ashokan Reservoir, 308–9
As-sabiyah, 141–42
Assyria, 164, 165, 170, 182
Astoria, 320, 324
Athens, 164, 208, 272
Atlantic Slave Trade, 252–59, 266–67, 292, 422
Atrahasis, 176–78, 180–81
attractor basin, 32, 35
attractor point, 32
authority, 28, 30–31, 146
autopoiesis, 18
Azores, 252–53, 260, 266
Aztec, 262–64, 266

Ba'al Cycle, 175–76, 178–80, 182, 215
Babylonia, 161, 164, 165, 172, 175, 177, 180, 182, 188–89, 202, 204–10, 217, 240, 272–73

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

Baseball Hall of Fame, 330, 356, 374, 375
Bassett Healthcare, 356, 373
Battle of Kadesh, 191
Bear Mountain, 328
beaver, 11, 36, 47, 278–79, 287, 314, 383, 408
behavioral plasticity, 20–21, 23, 40
Beidha, 126, 129, 137
Beveled rim bowl, 149–50, 152, 160, 410
Beverwyck, 279
Bible, 169, 176, 184, 185, 189, 190, 195, 196, 198–204, 211, 228, 244, 254, 280
Blumer, Herbert, 3, 22–25
bonobo, 21–22, 38
Boston, 278, 319, 343, 364, 409
bounded rationality, 25, 26
Bourdieu, Pierre, 29, 48–49, 91–92, 217
Briarcliff Manor, 281
Britannia, 218, 228, 239, 243
British manor law, 280–81
broad spectrum revolution, 114–16, 130, 131, 136, 220, 269, 401
Bronze Age, 6, 38, 148, 155, 157–87, 189, 190, 193, 195–97, 201, 202, 209–12, 214, 215, 228–41, 249, 273, 345, 386, 390, 410
Brooklyn, 315–24, 331, 352
Brooklyn and Jamaica Railroad, 319, 324
Bruges, 251, 265
Bubonic Plague, 238–39, 252
Buffalo, 89, 294, 302, 303, 330, 332, 347–53, 355, 357, 363, 365, 371, 380–81, 405–6
built environment, 24, 45, 47–48, 50, 52, 103, 142, 145–46, 153, 184–85, 341, 410, 414
Byzantine Empire, 213, 238, 239, 244, 250–52, 256, 272, 421

Cairo, 248, 249, 255
caloric well, 32, 45–47, 52, 103, 195, 209, 214, 220, 271, 274, 295–98, 363, 382–83, 401, 408–9, 411, 412
caloric well analysis, 46–47
Canaan, 125, 169, 175, 190–94, 196–215, 217, 241, 420
capital, 59–60
capitalism, 8–9, 18, 59–61, 72, 88, 89, 91, 94, 95, 97, 99, 145, 148, 187, 213, 264, 283, 310, 345, 380–87, 399–406, 411, 416; logic of, 187, 213
Capitalist World Economy, *The*, 148
Carrying capacity, 5–6, 32, 34, 37, 130, 145, 148, 150, 154, 184, 259, 262
Carthage, 201, 211, 218–19, 222, 226, 239, 241
caste, 139, 146–52, 163, 182, 216–17, 234, 402; merchant, 147, 154, 163, 182; military (soldier), 146, 154, 163, 182; sage, 151–52, 155, 163, 182
Catalhoyuk, 124–26, 134, 137, 185, 214, 272
Catholics, 246, 344
Catskills, 285, 308–9, 313, 328, 330–33, 356, 379–80, 397, 412
Catskill system, 308
Central Asia, 141, 217–22, 236–37, 239, 240, 243, 245–47, 259, 268, 274
Central Place Theory, 75–76, 94
Chalcolithic, 130, 132, 146
Champagne, 251
Chavin culture, 262
Chenango Canal, 294, 299, 355
Chicago School, 3, 58, 66, 68–69, 72, 75, 77–78, 97, 100–101, 323–25
Chimpanzee, 21–22
China, 10, 86, 102, 213, 219–21, 230–31, 239, 240, 243, 244, 247, 249, 252, 259–61, 267, 271, 273–74, 287, 309, 384, 400–402, 404, 412, 419
Choga Mami, 137
Cholera, 230, 304, 305
Christaller, Walter, 75–77, 79
Christianity, 173, 176, 215, 216, 223, 232–36, 244–46, 248, 280, 416
City, *The* (Park & Burgess), 71–72

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

City, *The* (Weber), 70
city-state, 161–66
Clark, 356
class stratification, 140–41, 145, 154, 158, 167–68, 187, 193, 214, 216–21, 224, 258, 408
Code of Hammurabi, 165, 173–75
coercion, 26–29, 44, 45, 117, 258, 395, 411
coercive power, 26–29, 35, 89, 163, 396, 411
coevolution, 158
collapse, 9, 38, 51, 52, 55, 83, 104, 108, 113, 128–31, 163–64, 170, 187–96, 199, 209–14, 228–40, 243, 263, 264, 270, 271, 273, 337, 373, 386, 403, 416
collect pond, 304–5, 307, 343
colonization, 49, 108, 257, 265, 274, 283, 393, 403
Columbus, Christopher, 260
communism, 61, 400
communist, 87, 402
Communist Manifesto, *The*, 60, 187
complex adaptive system, 6, 13, 15–20, 50, 62–70, 81, 83, 103, 111, 128, 158, 163, 171, 213, 264, 269, 310–11, 337, 342, 380, 413, 415; autopoiesis, 18; collective agency, 17; dynamic growth, 19; emergence, 19; scale, 16, 19; self-organization, 17; self-similarity, 103, 104, 142, 271, 272, 335, 338, 410; time, 6–7, 16–18
complexity, 2, 6, 10, 16, 17, 26, 35, 37–38, 40, 41, 46, 55, 83, 128, 157, 190–91, 194, 228, 271
Comte, Auguste, 63, 68, 398
Concentric Zone Theory, 71–72, 295, 319, 324, 425
concubine, 254–56
Condition of the Working Class in England, *The*, 59
Confederacy, 292, 311
conflict theory, 2–3
Constantine, 233, 243
Constantinople, 222, 226, 228, 237–39, 245, 249, 251
Cooper, James Fenimore, 354
Cooper, William, 283, 286, 291, 294, 355
Cooperstown, 1, 107, 286, 290–98, 300, 309, 310, 339–41, 354–56, 364, 367–82, 409
Cooperstown Complex, 291–92, 309, 381
Cooperstown Dreams Park, 377
corporate concentration, 348–50, 353, 363, 364, 371, 380, 386
cotton, 244, 250–52, 258, 263, 265–68, 287–93, 299, 310–11, 354, 358, 361, 368, 369, 383, 409
critical theory, 91
croton system, 305–6, 308, 328
crucifixion, 227
cultural capital, 43, 48–49, 92
culture, 4, 7–9, 17, 19–21, 23–25, 28, 31, 38–50, 52, 62, 75, 83, 91, 96, 97, 103–5, 115, 118, 122, 130, 134–38, 144, 162, 164, 179–84, 215–16, 261, 272, 313, 339, 382, 385, 408, 411, 414–15
Cusp catastrophe, 105–7
Cuzco, 262, 263, 266
Cyrus the Great, 217

Dairy, 58, 125, 129, 149, 298, 309, 310, 369, 371, 379
Das Kapital. *See* Capital
David, 198–200, 202, 211
decision making, 7, 10, 24–28, 30, 38, 40, 105, 133, 405
deforestation, 228, 241, 398, 401
deindustrialization, 95, 348–50, 357–63, 366, 368, 380, 383, 386, 402, 404–6, 409
deity, 112, 127, 161, 174–76, 182–83, 202, 205, 280
demographic transition theory, 83, 98, 350

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

Dependency theory, 3, 87, 99, 392–94, 399
desert kites, 116, 121
Dewey, John, 66, 69
dimorphism, 26–27
distance parity model, 151
Distinction, 217
Division of Labor in Society, *The*, 63, 390
Documentary Hypothesis, 178
DuBois, W. E. B., 66–71, 100
Durkheim, Emile, 2, 38, 63–65, 68, 70–72, 82, 85, 92, 100, 390, 402
Dutch, 264–65, 274–75, 277–80, 286, 310, 317, 342
Dutch East India Company, 265, 277

Early Bronze Age, 162, 173, 174, 195, 201, 214, 410
East Bronx, 314, 315
economy, 7, 19, 24, 31–38, 44, 49, 52, 104, 113, 118, 130, 144, 162, 209, 210, 214, 216–26, 250, 255, 264, 306–14, 338, 342, 347–50, 356–85, 391–93, 395–98, 401, 403–4, 406, 410–13
Egypt, 166–71, 184, 190–93, 196, 199, 201, 206–9, 215, 221, 225, 226, 239, 247–48, 257, 270, 271, 281, 386, 403
Elefante, Rufus, 358–59
emergence, 17, 19
eminent domain, 284, 306
energy balance, 32, 34, 46, 150, 162, 163, 171, 195, 214
energy economy, 31, 44–46, 74, 90, 148–52, 159, 267, 269
Engels, Freidrich, 59, 61–63, 67, 187
Enuma Elish, 161, 165, 175–76, 180–82, 280
environment, 2, 5–7, 9, 13, 15, 17, 19–20, 24, 31–34, 36, 45–52, 58, 90–91, 94, 103, 104, 112–16, 120, 131, 135–36, 138, 142–43, 145–46, 149, 153–54, 158–59, 162–64, 166, 171, 172, 184, 187, 205, 210, 214, 229–30, 259, 267, 269, 272, 288, 313, 337, 341–42, 351, 379, 380, 383, 410, 412, 414
environmental demographic system, 10, 17, 20, 24, 34, 38, 39, 42, 46, 50, 52, 56, 111, 120, 130–31, 133, 159, 162, 270
environmental demography, 4–6, 13, 15, 52, 103, 154, 415
Epic of Gilgamesh, 177–79, 389
episodic leadership, 20, 119–20, 132
Eridu, 143, 144, 150, 215
Erie Canal, 293–95, 297, 299, 302, 306, 307, 309–10, 317, 323, 330, 347–48, 354, 355, 362, 365
An Essay on the Principles of Population, 56
exoticism, 217, 267
explorers, 252, 273, 274, 277

facework, 27
Fertile Crescent, 10, 112, 119–32, 172, 208, 213, 214, 219–21, 253, 260, 261, 271, 274, 277
feudalism, 226, 255, 281–85
field, 48–49
Fifth order center, 368–72
firmament, 179, 181, 182, 184
first fruits, 143, 181
first intermediate period, 169
first order center, 241, 271, 302, 337, 339, 342, 357, 363–64, 375, 380, 409
Five Points, 305
Flood Myth, 176–77
Florence, 178, 250, 251
Flushing, 229, 318, 320–22, 325
flying shuttle, 288
folk religion, 189
folk-urban continuum, 74–75
Fort Orange, 278
Fort Plain, 282, 293, 294, 307, 354, 409
Fort Stanwix, 293
fourth order center, 372–77
Frank, Andre Gunder, 1, 3, 392
freehold system, 283, 284

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

Fulton Ferry, 317, 324
functionalism, 1–3, 7, 83, 86, 89, 98–99

Galpin, Charles, 69, 71, 72, 100
Ganj Derah, 125
Garden City, 322
gender stratification, 140
geometric kebaran, 115
Ghent, 251, 265
gift economy, 117, 120, 121, 131, 153, 192, 394
Gilboa, 308
Gilgal, 121
Gilgamesh, 127, 177–79, 181, 389
Glimmerglass Festival. *See* Glimmerglass Opera
Glimmerglass Opera, 380
The Global City, 400
Gobekli Tepe, 122–23, 214, 415
Goffman, Erving, 27
gorilla, 22, 413
Goths, 232, 237
Great American City, 3, 324
Great Catastrophe, 169–70, 172, 189–95, 201, 202, 241, 410
Great Depression, 301, 359, 364, 371
Great Lakes, 257, 286, 293, 294, 302–3, 313, 336, 345, 347–49, 380, 381, 383, 386, 404, 406, 409
Greece, 113, 193, 194, 208, 216, 420
Greenland, 259–60
Greenpoint, 318, 320
Greenwich Village, 314
Growth of Cities, *The*, 66

Habitus, 48–49
Halaf, 135–36, 154, 410
Hamoukar, 146–47, 151, 160, 162, 165, 209, 383
Han Dynasty, 212, 213, 217, 219–21, 230–31, 259, 268, 274, 363
Harappa, 220, 247
Harlem, 314
Harrapan civilization, 220, 240, 247
Hartwick, 286, 291, 339, 355, 369–72, 376, 377, 382
Hartwick, John Christopher, 282–83, 286
Hartwick College, 378
Hartwick Seminary, 356, 368–69, 376–77
Hassuna, 135, 136, 155
Hawley, Amos, 83, 100
hegemonic power, 26–31, 35, 44, 179, 181, 214–15, 225
Hellenism, 208, 218
Hellenistic Period, 208–18
Hempstead, 318, 319, 322
Henry the Navigator, 252
Hilazon Tachtit, 118
Hittites, 170, 172, 190–91, 193, 201, 202, 386
Homo economicus, 58
Homo erectus, 112
HSBC, 351
Hudson, Henry, 277
Hudson River, 274, 306, 324
human evolution, 20–23
Huns, 237, 243
Hyksos, 169, 196–97

Ice Age, 111, 116, 130, 261, 394
Iceland, 259–60
IMF. *See* International Monetary Fund
immigrant, 291–92, 299, 301, 306, 310, 314, 343–44, 347, 351–53, 358, 362–63, 365, 402, 407
immigration, 291–92, 299–301, 306, 310, 314, 326, 343–44, 347, 351–53, 358, 362–63, 365, 402, 407
imperial overstretch, 128, 194
Inca, 262–63, 266–67, 306
India, 96, 193, 208, 218–21, 223, 230, 239, 240, 244, 247–50, 252, 260, 265, 267, 273, 277–78, 287, 289, 392, 399
industrial cycle, 357, 363
Industrial Revolution, 84, 250, 265, 287–92, 301, 302, 310

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

insulae, 228, 229
integrative institution, 357, 367
interaction ritual chains, 28, 42
internal colonization, 49–50, 383, 393
International Monetary Fund, 398
Irish, 343–44, 358, 407
Irish immigration, 343–44
Iron Age, 113, 165, 170, 172, 178, 179, 181, 186, 187, 189–91, 197, 202, 208–11, 240, 246, 255, 410
Iroquoian, 261, 277, 336
Iroquois, 11, 278–79, 286, 336, 409
Iroquois Confederacy, 278, 336
irrigation, 36, 51, 86, 137–40, 143–45, 148, 149, 153, 154, 172–73, 262–63, 270, 280, 303, 337, 342
Islam, 240, 244–48, 250, 257
Isolated State, *The*, 58
isomorphism, 103, 142
Israel, 169, 170, 190, 196–206, 211

Jamaica, 318–23
Jemdet Nasr period, 152, 155
Jericho, 122, 123, 126–27, 129, 137, 166, 214
Jerusalem, 29, 178–79, 188–89, 191, 192, 198, 200–201, 204, 206–8, 211, 215, 218, 222, 228, 241, 246, 254, 272, 273, 282, 408, 410
Jewish, 169, 223, 228, 233–36, 244, 245, 344
Joseph Cycle, 169, 197
Jubilee, 254
Judah, 189, 198–201, 203–7, 211
Judaism, 244, 246, 273
Juilliard Corporation, 363
Justinian, 238, 239, 244

Karahan Tepe, 122, 123
Kebaran, 115
Khiamian, 120
Kingfisher tower, 356
Kingston, 282, 307, 308, 327–30, 352, 355, 362, 379
Kish, 161
Ku Klux Klan, 344

L'anse aux Meadows, 260
Lackawanna, 351
Lagash, 146, 161, 164–65, 171, 209
last glacial maximum, 111, 114, 130, 259
last glacial period, 111
late Bronze Age, 170, 175, 187, 190–91, 195–97, 202, 208, 209, 211, 215, 240, 410
La Venta, 262
League of Corinth, 208
Levantine corridor, 120, 122, 126, 128, 134, 190, 199, 203
Little Falls, 293, 299, 300, 355, 364, 426
logic of capitalism, 187, 213
Long Island, 282, 317–24, 326–29, 331, 336
Loom-to-Boom period, 302, 360–61
Los Angeles, 89, 97, 339, 345, 365, 406
Los Angeles school, 97–98
Lowell, 291
luxury trade, 24, 34, 45, 117, 121, 131, 141, 149, 150, 153, 191, 210, 218, 221, 226, 240, 267, 268

M&T Bank, 351, 363
Maize, 48, 261
Malthus, Thomas, 4–6, 13, 55–58, 61, 62, 67, 113–16, 406
Manhattan, 31, 274, 278, 294, 303–6, 313–17, 319, 321–24, 327, 329, 331, 339, 344, 352, 409
Manhattan Company, 304–5
Marine Midland bank, 351
Marx, Karl, 3, 4, 13, 18, 55, 59–63, 67, 86, 100, 187, 213, 255, 416
mass production, 160
Maya, 51, 259, 262–63
Mead, George Herbert, 66, 69
Mesoamerica, 10, 102, 262–63, 266, 412

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

Mesopotamia, 113, 136–38, 141–59, 161–67, 169–71, 174–79, 182, 188, 189, 196, 202–3, 205, 208–10, 218–22, 245, 247, 270, 280–81, 309, 337, 338, 345
Mexico, 261–62, 330, 398, 404
Middle Bronze Age, 202
Middle Kingdom, 169
Military power, 28–29, 223, 265
Mineola, 322
Mithras, 232, 233
Moab, 200, 203–5
Moche, 262
Mohawk River, 289, 290, 293–94, 355, 361, 401
Mohawk Valley Community College, 360
Mohawk Valley formula, 363
Mohicans, 278
Mongols, 249, 270
mother goddess, 112, 113, 180, 232
Mount Vision, 291, 339, 368
Muddy Mohawk, 307
Multiple Nuclei Theory, 72, 324
Mureybet, 122, 124–25, 166
Mureybetian culture, 122–25
Mushabian, 115
Mycenaean, 191, 208

Naqada I period, 167
Naqada II period, 167
Naqada III period, 167, 168
Narmer, 168
Narmer Palette, 168
Natufian, 116, 119, 394
natural environment, 13, 24, 31, 37, 44–47, 90, 112–15, 145, 163, 313
Neanderthals, 111–12
Neo-Hittite, 201, 211
Neolithic, 36–38, 112–13, 116–35, 137–41, 145, 148, 153–55, 162, 166–67, 171, 174, 185, 195, 214–16, 220, 230, 269, 271, 272, 280, 394, 408
Nevali Cori, 122
New Amsterdam, 279, 304
Newark, 278, 322–23, 333
Newburgh, 327, 328
New Kingdom, 169–70, 190, 196, 210
New Netherland, 264, 278–79
New Obsidian, 55
New York, 48, 94, 95, 106, 108, 222, 228, 230, 263, 264, 269, 277–85, 303–9, 313–38, 341–45, 351, 375, 379, 381, 383, 386, 387, 397, 405, 409
New York City Water Supply, 303–9
New York Mills, 289–91, 301, 359, 362, 363
New York urban-rural system, 335–41
Nineveh, 188, 206, 272, 303
1984, 416
nomadic foraging, 34, 38, 47, 112, 116, 130–31, 133, 157–58, 166, 270
Norse expansion, 259

Ogallala Aquifer, 401
Ohalo II, 114–16, 120, 121, 130, 269, 413
Oikoi, 139–41, 149, 154, 155, 162–63, 216
Old Kingdom, 168–71, 195
Olmec, 259, 262
Oneida National Bank, 363–64
Oneonta, 106, 300, 307–9, 329, 340, 354–57, 368, 371, 373, 377–80, 382, 405, 409
Oneonta Normal School, 355
Oort Cloud, 330, 332
optimal foraging strategy, 114
Orangutan, 22
Otesaga Hotel, 356
overshoot, 32, 46, 55, 90

Paleolithic, 42, 47, 108, 111–16, 118, 130–31, 133, 138, 147, 153, 230, 269, 394, 408, 413
Park, Robert, 69, 71, 100
Parsons, Talcott, 2, 30, 86

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

pastoral nomad, 128–29, 135, 144, 153, 158, 166, 193, 196, 207, 270, 394, 408
Paterson, 323
path dependency, 19–20
Patroon system, 279–81
Pawtucket, 289, 323
Pax Romana, 190, 222–23, 226
PECE, 16, 19, 24, 51
Pelham Manor, 281
Persia, 208, 217, 219, 232, 238, 240, 243–45, 247
Philadelphia, 67, 278, 279, 281, 286, 328, 331–32, 335, 381
Philadelphia Negro, The, 67
Philip of Macedon, 208
Philistines, 198, 201
Phoenicia, 200
place structuration, 48
Plague of Justinian, 238–44
plantation, 223, 253, 256–58, 260, 263, 266, 292, 383
plant domestication, 118–20
political economy, 1, 8, 16, 38, 41, 56–62, 65, 70, 72, 75, 84, 86–95, 99, 106, 162, 229, 250, 325, 337, 340, 355, 398, 404–6
political machine, 358, 359
polity, 7, 10, 19–20, 24–31, 38, 44, 49, 52, 104, 115, 122, 133, 139, 144, 154, 162, 165, 169, 170, 172, 208, 213, 215, 217–19, 313, 341, 411, 414, 415
pollution, 305–7, 317
population related municipalities, 295, 425–26
potato blight, 306, 343
Pottery, evolution of, 134–37
Pottery Neolithic, 128, 134, 272
Poughkeepsie, 306–7, 327, 328, 330
power, 26–30, 223, 265; coercive, 28; economic, 29–30; hegemonic, 26; military, 28–29, 223, 265; political, 29
Pre-Pottery Neolithic A, 121–24
Pre-Pottery Neolithic B, 124–28
Pre-Pottery Neolithic C, 128–29
Principles of Rural-Urban Sociology, 72
PRM. *See* population related municipalities
Protestant, 246, 279, 344, 369
proto-deities, 127, 142, 155, 369
Putnam, Robert, 91
pyramid, 168, 262

Queens, 314, 319–22

race, 27, 67, 71, 91, 255, 258, 266, 290, 345
racism, 5, 390
railroad, 58, 294, 308–9, 313, 315, 319–22, 343, 348, 354–56
reconquista, 251, 252
Redfield, Robert, 74, 100
reflexivity, 19
regionalized urban dependency, 6, 109, 205, 226, 270, 309, 382, 412
religion, 28, 50, 105, 113, 118–20, 132, 134, 181–84, 189, 215, 232–36, 245–48, 337, 345
Remington Corporation, 290, 301, 307, 361–63
Rensselaerwyck, 279–81
resource horizon, 32–34, 45, 49, 52, 163, 209, 214, 220, 222, 282, 363, 382–84, 411, 412
Rhode Island system, 291
ritual, 22–23, 28, 29, 42, 118, 126, 139, 142–43, 163, 173, 174, 181, 204, 216, 271, 281, 338
Rochester, 222, 302, 330, 332–34, 343, 347–53, 365
Rome (Italy), 38, 162, 164, 201, 215–19, 221–40, 244–50, 259, 268, 271, 274, 280, 390, 403, 408
Rome (New York), 293, 294, 299, 336–37, 345, 357
Rome Climate Optimum, 221–22, 228–29
Rural Life Series, 74–74

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

rural production, 35–38, 44, 47, 88, 96, 159, 281, 383, 392–94, 396, 398, 401, 412

Sahlins, Marshall, 113
Saint Lawrence Seaway, 348–49, 365, 380, 405
Samarra, 135–38, 141, 142, 145, 147–48, 153–54, 166–67, 270, 337
San Lorenzo, 262
Sargon the Great, 164, 170, 214
Sassen, Saskia, 400
Sauquoit Creek, 289–90, 337
Savage Arms, 307, 361–62, 367
Savings Bank of Utica, 351, 363
scaling, 20, 39, 103, 185, 271, 272, 295, 410, 413
Schenectady, 293, 294, 302, 307, 340, 343, 352, 354, 365, 405
Schnaiberg, Allan, 91
Schoharie Reservoir, 308
scribes, 3, 114, 151–52, 163, 184, 216, 240, 255, 403
Sea Peoples, 190, 201, 208
second intermediate period, 169
second order center, 33, 271–72, 302, 303, 339, 342, 357, 375, 409
Sector Theory, 72, 324
sedentism, 4, 115, 116, 133, 269
self-organization, 17
self-similarity, 103, 104, 142, 271, 272, 335, 338, 410
Shang dynasty, 220
silk road, 309
Simmel, Georg, 68, 70, 71, 100
simulacra, 44, 97, 375
sixth order center, 367–68
skull cult, 123–24, 127, 132, 133, 139, 271
Slater, Samuel, 289, 310
slave, 252–59, 266–67
slave mode of production, 255
slavery, 252–59, 266–67
Small, Albion, 68, 71
Smallpox, 229–31, 239, 260
Smith, Adam, 13, 55–57, 63
social capital, 48, 91, 92
social construction, 4, 43, 169
social constructionism, 4, 415, 416
Social Construction of Reality, *The*, 4
social environment, 2, 43, 48–49, 164, 174, 205, 229
socialization, 4, 42–43
social structuralism, 3–4, 415, 416
The Social System, 2
Solomon, 199–203, 211, 255
Sorokin, Peterim, 69, 72–74
Spartacus, 227, 256
spatial inequality theory, 92–93
Spencer, Herbert, 63, 390
Staten Island, 316, 322–24, 331
status differentiation, 27, 119–21, 132–34, 140, 154
Steuart, Sir James, 57–59
Stockholm syndrome, 26
Stone Age Economics, 113
Sullivan County, 330
Sultanian culture, 122
Sumer, 138, 161, 170–82, 201–2, 206, 215, 247, 271, 303
summer season, 230, 304, 356
SUNY Oneonta, 378
SUNY Polytechnic Institute, 360
Susquehanna River, 279, 282, 290, 292–94, 307, 354–57, 369
symbolic interactionism, 3, 66
syncretism, 179, 182, 199, 215
Syracuse, 286, 295, 297, 299, 302, 309, 339, 341, 355, 360, 365, 405, 425–26
System 1 decision making, 25, 26, 39, 105
System 2 decision making, 25, 26, 39, 40, 105

Tammany Hall, 344, 358
Taylor, Carl, 74
Tel Aswad, 125
Tenochtitlan, 262, 263
territorial state, 188, 193, 202, 205, 208

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

textile, 35, 45, 150, 246, 250–51, 287, 302, 343, 359–64, 392
Third Dynasty of Ur, 164, 172
third order center, 377–80
Thompson Submachine Gun, 361
Three Sisters, 261, 263
Tiwanaku, 262–63
Toddsville, 290, 291, 368, 369
tokens, 127–28, 141, 142, 151–52, 157
Tonnies, Ferdinand, 62–64, 67, 68, 70, 74, 75, 100
Tourist Belt, 332
transit point, 35, 141, 148, 150–51, 153, 160, 247, 287, 299
T-shape house, 137, 154
Turks, 238, 252
typological approach, 62, 69, 74
Tyre, 188, 190, 200, 211

Ubaid, 137–44, 146, 149, 151–52, 154, 159–62, 187, 214–16, 220, 270, 271, 280, 303, 337, 395, 402, 408
Ugarit, 175–76, 194, 280
Umma, 146, 161, 164, 209
Umm Qseir, 135–36
uncertainty principle, 19
Univac File Computer, 302, 362
Upper Paleolithic, 112
upscaling, 367–68, 377, 402
Ur, 143, 144, 147, 164–65, 171–73, 408
Urban Bias Theory, 88, 98, 99, 101
urban dependency, 5, 8–9, 19, 31–35, 37, 44, 46, 49, 63, 103, 109, 147, 149–51, 154, 170, 209, 213–15, 221, 226, 264, 270, 281, 283, 285, 296, 309, 382–84, 402, 403, 412, 416
Urban Fortunes, 101, 404
urbanormativity, 5, 7–9, 31, 44–45, 50, 224, 264, 341, 387–93, 416
urban production, 35–37, 49, 61, 96, 148, 150, 171, 187, 191, 210, 214, 250, 300, 310, 313–14, 387, 392, 400–402
urban renewal, 55, 95, 364–65, 372, 381, 405
urban-rural system, 6, 15, 18, 35, 50–53, 83, 84, 105, 109, 147–52, 157, 162–64, 170, 171, 189, 197, 205, 214, 257, 270, 273, 274, 280, 295–303, 309–11, 313–14, 335–42, 354, 357, 367, 375, 382, 383, 386, 396, 399, 403, 407, 409, 423
Uruk, 127, 143–55, 157, 160, 164, 170–71, 175, 177, 182, 185, 207, 209, 217, 230, 261, 270–72, 280, 337, 383, 385, 389, 401–2, 410, 412
Uruk expansion, 147, 150, 159–60, 164, 165, 171, 412
Utica complex, 291, 309
Utica urban-rural system, 295–303

Vandals, 237
Venice, 250, 251
Venus figure, 112, 113, 180, 232
Viking, 240
Von Thunen, Johann Heinrich, 58, 61, 65, 72, 75, 89, 100

Wallerstein, Immanuel, 1, 18, 84, 148, 264, 394–96, 404–5
war, 35, 46, 57, 143, 146–47, 157, 160, 162, 163, 169, 173, 181, 195, 202, 204–5, 209, 225, 232, 236, 243, 253–54, 260, 268, 275, 278, 292, 311, 336, 344, 360, 385, 402, 411, 412, 415–16
Wealth of Nations, *The*, 56–57
Weber, Adna, 66, 83, 100
Weber, Max, 2, 13, 55, 67, 70–72, 82
West Bronx, 314, 315
Western Inland Lock Navigation Company, 293
West Farms, 315
West Point, 328
Wheeler machine, 344, 358
Williamsburgh, 318, 320, 321, 324
Wirth, Louis, 78
World Bank, 83, 398
World city system, 393, 397
World Ecological Destruction, 157

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

world system analysis, 1, 3, 87–90, 94, 385
World War I, 344, 358
writing, evolution of, 151–52

Yankee expansion, 298
Younger Dryas, 116, 120, 220, 394

Zhou dynasty, 220–21
Zimmerman, Carle, 72
Zipf's Law, 77
Zoroastrianism, 232, 245

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

About the Authors

Gregory M. Fulkerson, PhD, is professor and chair of the Department of Sociology at SUNY Oneonta. Along with Dr. Thomas, he is coeditor of the *Urban-Rural Dynamics* book series with Lexington Books, and has published coauthored and coedited books including *Urbanormativity* (2019), *Reimagining Rural* (2016), *Reinventing Rural* (2016), *Studies in Urbanormativity* (2014), and *Critical Rural Theory* (2011). He has published peer-reviewed research on environmental issues, social capital, and rural sociology.

Alexander R. Thomas, PhD, is professor of sociology at SUNY Oneonta. He is coeditor, with Gregory Fulkerson, of the Lexington Series on *Urban-Rural Dynamics*. He has published numerous books and articles on cities and their relationship with the countryside, including *In Gotham's Shadow* (2003), *The Evolution of the Ancient City* (2010), *Critical Rural Theory* (2011, with Brian Lowe, Gregory Fulkerson, and Polly Smith), *Studies in Urbanormativity* (2014), *Reimagining Rural* (2016), *Reinventing Rural* (2016), and *Urbanormativity* (2019, with Gregory Fulkerson).

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use

EBSCOhost - printed on 2/14/2023 4:27 AM via . All use subject to https://www.ebsco.com/terms-of-use