

DE GRUYTER

Susanne Brather-Walter (Ed.)

ARCHAEOLOGY, HISTORY AND BIOSCIENCES

INTERDISCIPLINARY PERSPECTIVES

Copyright 2019. De Gruyter. 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.



Archaeology, History and Biosciences

Ergänzungsbände zum Reallexikon der Germanischen Altertumskunde



Herausgegeben von
Sebastian Brather, Wilhelm Heizmann
und Steffen Patzold

Band 107

Archaeology, History and Biosciences



Interdisciplinary Perspectives

Edited by
Susanne Brather-Walter

DE GRUYTER

ISBN 978-3-11-061416-9
e-ISBN (PDF) 978-3-11-061665-1
e-ISBN (EPUB) 978-3-11-061417-6
ISSN 1866-7678

Library of Congress Control Number: 2018967103

Bibliografische Information der Deutschen Nationalbibliothek

Die Deutsche Nationalbibliothek verzeichnet diese Publikation in der Deutschen Nationalbibliografie; detaillierte bibliografische Daten sind im Internet über <http://dnb.dnb.de> abrufbar.

© 2019 Walter de Gruyter GmbH, Berlin/Boston
Satz: Integra Software Services Pvt. Ltd.
Druck und Bindung: CPI books GmbH, Leck

www.degruyter.com

Foreword

This volume represents the first result of a French-German research project, entitled “Archaeology of a transformation period. The burial place of Niedernai and the 5th century along the Upper Rhine” directed by Susanne Brather-Walter at Freiburg University and Eckhard Wirbelauer at Strasbourg University. It started in spring 2014 and was funded by both the *Agence nationale de la recherche* in Paris and the *Deutsche Forschungsgemeinschaft* in Bonn. The first major event was a conference “Archaeology, history and biosciences. Interdisciplinary perspectives” at Freiburg University in November 2015, and its contributions can be found along the following pages.

Two additional volumes are working in process and will hopefully published in the near future. On one hand, the first volume will present all the information concerning the 5th and early 6th century burial place of Niedernai, collected through archaeology, DNA and isotope analysis, and of course our interpretation of the cultural changes which took place during the second half of the 5th century as Niedernai is a quite good study case. On the other hand, the second volume will contain papers that were written by archaeologist and historians at another conference in Freiburg in April 2017 entitled “The 5th century as a transformation period between Late Antiquity and the Early Middle Ages”.

I am thankful that the outcome of the Niedernai project can be published within the distinguished series of the *Ergänzungsbände zum Reallexikon der Germanischen Altertumskunde*.

Many thanks go to Dr. Andrea Czermak (University of Oxford), Dr. Claudia Preis (Oxford), Dr. Edward M. Schoolman (University of Nevada, Reno), Michel Summer (University of Dublin), Nuria Schäfer and Ruoshan Yau (Albert-Ludwigs-Universität Freiburg) for improving the English.

Freiburg, summer of 2018

Susanne Brather-Walter

Contents

Foreword — V

Susanne Brather-Walter

Archaeology, History and Biosciences: An Introduction — 1

I Archaeology and Biosciences

Stefanie Samida

Archaeology in Times of Scientific Omnipresence — 9

Sabine Deschler-Erb

Pride and Prejudice? On the Relationship Between Archaeology and Biosciences — 23

Hélène Réveillas

Archaeoethnatology, the Recognition of Funerary Practices: Recent Examples — 33

II Migrations: Mobility and Communication

Sebastian Schmidt-Hofner

Barbarian Migrations and the Agrarian Economy of the Later Roman Empire in the Fourth Century CE — 55

Susanne Brather-Walter

Bow-Brooches as Ethnic Indicators? A Myth of Early Medieval Archaeology — 85

III Transformations: Continuity and Discontinuity

Roland Steinacher

Transformation or Fall? Perceptions and Perspectives on the Transition from Late Antiquity to the Early Middle Ages — 103

Frans Theuws

Burial Archaeology and the Transformation of the Roman World in Northern Gaul (4th to 6th Centuries) — 125

Clémence Hollard and Christine Keyser

Funerary Recruitment and Ancient DNA: Making DNA Speak — 151

IV Social Structures: Conditions of Life and Social Order

Magali Coumert

Archaeology vs Written Sources: The Case of Gothic Women — 163

Andrea Czermak

Diet Reconstruction Based on C/N Stable Isotope Analysis: What Can It Contribute to Address Questions on Cultural Change? — 181

Philipp von Rummel

Conclusion and Perspectives — 199

Indices

General Index — 205

Index of Geographic Names — 207

Index of Personal Names — 209

Susanne Brather-Walter

Archaeology, History and Biosciences

An Introduction

I

From November 19th to 21st 2015, an international conference “Archaeology, history and biosciences. Interdisciplinary perspectives” was held in Freiburg. This gathering was part of a German-French research project financed by the *Deutsche Forschungsgemeinschaft* and the *Agence Nationale de la Recherche* with the title: “Archaeology of a transformation period. The burial place of Niedernai and the 5th century along the Upper Rhine”.¹ The project is focused on a smaller grave yard southwest of today Strasbourg; its 33 graves mainly belong to the second half of the 5th and the early 6th century, the transition between late antiquity and the early middle ages. Because so few contemporary parallels are known so far, Niedernai is worthy of specific attention.

The project has three main aims: first, to offer a comprehensive interpretation of the burial place of Niedernai; second, to examine different hypothesis between migration and transformation within the scope of that evidence; and finally to transfer the results into a wide geographical scale in an archaeological and historical perspective. With these aims in mind, genetic and isotope analysis have been employed as an integral part of our project. What they could contribute when historical questions arise? This can be disputed and answered only interdisciplinary.

The central questions of the project may clarify our approach:

1. How did the grave yard of Niedernai developed chronologically?
2. To which cultural communication networks did the people of Niedernai belong?
3. Where did the people of Niedernai come from and how they were related to each other biologically and socially?
4. Which social differences can be observed between grave furnishing on one hand, and the nutritional status on the other?
5. What can be deduced from Niedernai about the establishment of row grave cemeteries along the Upper Rhine and the periphery of the former Roman Empire?
6. To which historical contexts the people of Niedernai belong?

¹ Cf. so far Susanne Brather-Walter/Eckhard Wirbelauer, Archäologie einer Transformationszeit. Das Gräberfeld von Niedernai und das 5. Jahrhundert am Oberrhein (Archéologie d’une période de transformation. La nécropole de Niedernai et le V^e siècle dans la région du Rhin supérieur). DFG-ANR-Projekt “Nied’Arc5”. Collegium Beatus Rhenanus EUCOR-Newsletter 17, 2014, 11–12; Susanne Brather-Walter, Das Gräberfeld von Niedernai im Elsass. Archäologische Nachrichten aus Baden 90/91, 2015, 58–63.

II

Specific scientific disciplines complement archaeological research, and the relationship across these fields has been long standing, especially with regards to pedology and palinology, and with morphological anthropology and archaeozoology. The rapid development of new methods in isotope analysis and genetics now offer new fascinating results and possibilities, but how they could and should be interpreted historically and culturally? Do they finally answer questions asked by archaeologists and historians for 200 years, and are still not able to answer based on their own record? This would imply that these questions are not asked misleadingly – in sharp contrast to actual research perspectives. Or do they present completely new perspectives and therefore answers to questions which the history-orientated humanities – again because of missing sources – could not raise so far? What perspectives thus are offered to interdisciplinary research?

The issue is obviously has wide ramifications well beyond in the Niedernai project. A few weeks before the Freiburg conference, a workshop took place in Berlin on “Genetic history. A challenge to historical and archaeological studies”.² And a year before, a new institute of the *Max-Planck-Gesellschaft* was founded in Jena – the *Max Planck Institute for the Science of Human History*.³ Michael McCormick established the *Initiative for the Science of the Human Past* (SOHP) at Harvard University,⁴ and both institutions have announced the *Max Planck Harvard Research Centre for the Archaeoscience of the Ancient Mediterranean* (MHAAM). Furthermore, Patrick Geary is directing a large Lombard project which looks for the genetic diversity in Hungary and northern Italy during the 6th and 7th centuries.⁵

What is important for the debate between science and the humanities?

1. Both sides must be informed sufficiently about the actual approaches and methods of each other. If not, they cannot evaluate how interpretations are achieved and how reliable they are. Archaeologists are often impressed by the misleadingly suggested ‘objective’ data.
2. Though problems and limits have to be discussed interdisciplinary. What do the data themselves offer, and what interpretations are driven by which assumptions? Transparency and sensibility are needed especially in problematic issues – in order to not ignore the actual state of the art in the other discipline.

² <http://www.hsozkult.de/event/id/termine-27827> – see the contributions published in: *Medieval worlds* 4, 2016 (The Genetic challenge to Medieval History and Archaeology) – <http://medievalworlds.net>

³ <http://www.shh.mpg.de/en>

⁴ <https://sohp.fas.harvard.edu/>

⁵ Carlos Eduardo G. Amorim/Stefania Vai/Cosimo Posth/Alessandra Modi/István Koncz/Susanne Hakenbeck/Maria Cristina La Rocca/Balazs Mende/Dean Bobo/Walter Pohl/Luisella Pejrani Baricco/Elena Bedini/Paolo Francalacci/Caterina Giostra/Tivadar Vida/Daniel Winger/Uta von Freedden/Silvia Ghirotto/Martina Lari/Guido Barbujani/Johannes Krause/David Caramelli/Patrick J. Geary/Krishna R. Veeramah, *Understanding 6th-Century Barbarian Social Organization and Migration through Paleogenomics*; <https://www.nature.com/articles/s41467-018-06024-4>

The importance of these debates can be understood through a few concrete examples: Do isotopes really verify migrations through different foods and diet between childhood and adulthood – or do they offer detailed information about the nutrition and its changes during individual lifetimes? How such changes could be explained in a culture historical way depends on the specific context. Instead of the one-sided and already interpretive classification as ‘foreign’, should a ‘non-local’ individual (or just ‘non-local’ nutrition) be labelled or assumed? Furthermore, could genes really ‘report’ on migrations? Or, asked the other way round, how should results of DNA-analysis look like if they are interpreted as indications of migration?

Both examples show that research in archaeology and historiography has been very much focused on ‘peoples’ migrations’ for a long time. This has changed meanwhile, and we would be surprised if they would be acknowledged by genes or isotopes. The intense debate on the ‘ethnic interpretation’ of archaeological finds and features characterises this paradigmatic shift. The opening of early medieval archaeology – studying a wide spectrum of themes instead of focusing on just one primary subject, the ‘ethnic paradigm’ – is no crisis, as sometimes said, but represents a substantial widening of the analytical horizon. At the same time, it legitimates the interdisciplinary debate with historiography: why archaeology should be interesting if it only would confirm what is already known from written sources (e.g. that the Lombards had migrated)? Only the combination of different perspectives – which complement and enrich each other far more than they may confirm each other – leads to a more complex coherent reconstruction of the past.

III

The necessity to discuss general methodological questions interdisciplinarily was the aim of the conference, bringing archaeologists, historians and bio-scientists together for an intense and critical discussion (Fig. 1.1).⁶ All participants should present their own research in order to prepare the others for an interdisciplinary debate. This is true especially for the complex analysis of ancient DNA and isotopes. At the same time, expectations directed to the neighbouring disciplines have to be expressed as precisely as possible, especially at the points of intersection; this will lead to the identification of fields of cooperation and to avoid dead ends. In the end, interdisciplinary perspectives should be developed in general and internationally – as well as for the Niedernai project specifically.

⁶ This debate is ongoing very lively; cf. the recent issue of *NTM. Zeitschrift für Geschichte der Wissenschaften, Technik und Medizin* 26, 2018.



Fig. 1.1: Speakers and moderators of the conference. From left to right – in the background Frans Theuws, Roland Steinacher, Sabine Deschler-Erb, Ursula Wittwer-Backofen, Irene Barbiera, Philipp von Rummel, Stefanie Samida, Eckhard Wirbelauer, Sebastian Brather; in the foreground – Andrea Czermak, Corina Knipper, Bonnie Effros, Susanne Brather-Walter, Magali Coumert, Hubert Fehr.

To achieve these aims, the conference programme was divided into four sections:

1. Archaeology and science: the opportunities in principle and the limits of the different disciplines and their cooperation – the mutual expectations and offers as well as the perspectives – that can be developed on this basis and which we should follow together.
2. Migrations – mobility and communication: ‘peoples’ migrations’ on one hand, and just transfer of ideas present on the other, present the extreme ends of a spectrum, which do not exclude each other; what data indicates what interpretation, or are they ambiguous?
3. Transformation – continuities and discontinuities: the interpretation of the transition from antiquity to the middle ages (both eras are inventions of the humanists 500 years ago) is explained sometimes as ‘transformation’ and sometimes as ‘break down’; to what extent do these explanations are suitable for humanities as well as for science?
4. Social structures – conditions of life and social order: What can we identify through our data and models about the everyday life of populations and societies beyond the political sphere, because both aspects are not directly connected?

Many people contributed to the conference. I would like to thank all authors and moderators as well as all contributors to the lively discussion. Many students of the Archaeological institute at Freiburg University assisted in the background as well as during the meeting itself, and Cornelia Wagner was the reliable centre of the organisation at the institute.

The *Deutsche Forschungsgemeinschaft* funded this conference, for which I am very thankful too.

I Archaeology and Biosciences

Stefanie Samida

Archaeology in Times of Scientific Omnipresence

Dedicated to Manfred K. H. Eggert with best wishes for his 75th birthday in May 2016.

“The Anglo-Saxon Invasion: Britain Is More Germanic than It Thinks” – this headline was published in *Spiegel Online* in June 2011.¹ The article’s German author unequivocally told his readers: “It is now clear that the nation which most dislikes the Germans were once Krauts themselves.” His report was based on recent archaeological and genetic analyses of Anglo-Saxon migration from northern Germany to England. This briefly outlined and public-oriented example can easily be supplemented with other headlines such as “A million Vikings still live among us”² or “We Europeans are Asians”³ – to name just a few. They all do not only attest to the increasing attention the field of molecular genetics is receiving in public discourse but also represent an observable trend in archaeology which is manifested in an increase of scientific methods. Above all, molecular genetics and isotope analyses have opened up an entirely new approach and apparently uncovered new distinctive evidence regarding human history. The time in which archaeological research projects can be conducted without or only with singular sciences is obviously over. 15 years ago, Ulrich Veit already observed that archaeology is transforming itself increasingly into a kind of “high-tech-archaeology”, in which the notebook and scientific methods have begun to replace the infamous spade.⁴

Therefore, it should come as no surprise that some researchers have recently been speaking of a “third science revolution”⁵ and predicted a paradigm shift questioning if archaeology as a form of ‘historical culture studies’ (*Historische Kulturwissenschaften*) could still remain its point of reference.⁶ I will return to these aspects later, but first I would like to determine the relationship between the natural sciences and humanities/

¹ See Schulz, Matthias: The Anglo-Saxon Invasion: Britain Is More Germanic than It Thinks (16. 6. 2011). <http://www.spiegel.de/international/europe/the-anglo-saxon-invasion-britain-is-more-germanic-than-it-thinks-a-768706.html> [29. 1. 2019]. – I am very grateful to Herma Moschner (Clearwater, USA) and Vanessa Bühling (Heidelberg, Germany) for their proofreading; they made this paper more comprehensible – thank you very much.

² Daily Mail Online, 10th March 2014. See <http://www.dailymail.co.uk/news/article-2577003/A-million-Vikings-live-One-33-men-claim-direct-descendants-Norse-warriors.html> [29. 1. 2019].

³ Wir Europäer sind Asiaten. Unsere Vorfahren kamen aus dem Osten. *Bild der Wissenschaft* 2015, H. 7.

⁴ Veit 2001, 87. – All following German quotes were translated by the author.

⁵ Kristiansen 2014.

⁶ Hansen/Nagler 2015.

culture studies⁷ (*Geistes-/Kulturwissenschaften*) more generally in order to subsequently turn to the current scientific tendencies in prehistoric archaeology. In doing so, the question of the extent of the domination of the current trend in prehistoric archaeology arises in a way that it increasingly fails to justify its claim of being a ‘historical culture study’.

Humanities and Sciences

It would seem, at the present day, as if the relations of the various sciences to one another, in respect of which relationship we have been accustomed to group them together under the name of a *universitas litterarum*, had become looser than ever. We see the learned men of our day absorbed in studies of detail of such vast extent, that not even the most versatile dare any longer think to string up in his head the varied knowledge pertaining to more than some small district of the domain of modern science. [...] Who shall be able to overlook the whole? – who may hold in his hand the connecting thread, and find his way through the labyrinth? The natural result of all this we first perceive in the fact, that each individual explorer is necessitated to choose for himself a continually narrowing field of inquiry, and can attain but to an imperfect knowledge of adjacent departments of science.⁸

This quote is more than 150 years old. The German physicist and polymath Hermann von Helmholtz (1821–1894) uttered these words at the beginning of his academic speech on the occasion of the birthday of the Grand Duke of Baden at the University of Heidelberg in 1862. Helmholtz’s address was titled “On the Relation of the Natural Sciences to the Totality of the Sciences” and appears to be, as these opening lines indicate, still quite relevant today. Surely, today no one would agree with his characterization that the humanities are “derived from a process of psychological intuitions”⁹; the same applies to his enthusiastic eulogy of historians’ memory with which they amazed their contemporaries,¹⁰ while physicists and mathematicians do not need any memory, here defined as a kind of mental activity, that is based on analogies.¹¹ However, Helmholtz’s statements are still relevant when the relationships between the disciplines are concerned: “The physicist”, as he put it, “will find some difficulty in imparting to the philologist and the jurist a clear view of a complicated process of nature. [...] The philologist and the historian [...] will find the physicist surprisingly indifferent to literary treasures; perhaps even more indifferent than is good for the history of his own science”.¹²

⁷ From now on I will use the terms ‘humanities’ and ‘culture studies’ as synonyms.

⁸ Helmholtz 1869, 5ff. The original German version was published 1862, see Helmholtz 1862.

⁹ Helmholtz 1869, 14.

¹⁰ Helmholtz 1869, 14.

¹¹ Helmholtz 1869, 18.

¹² Helmholtz 1869, 9.

Nearly 100 years earlier than Charles Percy Snow's famous lecture "The Two Cultures" (1959),¹³ Helmholtz's representation of the relationship between natural scientists and scholars of humanities described the reciprocal incomprehension of these groups, which Snow called *literary intellectuals* and *scientists*. Snow was much more pronounced in his language and spoke of the antipathy and a lack of understanding that shapes everyday life, which leads to distorted images of each other.¹⁴ More clearly than Helmholtz, he pointed to the deprecation of sciences in society and provided the Second Law of Thermodynamics as an example:

A good many times I have been present at gatherings of people who, by the standard of the traditional culture, are thought highly educated and who have with considerable gusto been expressing their incredulity at the illiteracy of scientists. Once or twice I have been provoked and have asked the company how many of them could describe the Second Law of Thermodynamics. The response was cold: it was also negative. Yet I was asking something which is about the scientific equivalent: *Have you read a work of Shakespeare?*¹⁵

In this context, it is irrelevant what Snow intended to convey with this readily and much-quoted example; certainly, his lecture must be seen against the backdrop of the so-called Sputnik Shock (1957) and the quote is obviously an inappropriate comparison, consciously emphasizing the gap between the disciplines.¹⁶ Yet I argue that Snow would have received similar answers or uncomprehending looks if he would have asked about the more common Theorem of Pythagoras or Newton's Law of Gravity. Moreover, I am also sure that the situation he described could be found in a similar form today. This gap was not only conjured up in his time but was already a topic of critical reflection as attested to, among others, in Helmholtz's speech in 1862.¹⁷

13 Snow 1959/1998.

14 "Literary intellectuals at one pole – at the other scientists, and as the most representative, the physical scientists. Between the two a gulf of mutual incomprehension – sometimes (particularly among the young) hostility and dislike, but most of all lack of understanding. They have a curious distorted image of each other. Their attitudes are so different that, even on the level of emotion, they can't find much common ground" (Snow 1959/1998, 4).

15 Snow 1959/1998, 14f. – In his consciously polemic article about the two cultures, the German science historian Ernst-Peter Fischer (1991, 4) put the problem in a nutshell: "I am convinced that many people neither know Shakespeare's sonnet nor the Second Law of Thermodynamics. Nevertheless most of them would contemptuously deride people who admit not knowing the poems, and consider them to be uneducated (*ungebildet*) while simultaneously welcoming those who do not know the Second Law of Thermodynamics into their peer group."

16 To this see Oels 2015.

17 See also Dilthey 1883; Rickert 1926.

Since Snow's description of the mutual ignorance of the two academic cultures, the debate of the 'two cultures' thesis has picked up speed¹⁸ and led to an intensive engagement.¹⁹ The German philosopher and historian of science Jürgen Mittelstraß, for instance, considers Snow's 'two cultures' thesis to not only be a myth but also a curse that has particularly burdened the humanities²⁰ because, according to Snow, the future is to a certain extent intrinsic to the sciences whereas the humanities merely look back into the past.²¹ In other words: while sciences seem future-oriented, the humanities appear to be disciplines looking backward.

It is not my aim to continue the entire discussion of Snow's 'two cultures' thesis which occurred primarily at the end of the 1980s and has continued to flare up into the present.²² Instead, I would like to demonstrate that the different perception of the two cultures respectively of "bed and table"²³ was clearly introduced long before Snow and in a similarly pronounced way by Hermann von Helmholtz. I claim that this pair of antagonisms is still a strong element of our academic world²⁴ even if some researchers have rightly pointed out recently that the "battle of academic cultures' [...] inadequately describes the present situation", because the economic criteria of differentiation – money-generating versus money-wasting sciences – apply nowadays.²⁵

In his speech, Helmholtz observed that despite the faith in progress and the quick developments in the field of science, the natural sciences were also under pressure – one had accused them of having taken an isolated path and being estranged from the other sciences²⁶ – and thus, he promoted a "union of the different sciences" on the ground that every one-sided training is flawed. It renders researchers of all kinds unprepared for the types of activities practiced less, it limits the "comprehensive

18 For example Kreuzer 1987; Bachmaier/Fischer 1991; see also the introduction by Stefan Collini in Snow 1959/1998.

19 Occasionally it came to polemical attacks against Snow, see the Richmond Lecture of Frank Raymond Leavis in 1962 (Leavis 2013).

20 Mittelstraß 1989, 1991.

21 Snow 1959/1998, 11.

22 See, e.g., Eggert 2006, 11 ff.

23 Mittelstraß 1991, 11.

24 Eggert 2006, 18. – This is well illustrated by the ongoing, often quite passionate discussion. Holzhey 1999, 50 expresses it somewhat dramatically as follows: "The relationship between the sciences and the humanities can be defined as one of mutual criticism. Within this context of confrontation, both sides struggle to determine our future world's cultural form."

25 Hartmann et al. 2012, 9.

26 Helmholtz 1869, 7: "I am the rather drawn to take up the question of the connection of the various sciences as I myself belong to the department of the natural sciences; and this department has been charged, of late, with having, more than any other of the sciences, struck out for itself an independent path, and become estranged from the rest, which, by common philological and historical studies, are connected with one another."

views of a subject” and could easily lead to an “overweening self-esteem”.²⁷ Certainly, his speech was shaped by the dichotomy of sciences and humanities, but at the same time it is entirely visionary in its plea for collaboration since all sciences ultimately have a common goal, namely “to assert the predominance of mind over the world of matter”.²⁸ This may sound somewhat extreme but it hits the mark since every single science aims first and foremost for knowledge or pursues an epistemic goal. However, a further question arises: does Helmholtz’s ‘meta’-goal suffice in order to reach a productive cooperation? Spontaneous reactions might be disapproving. Inevitably, much more is needed to pursue a collaboration profitable for all. The ‘magic’ word in this context is ‘interdisciplinarity’.

On Interdisciplinarity

Some terminological clarification appears to be appropriate here.²⁹ Four different modes of doing research became generally agreed on: monodisciplinarity, multidisciplinary, interdisciplinarity and transdisciplinarity. They are differentiated first by the number of disciplines involved, second by the form of input needed to solve a given problem and third by the degree of integration achieved in the process of cooperation (Tab. 2.1).

Interdisciplinarity implies that the problem to be solved is analyzed and defined jointly as well as that each discipline brings in its particular perception of the task and the possible ways of solving it. This leads to a discussion of both the conceptional frame of reference and the procedure; whenever necessary, this discussion will be continued as a more or less institutionalized structure throughout the whole process of research. In other words, this mode of collaborative research hinges on a continuous exchange of ideas, insights and results as long as the investigation proceeds, or as Mark Pollard and Peter Bray once expressed it: “It has to be an equal partnership, with mutually intelligible language of communication, agreed objectives, and equal inputs”.³⁰ To put it briefly, there can be no interdisciplinarity without a genuine

27 Helmholtz 1869, 10.

28 Helmholtz 1869, 22.

29 Some of the following mentioned aspects on interdisciplinarity were already discussed in detail, see Samida/Eggert 2012.

30 Pollard/Bray 2007, 246. Quite similar a few pages further on: “There are three fundamental keys to successfully riding the bicycle. One is a common goal [...], secondly a shared language, and the third, mutual respect – not simply personal respect, which is a sine qua non, but mutual academic respect. [...] Communication over a carefully defined question is the key. Integration cannot be defined just by the quantity of joint papers: It comprises discussion, meetings, conferences, and negotiation” (Pollard/Bray 2007, 255f.).

Tab. 2.1: Multi-, inter- and transdisciplinarity (based on Eggert 2011, 39 fig. 3).

	Multidisciplinarity	Interdisciplinarity	Transdisciplinarity
Methods	Discipline-specific methods; no cooperation	Discipline-specific methods; high degree of cooperation	Joint development of new methods; disciplines merge (at least partially) during a certain time span
Problem Definition	Discipline-specific problem	Jointly defined problem	New and jointly defined problems (new fields of research)
Language, Terms, Theories	Discipline-specific	Discussion, clarification and consolidation of the conceptual frame	Development of a new conceptual frame
Gain of Knowledge	Basically discipline-specific; nevertheless, each discipline participates	Additional gain of knowledge through close cooperation	Autonomous gain of knowledge; only possible through developing new methods
Summary	Parallel existence of disciplines; minimal cooperation	Continuous exchange of ideas, insights and results between disciplines on a common basis	Boundaries of disciplines become blurry and might even dissolve partially; disciplines merge temporary; possible emergence of new disciplines

reflection on theories and methods in each of the participating disciplines. Yet, this is the most basic prerequisite.

However, ‘pretension and reality’ of interdisciplinarity are not always congruent. This holds also true for a few cases of reflections on interdisciplinarity already published. Veronika Fuest who initialized and coordinated a German Collaborative Research Center (*Sonderforschungsbereich*) uniting scientists and institutions for many years, concludes that there are usually more problems than successes within interdisciplinary collaborations, especially between social sciences (including the humanities) and natural sciences. This is due to the fact that both epistemology and methodology are not only fundamentally different but, in addition, rarely understood by the respective partners.³¹ According to Fuest, there are four problems: (1) differences in the epistemology of the participating disciplines; (2) differences in data

³¹ Fuest 2006, 47ff. Moreover, on the practical level this kind of research fails because of mutual prejudices; this is especially true for joint projects of the sciences and the humanities, where the latter with their qualitatively oriented mode of research often have to ‘fight’ for being accepted by their quantifying colleagues (Fuest 2006, 62). Instructive examples of prejudices and mutual misunderstandings are given by Egorova (2010).

acquisition and analysis; (3) difficulties in the project's organization and management; and (4) difficulties concerning the institutional frame (e.g., introduction of interdisciplinary approaches into university teaching, creation of new funding lines, training of referees).³²

Fuest's insights are not isolated. Quite to the contrary, as many practitioners of interdisciplinary cooperation who have critically reflected on this kind of research agree with her. Thus, the contributions to the volume *Interdisziplinarität: Praxis – Herausforderung – Ideologie* edited by Jürgen Kocka mention a variety of problems in the context of 'genuine' interdisciplinarity.³³

Archaeology and Sciences

To avoid any misunderstanding, let me state from the outset that it is neither my intention to declare collaborative cooperations between natural sciences and humanities as essentially impracticable, nor to lament the increasing role of the natural sciences in archaeology or raise a philippic against the natural sciences in the context of archaeological research in general in the following paragraphs. Considering the long tradition of collaboration between archaeology and various natural sciences, this would be more than an escapist view. For German-speaking prehistoric archaeology, Rudolf Virchow (1821–1902) was not only one of the most famous epigones but also the central protagonist who at the time gave the young and developing discipline a more natural-scientific orientation. In this context, one speaks of a “scientific paradigm”³⁴ which could be seen in its largely material-oriented alignment of the early studies and which was closely connected with Virchow and his activities, e.g. the founding of *Berlin Anthropological Society* (*Berliner Gesellschaft für Anthropologie, Ethnologie und Urgeschichte*) in 1869. Virchow preferred only ‘facts’ and was of the opinion that prehistoric archaeology could be practiced with pure scientific methods.³⁵ Quite instructive in this context is his preface in Heinrich Schliemann's famous book *Ilios. The City and Country of the Trojans* (1880) in which he characterized himself as a “naturalist habituated to the most dispassionate objective contemplation (*mit der Gewohnheit der kältesten Objektivität*)”.³⁶

32 Fuest 2004, 6. – Similar problems are discussed in other critical reports on interdisciplinary research projects: Immelmann 1987; Voßkamp 1987; Lentz 2004; Meier-Tillessen (2011) with reference to so-called Research Training Groups (*Graduiertenkollegs*).

33 See Kocka 1987.

34 Eggert 2006, 46.

35 Andree 1976, 169, writes: “Virchow's effort to practice and promote strong scientific research based on facts and to refuse any kind of speculation was exemplarily.”

36 Virchow 1880, IX.

Thus, from the very beginning, prehistoric archaeology was closely connected both with scientific methods and a scientific approach to the past. The relevance of new scientific methods has also been repeatedly emphasized by prehistoric archaeologists.³⁷ In recent years it is particularly Kristian Kristiansen, who discussed this subject quite intensively.³⁸ For this reason and as a representative of other opinions, I would like to outline his views on this field of research in greater detail.

Kristiansen points out that there are both periods of innovation and periods of consolidation in prehistoric archaeology.³⁹ For the former, the ensuing features are characteristic: great influence of natural sciences, implementation of new scientific methods, international collaboration and research in aspects of global questions. Periods of consolidation in turn are characterized by a minimal influence of natural sciences, recourse to proven scientific methods and familiar knowledge, national research networks and studies of mainly local problems. Against this backdrop, he recognizes two periods of innovation: the first one lasted from 1850 to 1860, the second period lies between 1940 and 1950. Thus, the first boost to innovation is evident at the beginning of archaeological research itself and was shaped by the previously stated cooperation of physical anthropology, cultural anthropology/ethnology, archaeology, geology and zoology. The second period of innovative improvements was shaped by developments in the field of pollen analyses, particularly by the introduction of the radiocarbon method which revolutionized dating methods. Kristiansen asks if we are again in such a period of innovation, answering this question in his 2011 article with a cautious ‘yes’ since the first signs of these changes can already be observed (new scientific methods, questions of global extent/dimension, e.g. migration).

In a recent article from 2014 his still cautious appraisal gave way to a definite statement.⁴⁰ Kristiansen now observes a paradigm shift and speaks of a “third science revolution”, which manifests itself in the increase of “big data”, “quantification and modeling” and “theoretical power of new knowledge”; the development and inclusion of scientific methods (especially genetics) play the central role in his argument. Hardly surprising, his paper led to some critical reactions.⁴¹ In one of the comments to Kristiansen’s article in *Current Swedish Archaeology* Elisabeth Niklasson countered: “Big Data does not mean better data; after all it is often just the same data linked up. It makes ‘bigger’ interpretations possible, which is great, but this does not equal ‘better’ interpretations. And importantly, just because it is true, it does not mean it is right.”⁴² Quite similar is a statement by Alfredo González-

³⁷ For example Renfrew/Boyle 2000; Renfrew 2010; Gramsch/Lüth 2010.

³⁸ Kristiansen 2008, 2011, 2014.

³⁹ Kristiansen 2008, 11ff.; 2011, 73f.

⁴⁰ Kristiansen 2014.

⁴¹ See the various comments of Kristiansen’s paper in *Current Swedish Archaeology* 2014; also: Lidén/Eriksson 2013; Meier 2008.

⁴² Niklasson 2014, 62.

Ruibal, who is extremely critical of Kristiansen's "paradigmatic enthusiasm".⁴³ I would like to give just one of González-Ruibal's examples which refers to Kristiansen's exclusive argumentation. What Kristiansen emphasized as *the* revolution, González-Ruibal stresses, might be at best proclaimed *a* revolution; furthermore, in González-Ruibal's opinion there should still be the chance of practicing a different form of archaeology.⁴⁴ He cautions against a sort of 'two-class-archaeology': the good one, which uses scientific methods, and the 'inferior' one, which can be practiced without using DNA analyses and isotope databases. And he rightly asks: "will I be allowed to do my archaeology under the new revolutionary regime?"⁴⁵

Kristiansen's hymn is quite odd. This is true for his belief concerning big data as well as his belief in the scientific material itself which could tell us, as he believes, whole life stories if only the samples would be sampled in a correct manner:

Like now: we can once again walk back into the museum stores and select material that will tell us whole life stories of individuals, their diet, mobility and close family stories, as well as their larger genetic family stories from prehistory until the present. A new door has been opened to previously hidden absolute knowledge that once again will reduce the amount of qualified guessing and thus both refine and redefine theory and interpretation.⁴⁶

Considering such a statement, one has to ask oneself: which "whole life histories" does he mean? Does he mean aspects which concern what early men looked like, their whereabouts and the genetic kinship in prehistoric times?⁴⁷ Results regarding such questions might please one or the other and eventually satisfy one's own epistemic interest; however, the results are only peripherally interesting for culture scientists and archaeologists. Instead, one has to ask: what does it mean when we talk of kinship in Neolithic or Iron Age times? Genetic kinship is obviously not the same as social kinship – this is well established by anthropological and sociological studies.⁴⁸ Kinship – and here, I do not want to use it in a culturalistic way – is a complex field which does not only apply to the so-called patchwork families of our time.⁴⁹ Moreover, Kristiansen's eulogy

43 González-Ruibal 2014, 41.

44 González-Ruibal 2014, 43.

45 González-Ruibal 2014, 44.

46 Kristiansen 2014, 27.

47 Quite similar González-Ruibal (2014) who emphasizes that archaeometry seduces "laziness". Why, he sneered, should one try to think more intensive and more different when all the new methods tell us "*how the past actually was?* They tell us exactly what they ate, where they came from, which diseases they suffered from. What else do we need?"

48 See Bargatzky 1997, 96ff.; Schmidt 2006; Schnegg et al. 2010.

49 See also Müller's (2013) appraisal: "Obviously, the recent debate about aDNA methods lacks a link to social and cultural theories on the construction of identities and societies. If we read palaeogenetic research articles, the impression often arises that haplotypes are responsible for why certain individuals were together with whom and why not. [...] From the discourse about 'sex and gender' we already know that social roles are social products and not necessarily biologically distinct. Human societies are human made and not biologically determined."

conceals that we still do not know very much about the manner in which people lived together, for instance, in the Bronze Age (e.g. settlement type, social structure), furthermore: are scientific results helpful regarding the question which structure of society prevailed during the Hallstatt period? How did people live 2500 years ago? With whom and how did they exchange goods? What conceptions did they have concerning this world and the hereafter? Which rituals did they practice (both sacred and profane)? What religious beliefs did they have?⁵⁰ In short: all of these central questions and many others cannot be answered by using more and more scientific samples starting with pollen and metal samples (e.g. analyses of origin) to isotope and DNA analyses. Not everything that is technically possible is relevant. Furthermore, as also becomes evident in Elisabeth Niklasson's criticism, one cannot help but feel that many of the so-called hard facts are anything but hard facts.⁵¹ While this is also the message communicated by natural scientists, it does not always reach their archaeological colleagues. Not infrequently, archaeologists accept the 'hard facts' uncritically and hastily link these facts with cultural-historical interpretations.⁵² However, the scientific data also needs to be examined critically and in order to do so it is necessary to know and above all to understand the prevailing scientific methodology. But in view of growing specialization this can hardly be achieved. At this point, we have once again arrived at Hermann von Helmholtz.

Archaeology in Times of Scientific Omnipresence: What Are We Left With?

Thus can we observe, in accordance with Kristiansen, a boost to innovation and a "scientific revolution" in archaeology today? Or should we agree with the art historian and philosopher Wolfgang Kemp, who speaks pessimistically of "waves of naturalism"⁵³ which seize the humanities from time to time, and in which the humanities transfer their leading concepts to the sciences in order to answer their own questions? I will leave it up to you to answer these questions.

50 "Hard sciences", as the literary and media scholar Jochen Hörisch (2004, 318) puts it sarcastically "cannot contribute to solving conflicts induced by religion – not even if they were to discover areas in the brain in which religious competences are located."

51 See also Niklasson 2014.

52 Quite similar Schreg 2014, 732. All at once this applies to the sciences too as Hagner and Rheinberger (2002, 23) elucidate: "Due to symmetrical reasons, one, however, has to expect the natural sciences to not succumb to the arrogance of facts and the naively belief that they have always been connected to the nature outside – and therefore are in a stronger position than the social sciences."

53 Kemp 2006, 719; see also Hagner/Rheinberger 2002, 17f.

In a workshop report, Svend Hansen and Anatoli Nagler recently pointed out that “the times, in which one could have used singular sciences just as a possible supplement or not” are over; everyone who digs needs to use all methods which are relevant for interpreting the site.⁵⁴ Everyone, I guess, would agree with them in this context without any reservation. I am however much more skeptical regarding their other conclusions since they question “if archaeology as historical culture science could remain the obligatory point of reference”. “Certainly”, I would like to answer. Archaeology attempts to answer historical respectively cultural historical questions and in doing so integrates all available sources; this includes all knowledge gained by scientific methods.⁵⁵ Therefore real interdisciplinary collaboration is essential even if new difficulties on the epistemological, as well as on the structural, institutional and actor-centered level will need to be overcome anew. More than ever before, a discourse between the natural and the cultural scientists is needed.⁵⁶

In the context of historical culture studies and thereby in an archaeological context, the natural sciences are, at best, only one side of the coin. In other words, there is much more to archaeology than any natural science can ever provide. However important the insights that the natural sciences may provide, they need to be evaluated in an archaeological and cultural historical frame of reference.⁵⁷

In his article titled “Wissenschaft, Geisteswissenschaft, Philosophie” (“Science, Humanities, Philosophy”), the philosopher Dirk Hartmann⁵⁸ recently emphasized the importance of the humanities, or rather culture sciences; he said: “Whoever stopped to reflect on his/her culture will soon not understand it any longer. Whoever has stopped to understand her/his culture will lose it”. There is nothing more to add.

References

- Andree, Christian, *Rudolf Virchow als Prähistoriker 1. Virchow als Begründer der neueren deutschen Ur- und Frühgeschichtswissenschaft* (Köln, Wien 1976).
- Bachmaier, Helmut/Fischer, Ernst Peter (eds.), *Glanz und Elend der zwei Kulturen. Über die Verträglichkeit der Natur- und Geisteswissenschaften*. Konstanzer Bibliothek 16 (Konstanz 1991).

⁵⁴ Hansen/Nagler 2015.

⁵⁵ See Eggert 2006, 25.

⁵⁶ See, for example, Egorova (2010) in general and Samida/Eggert (2013) on the focus of prehistoric archaeology.

⁵⁷ Relating to a growing ‘market’ of genetic research see also Goodman (2007, 229), who explains: “Genetics knowledges, discourses, and practices are too important, too determinative, to escape critical study. What is needed is not an age of genetics but an age of anthropology to think through the localness, partiality, instability, and context of genetic information. Genetics need anthropology to help fashion its questions and to make sense of its results.”

⁵⁸ Hartmann 2012, 25.

- Bargatzky, Thomas, *Ethnologie. Eine Einführung in die Wissenschaft von den urproduktiven Gesellschaften* (Hamburg 1997).
- Dilthey, Wilhelm, *Einleitung in die Geisteswissenschaften. Versuch einer Grundlegung für das Studium der Gesellschaft und der Geschichte 1* (Leipzig 1883).
- Eggert, Manfred K. H., *Archäologie. Grundzüge einer Historischen Kulturwissenschaft* (Tübingen, Basel 2006).
- Eggert, Manfred K. H., *Archäologie – Historie – Philologie. Überlegungen zur Disziplinarität in den Altertumswissenschaften*. In: *Methodik und Didaktik in der Ägyptologie. Herausforderungen eines kulturwissenschaftlichen Paradigmenwechsels in den Altertumswissenschaften*, ed. Alexandra Verbovsek/Burkhard Backes/Catherine Jones. *Ägyptologie und Kulturwissenschaften 4* (München 2011) 31–52.
- Egorova, Yulia, *DNA evidence? The impact of genetic research on historical debates*. *BioSocieties* 5/3, 2010, 348–365.
- Fischer, Ernst Peter, *Shakespeares Sonette und der Zweite Hauptsatz der Thermodynamik. Ein polemischer Beitrag zu den zwei Kulturen*. In: *Bachmaier/Fischer 1991*, 45–62.
- Fuest, Veronika, *Anspruch und Wirklichkeit interdisziplinärer Zusammenarbeit in der deutschen Umweltforschung. Epistemologische, organisatorische und institutionelle Aspekte* (2004). URL <http://www.heidelberger-lese-zeiten-verlag.de/archiv/online-archiv/fuestneu.pdf> [21. 1. 2019].
- Fuest, Veronika, *Ethnologen in der Arena: Ein akteursanalytischer Blick in Umweltforschungsprojekte*. *Sociologus* 56/1, 2006, 35–67.
- González-Ruibal, Alfredo, *Archaeological revolution(s)*. *Current Swedish Archaeology* 22, 2014, 41–45.
- Goodman, Alan H., *Toward genetics in an era of anthropology*. *American Ethnologist* 34/2, 2007, 227–229.
- Gramsch, Alexander, *Different languages. An interview on archaeology in Germany with Friedrich Lüth*. *Archaeological Dialogues* 17/2, 2010, 199–214.
- Hagner, Michael/Rheinberger, Hans-Jörg, *Die Zukunft der Geisteswissenschaften und die Wissenschaftsgeschichte*. In: *Wissenschaftsgeschichte und Geschichtswissenschaft. Aspekte einer problematischen Beziehung*. Wolfgang Küttler zum 65. Geburtstag, ed. Stefan Jordan/Peter T. Walther (Waltrop 2002) 17–23.
- Hansen, Svend/Nagler, Anatoli, *International symposium multidisciplinary methods in archaeology. Latest updates and outlook*, 22. 6. 2015–26. 6. 2015 Novosibirsk. *H-Soz-Kult*, 18. 9. 2015. URL <http://www.hsozkult.de/conferencereport/id/tagungsberichte-6162> [21. 1. 2019].
- Hartmann, Dirk, *Wissenschaft, Geisteswissenschaft, Philosophie*. In: *Methoden der Geisteswissenschaften. Eine Selbstverständigung*, ed. Dirk Hartmann/Amir Mohseni/Erhard Reckwitz/Tim Rojek/Ulrich Steckmann (Weilerswist 2012) 17–32.
- Hartmann, Dirk/Mohseni, Amir/Reckwitz, Erhard/Rojek, Tim/Steckmann, Ulrich, *Einleitung*. In: *Methoden der Geisteswissenschaften. Eine Selbstverständigung*, ed. Dirk Hartmann/Amir Mohseni/Erhard Reckwitz/Tim Rojek/Ulrich Steckmann (Weilerswist 2012) 7–14.
- von Helmholtz, Hermann, *Ueber das Verhältnis der Naturwissenschaften zur Gesamtheit der Wissenschaften. Rede zum Geburtstagsfeste des höchstseligen Grossherzogs Karl Friedrich von Baden und zur akademischen Preisverteilung am 22. November 1862* (Heidelberg 1862). URL <http://www.ub.uni-heidelberg.de/archiv/11487> [21. 1. 2019].
- von Helmholtz, Hermann, *On the relation of the natural sciences to the totality of the sciences. An address delivered before the University of Heidelberg*, translated by C. H. Schaible (London 1869). URL <http://www.ub.uni-heidelberg.de/archiv/12693> [21. 1. 2019].
- Holzhey, Helmut, *Natur- und Geisteswissenschaften – zwei Kulturen?* In: *Kulturwissenschaften. Positionen und Perspektiven*, ed. Johannes Andereg/Edith Anna Kunze (Bielefeld 1999) 31–50.

- Hörisch, Jochen, Theorie-Apotheke. Eine Handreichung zu den humanwissenschaftlichen Theorien der letzten fünfzig Jahren, einschließlich ihrer Risiken und Nebenwirkungen (Frankfurt a. M. 2004).
- Immelmann, Klaus, Interdisziplinarität zwischen Natur- und Geisteswissenschaften – Praxis und Utopie. In: Kocka 1987, 82–91.
- Kemp, Wolfgang, “Natürlich”. Die Geisteswissenschaften in Zeiten biologischer Korrektheit. *Neue Rundschau* 117/2, 2006, 71–86.
- Kocka, Jürgen (ed.), Interdisziplinarität. Praxis – Herausforderung – Ideologie (Frankfurt a. M. 1987).
- Kreuzer, Helmut (ed.), Die zwei Kulturen. Literarische und naturwissenschaftliche Intelligenz. C. P. Snows These in der Diskussion (München 1987) [First published: Stuttgart 1969].
- Kristiansen, Kristian, Do we need the ‘archaeology of Europe’? *Archaeological Dialogues* 15/1, 2008, 5–25.
- Kristiansen, Kristian, Theory does not die it changes direction. In: *The death of archaeological theory?*, ed. John Bintliff/Mark Pearce (Oxford 2011) 72–79.
- Kristiansen, Kristian, Towards a new paradigm? The third science revolution and its possible consequences in archaeology. *Current Swedish Archaeology* 22, 2014, 11–34.
- Leavis, Frank Raymond, Two cultures? The significance of C. P. Snow. With introduction by Stefan Collini (Cambridge 2013).
- Lentz, Carola, Interdisziplinarität. Erfahrungen und Probleme. In: *Mensch und Natur in Westafrika. Ergebnisse aus dem Sonderforschungsbereich 268 ‘Kulturentwicklung und Sprachgeschichte im Naturraum westafrikanische Savanne’*, ed. Klaus-Dieter Albert/Doris Löhr/Katharina Neumann (Weinheim 2004) 30–37.
- Lidén, Kerstin/Eriksson, Gunilla, Archaeology vs. archaeological science. Do we have a case? *Current Swedish Archaeology* 21, 2013, 11–20.
- Meier, Thomas, There is no archaeology but European archaeology... *Archaeological Dialogues* 15/1, 2008, 34–36.
- Meier, Thomas/Tillessen, Petra (eds.), Über die Grenzen und zwischen den Disziplinen. Fachübergreifende Zusammenarbeit im Forschungsfeld historischer Mensch-Umwelt-Beziehungen (Budapest 2011).
- Mittelstraß, Jürgen, Glanz und Elend der Geisteswissenschaften. *Oldenburger Universitätsreden* 27 (Oldenburg 1989).
- Mittelstraß, Jürgen, Geist, Natur und die Liebe zum Dualismus. Wider den Mythos von zwei Kulturen. In: *Bachmaier/Fischer* 1991, 9–28.
- Müller, Johannes, Kossinna, Childe and aDNA. Comments on the construction of identities. *Current Swedish Archaeology* 21, 2013, 35–37.
- Niklasson, Elisabeth, Shutting the stable door after the horse has bolted. Critical thinking and the third science revolution. *Current Swedish Archaeology* 22, 2014, 57–63.
- Oels, David, “Den Zweiten Hauptsatz der Thermodynamik angeben”. Zu einem unpassenden Beispiel in C. P. Snows *Zwei Kulturen*. *Arbeitsblätter Sachbuchforschung* 25 (Mainz 2015). URL https://www.blogs.uni-mainz.de/fb05-sachbuchforschung/files/2015/07/Oels_Zu_Snow_Zwei_Kulturen.pdf [21.1.2019].
- Pollard, A. Mark/Bray, Peter, A bicycle made for two? The integration of scientific techniques into archaeological interpretation. *Annual Review of Anthropology* 36, 2007, 245–259.
- Renfrew, Colin, Archaeogenetics – towards a ‘new synthesis’? *Current Biology* 20, 2010, R162–R165.
- Renfrew, Colin/Boyle, Katie (eds.), *Archaeogenetics. DNA and the population prehistory of Europe* (Cambridge 2000).
- Rickert, Heinrich, *Kulturwissenschaft und Naturwissenschaft. Sechste und siebte durchgesehene und ergänzte Auflage* (Tübingen 1926) [First published 1899].

- Samida, Stefanie/Eggert, Manfred K. H., Über Interdisziplinarität: Betrachtungen zur Kooperation von Natur- und Kulturwissenschaften in der Archäologie. *Hephaistos* 29, 2012, 9–24.
- Samida, Stefanie/Eggert, Manfred K. H., Archäologie als Naturwissenschaft? Eine Streitschrift. Reihe Pamphletliteratur 5 (Berlin 2013).
- Schmidt, Johannes F. K., Das Verhältnis von sozialer und biologischer Verwandtschaft: Konkurrenz oder Symbiose biologischer und soziologischer Konzepte? In: *Die Natur der Gesellschaft. Verhandlungen des 33. Kongresses der Deutschen Gesellschaft für Soziologie in Kassel 2006*, ed. Karl-Siegbert Rehberg (Frankfurt a. M. 2008) 894–908. URN <http://nbn-resolving.de/urn:nbn:de:0168-ssoar-153014> [21. 1. 2019].
- Schnegg, Michael/Pauli, Julia/Beer, Bettina/Alber, Erdmute, Verwandtschaft heute: Positionen, Ergebnisse und Forschungsperspektiven. In: *Verwandtschaft heute. Positionen, Ergebnisse und Perspektiven*, ed. Erdmute Alber/Bettina Beer/Julia Pauli/Michael Schnegg (Berlin 2010) 7–44.
- Schreg, Rainer, Review of Meier/Tillessen 2011. *European Journal of Archaeology* 17/4, 2014, 728–732.
- Snow, Charles Percy, The two cultures. The Rede lecture (1959). In: *Charles Percy Snow, The two cultures. With introduction by Stefan Collini* (Cambridge 1998) 1–51.
- Veit, Ulrich, Von der Schwierigkeit ein Fach zu bestimmen. Überlegungen zur kognitiven Identität der Ur- und Frühgeschichtsforschung. *Saeculum* 52/1, 2001, 73–90.
- Virchow, Rudolf, Preface. In: *Heinrich Schliemann, Ilios. the city and country of the Trojans* (London 1880) IX–XVI.
- Voßkamp, Wilhelm, Interdisziplinarität in den Geisteswissenschaften (am Beispiel einer Forschungsgruppe zur Funktionsgeschichte der Utopie). In: *Kocka* 1987, 92–105.

Sabine Deschler-Erb

Pride and Prejudice?

On the Relationship Between Archaeology and Biosciences

Introduction

The following thoughts result from long experience of teaching and working in the area of conflict between humanities and natural sciences.¹ Therefore, the article will not focus on the topic of “interdisciplinarity” in archaeology and history, as this has already been vastly discussed,² but on observations on the relationship between archaeology and natural sciences, especially biosciences, made during everyday research. The intersection seems to be marked by mutual ignorance and frequent misunderstandings,³ to the detriment of all involved disciplines. In times of limited financial resources specifically, their meaningful and coordinated use is vital. Therefore, possibilities of a productive cooperation will also be discussed in this paper.

To Each His Own View

Let us first take a look at the perception of archaeology in the media. Archaeology is the most popular discipline to be featured in documentaries (e.g. *Terra X*, *BBC History*) and in the scientific part of news magazines (e.g. *Der Spiegel*, *Neue Züricher Zeitung am Sonntag*). The discipline has followers among every age group and level of society (except maybe for politicians, when it comes to the granting of credits). The archaeologist (mostly a male representative of his discipline) is either depicted as being an adventurer of the Indiana Jones-type, who crosses the deserts of this earth alone in a white Jeep and who accidentally discovers the ruins of a yet unknown civilization, or he (in this case quite often a ‘she’) is shown standing in a laboratory, dressed in protective clothing, analyzing the remains of a prehistoric human. Mass media have noticed the fact that natural sciences have become increasingly important for archaeology. The future generation of students are now growing up with these images. They take up the study of archaeology with partly very specific, but not necessarily correct and realistic notions. Whereas the established generation of researchers grew up with “gods,

¹ I wish to thank Angela Schlumbaum and Eckhard Deschler-Erb for their advices.

² E.g. Meier/Tillessen 2011; Alt 2010.

³ E.g. Samida/Eggert 2013.

graves and scholars”,⁴ there are more and more students today who imagine their future as archaeologists not in the field, but also in the laboratory, working with high-tech equipment.

The increasing number of participants in archaeological-natural scientific courses taught at universities mirrors this development. Yet it can be observed that only a few universities in the German language area teach all of the biosciences (anthropology, archaeobotany, archaeogenetics, isotope studies) in the same rigor and connect to the study of archaeology. Within the academic world, the relationship between humanities and sciences is often politely reserved at best and marked by prejudice at worst. Scientists are said to receive enormous sums for their analyses, which the ‘real’ archaeology is supposedly missing. At the same time, scientists are said to be unable to draw meaningful conclusions in the field of historical culture studies. The representatives of humanities, on the other hand, are accused of applying the same old methods on the archaeological material (mostly shards), while leading endless theoretical debates without reaching concrete conclusions.

Among academics, the term ‘interdisciplinarity’ continues to be used in an often pejorative way. The opinion commonly held is that one can only be a real researcher if one is a specialist, engaging deeply within one single discipline. In this sense, a specialist field like archaeobiology is not considered to be a real science. This opinion results not only from a stereotyped way of thinking among certain experts. Universities and science grants also struggle with the idea of research areas looking beyond the horizon of faculties and disciplines. Research questions which are clearly defined have better chances of receiving long-time (financial) support. Multidisciplinary projects and courses might be caught between two stools.

Drifting Apart

When prehistoric lake dwelling sites were discovered in the circum-alpine region in the middle of the 19th century, plants and animal remains were considered as material culture. They were thought to be containing important information of cultural and historical processes, in the same way as pottery, stone or wooden artifacts. The publications of L. Rüttimeyer on animal remains (1860) and O. Heer on plants (1865) from stilt houses marked the beginning of archaeozoology and archaeobotany. During the same epoch, remains of hominids were discovered in the Neandertal. Although, as a medical scientist, R. Virchow did not support an early dating of those finds, he founded the society of anthropology, ethnology and prehistory (*Gesellschaft für Anthropologie, Ethnologie und Urgeschichte*) in Berlin. He is therefore counted amongst the pioneers of the German pre- and protohistorical

⁴ Ceram 1949.

archaeology.⁵ Both an exchange and a connection existed between the persons mentioned above and Charles Darwin. The evolution of nature and humanity was considered an important topic at that time and it was approached collectively, with all-encompassing methods.

A slow drifting apart of the disciplines, a separation into historical and scientific archaeology took place during the course of the 20th century. Archaeozoologists began focusing on the palaeontology of domestic animals. This resulted in publications in exclusively scientific journals or in appendices for archaeological studies. The logical consequence was that scientific analyses were less and less recognized by archaeologists. This development continued into the 1960s. Only since the end of the 20th century the disciplines began to grow closer again.⁶ Even though the importance of natural sciences is now stressed by archaeologists and the idea of an auxiliary science has been replaced by the notion of related sciences, their appliance and inclusion within German research is very heterogeneous.⁷ More recent epochs specifically hold a lot of potential in this regard, although the beginnings of, for example, the provincial Roman archaeobiology reach back into the 19th century.⁸ It is often argued that this has to do with the availability of written sources, yet it is clear that their potential is limited, especially for our regions. Today, archaeobiology oscillates between humanities and science, while different cultures of research are being cultivated in both disciplines (Tab. 3.1). This demands flexibility, adaptability and special commitment from the researchers, specifically when it comes to their publication activity, on which prospective grants depend. To be noticed in “hard” sciences, one has to publish in English, renowned, peer-reviewed journals. In the humanities, the printed, extensive monograph is still important. The most promising way would be to try and practice both, which, however, exceeds the capacities of even the most enduring and dedicated researcher.

Tab. 3.1: Working in humanities and nat sciences.

Humanities	Sciences
Individual researcher	Research team
Mother tongue publications	English publications
Monographies	Short papers
Enduring and printed publications	Short-lived publications in E-journals
Recension	Peer-reviews, impact factor

⁵ Samida/Eggert 2013, 17–20.

⁶ Hüster-Plogmann 2011, 468.

⁷ Samida/Eggert 2013, 141–142.

⁸ Deschler-Erb/Akeret 2011.

Whose Authority?

The problem of the ‘homelessness’ of certain disciplines is clearly reflected in the treatment of organic finds from excavations, i.e. botanical, human and animal remains. Archaeologists oriented towards the humanities see them as *naturalia*, therefore belonging to the purview of the natural sciences. Yet, ‘hardcore’ natural scientists are, as a start, not interested in those objects, even though they are of biological origin. The primary morphological identification and analysis is undertaken by archaeobiologists, experts of typology among the natural scientists. They need to establish the research questions for further biochemical analyses (Tab. 3.2). The morphological method has been in use since the 19th century. Only a limited apparatus (binoculars, scale, calipers, computer) is needed next to a reference collection and the relevant literature. Thus, important amounts of data can be handled in a relatively cheap way. However, the method remains a subjective one, which is not more objective than the typological method used with archaeological artefacts. The quality of assessment depends on the preservation of finds, the excavation methods or the experience of the person undertaking the analysis.

Tab. 3.2: Biosciences and methodological approach.

Morphology/Metrics	Laboratory based analyses
Anthropology	Genetics
Archaeobotany	Isotopes
Palynology	Lipid analysis
Archaeozoology	Protein analysis
Parasitology	

Among archaeologists, analytical methods have only recently started being used: aDNA analyses have been undertaken since the end of the 1980s, stable isotopes began to be analyzed a decade later. The same development could be observed for both methods, although deferred: An initial euphoria, based on the expectation to solve most of archaeology’s problems with a new method, was soon followed by skepticism and even rejection. This certainly resulted from the fact that both natural scientists and archaeologists do not know the methods of the other discipline well enough, therefore raising expectations too high, while the methods’ limits and possibilities are simultaneously ignored. Genetic analyses are often threatened by signs of decay and contaminations, whereas isotope analyses often provide ambiguous results. If, in addition, a too small amount of data is used in the first place, the relatively expensive and laboratory-based methods often fail to yield more significant results than traditional methods. Only if all important requirements are fulfilled, chemical analyses can yield various information on the life story of single

individuals, concerning kinship, mobility and nutrition,⁹ information which the ‘classical’ archaeological and archaeobiological methods can only produce in exceptional cases.¹⁰

In this regard, the question of interpretative authority over the results arises. For reasons related to the history of the discipline and due to their training, it is often assumed exclusively by those archaeologists associated with humanities. Yet, with regard to aDNA analyses of early human populations, geneticists begin to take over this authority. Although it is indisputable that analytical investigations produce new perspectives, they are dependent on the morphologists’ groundwork (definition, classification). They determine the research questions for the chemical analyses. Morphologists as well as analytics are in their turn dependent on the foundations laid by archaeologists (excavation, interpretation of finds, dating). All groups must engage in a common dialogue, in order to avert a problematic cultural and historical interpretation.¹¹ All three groups are financed by the same public funds, which seem to shrink instead of expanding. In this situation, the only possible solution seems to be the redistribution of the available resources according to research questions, after the involved disciplines have been consulted and the chances of success clarified.

“Relationship Status: It’s Complicated”

Four different forms of interdisciplinary cooperation are being practiced. Thomas Pottast¹² proposes four different terms with differing content:

- “*Pre-interdisciplinarity*”: Natural scientific disciplines provide data, which is then interpreted by archaeologists (“Data slave and result master”). The telling term of ‘auxiliary science’ (*Hilfswissenschaften*) used to be common for this form of cooperation. It is unclear whether the modern term ‘related sciences’ (*Nachbarwissenschaften*) has a more positive connotation, because it still compares a ‘core discipline’ (archaeology) to the natural scientific disciplines, which exist alongside, yet separately. Such a form of cooperation should be rejected by all those concerned, since it does not produce valuable results. Furthermore, it

⁹ Alt 2010, 13–14.

¹⁰ As in the case of the grave of Maxsimila and Heuprosinis from the burial ground of Vindonissa-Remigersteig, where a tombstone reveals the age and the origin of both women (Trumm et al. 2013). The prospective natural scientific analyses of the discovered cremation promises to yield further information and possibilities of comparison between both methods.

¹¹ As in the case of the genetic analyses by Vilà et al. (1997), who claimed that the domestication of dogs took place over a 100.000 years ago, which, according to the archaeo(zoo)logical results, is impossible. This thesis has also been modified by further genetic studies.

¹² Pottast 2011, 12–13.

should not be forgotten that in such cases natural scientific analyses count as declarable services, which means that another part of the already scarce funds escapes the research community.

- *Multidisciplinarity*: Different disciplines work together on one research object (for example settlement, burial ground), but they do not pursue common research questions or goals. A missing common synthesis in publications reflects this problem. Many analyses have already been published in this form, which makes it unnecessary to compile a list of examples.
- *Interdisciplinarity*: Requires “a common research question, a common research design and the development of new approaches and methods”. “Experts, who are qualified within their disciplines, on the basis of mutual recognition and trust, in a coequal, coordinated way and under organizational conditions adapted to research and according to the resources available, engage within a team in a problem, which cannot be adequately understood by one discipline alone, aiming for a common understanding of the problem and a ‘synthetic’ solution (= a product)”.¹³ A study of a publication’s table of contents is sufficient to check if such a cooperation took place during the project. In the case of interdisciplinary projects, the different scientific contributions should usually be released before the collective synthesis. Examples do not only exist for prehistoric,¹⁴ but also, even if less frequently, for protohistoric studies, namely Vindonissa-Südfriedhof¹⁵ or Vindonissa-Breite¹⁶. In their publication, Hagendorn et al. even abandon the common practice within humanities to list natural scientists as ‘contributors’ only. Instead, they appear as authors besides the archaeologists. Another fitting example for an interdisciplinary cooperation is the “Sagalassos archaeological research project”. This Anatolian city has been studied since 1990 by the university of Leuven and various disciplines and methods (geology, geomorphology, geophysics, archaeobotany, archaeozoology, anthropology, pollen, aDNA, stabile isotopes) have been incorporated. Many articles have already been published, either concerning specific disciplines or more general aspects.¹⁷ The final publication will certainly turn out highly meaningful and interesting.
- *Transdisciplinarity*: Research is shaped by questions and persons, not determined by scientific/academic institutions. One example is the Sixth Framework Programme (2005–2010) Network of excellence CLIOHRES (Creating Links and Innovative Overviews for a New History Research Agenda for the Citizens of a Growing Europe), within which historians, art historians, archaeologists and

¹³ Potthast after Dürnberger/Sedmak 2004.

¹⁴ Doppler et al. 2012.

¹⁵ Hintermann 2000.

¹⁶ Hagendorn et al. 2003.

¹⁷ <http://www.sagalassos.be>

archaeobiologists developed common research questions and publications.¹⁸ This example proves the capacity of natural sciences to improve our understanding of more recent eras.

Approaches to a Common Future

The total of the observations made here concerning the interdisciplinary cooperation between archaeology and natural sciences may read disheartening, yet there are encouraging examples, demonstrating the potential of such collaboration. Below, several practical approaches will be proposed, which could help to better exploit this potential and to improve the communication between different actors:

- *Excavations:* Whenever possible, the relevant disciplines should already get involved in the excavation process. Thus, a joint discussion concerning archaeological, biomolecular and geological sampling strategies can take place and also minimize costs. Furthermore, the professional recovery of human and animal skeletons is guaranteed.
- *Project design:* The prospective partners should already be included in the planning of and the application for the project. Thus, research questions and realistic goals can be defined together. The establishment of the budget should constitute a joint task as well.
- *Project management:* The project leader should be a person of integrative character, possessing a profound knowledge of the available and relevant methods and of their acquisition. Inside of evaluation teams, this position is normally occupied by an archaeologist, but an experienced natural scientist or a team of project co-leaders is thinkable.
- *Team sessions:* Regular meetings should be held during the project phase, during which the results of one discipline are presented and discussed together. This might lengthen the project, which should be considered during the establishment of the budget, but the quality of the results is improved.
- *Internet:* The new media provide an opportunity to communicate the project's research question, its procedure, its goal and general questions to a larger audience and to discuss them. Interested persons of both disciplines can be targeted, thus underlining the potential of interdisciplinary research.
- *Publications:* Digital, open access publications are often cheaper and more easily diffused than printed media. Monographs will surely continue to be written in native language, yet, in the long run, digital publication will constitute the form most preferred and supported by funding bodies. Shorter articles, written within the team and published in international journals, help to promote the project's

18 <http://www.cliohres.net>

- results. Especially German archaeology is, sadly, often not sufficiently recognized outside the German language area.
- *Workshops and conferences*: They offer the space for an interdisciplinary discourse, the settling of misunderstandings and the reduction of prejudices. Through an intelligent planning and management, conference organizers can greatly contribute to this. Workshops and conferences provide an opportunity for natural scientists to familiarise themselves with archaeological research questions.
 - *Studies*: As has already been noted, the students' interest in subjects such as pre- and protohistoric, (*Ur- und Frühgeschichtliche Archäologie*), provincial Roman and classical archaeology (*Provinzialrömische und klassische Archäologie*) and Egyptology is considerable. Universities should therefore continue to enlarge their range. The goal should not be to train specialists in natural scientific methods, but to acquaint prospective archaeologists with a wide range of possible methods, thereby enabling them to lead an interdisciplinary discourse and to make productive decisions during excavations. Archaeology can only be developed further if different disciplines cooperate.

References

- Alt, Kurt W., Grenzüberschreitungen. Wissenschaft im Dialog um die Vergangenheit. In: Anthropologie, Isotopie und DNA. Biografische Annäherung an namenlose vorgeschichtliche Skelette? 2. Mitteldeutscher Archäologentag vom 8. bis 10. Oktober 2009 in Halle (Saale), ed. Harald Meller/Kurt W. Alt. Tagungen des Landesmuseums für Vorgeschichte Halle 3 (Halle 2010) 9–16.
- Burri-Wyser, Elena/Chiquet, Patricia/Desideri, Jocelyne/Doppler, Thomas, Compte-rendu de la journée thématique "collaboration interdisciplinaire. Résultats, potentiels et limites". *Annuaire d'Archéologie Suisse* 98, 2015, 111–116.
- Ceram, C.W. (Pseudonym) (Kurt Wilhelm Marek), Götter, Gräber und Gelehrte: Roman der Archäologie (engl.: Gods, Graves and Scholars: The Story of Archaeology, Translation Wilkins, Sophie, Garside E.B.)(Hamburg 1949).
- Deschler-Erb, Sabine/Akeret, Ömi, Archäobiologische Forschungen zum römischen Legionslager von Vindonissa und seinem Umland. Status quo und Potenzial. *Jahresbericht der Gesellschaft Pro Vindonissa* 2010 (2011), 13–36.
- Doppler, Thomas (ed.), Spreitenbach-Moosweg (Aargau, Schweiz). Ein Kollektivgrab um 2500 v. Chr. *Antiqua* 51 (Basel 2012).
- Dürnberger, Martin/Sedmak, Clemens, Erfahrungen mit Interdisziplinarität. Working Papers 08. Theories & commitments. FWF Research Project Y 164 (Salzburg 2004).
- Eggert, Manfred K. H./Samida, Stefanie, *Ur- und Frühgeschichtliche Archäologie* (Tübingen, Basel 2013).
- Hagendorn, Andrea/Doppler, Hugo W./Huber, Adrian/Hüster-Plogmann, Heide/Jacomet, Sefanie/Meyer-Freuler, Christine/Pfäffli, Barbara/Schibler, Jörg, Zur Frühzeit von Vindonissa. Auswertung der Holzbauten der Grabung Windisch-Breite 1996–1998. *Veröffentlichungen der Gesellschaft Pro Vindonissa* 18 (Brugg 2003).

- Hauptmann, Andreas/Pingel, Volker (eds.), *Archäometrie. Methoden und Anwendungsbeispiele* (Stuttgart 2008).
- Heer, Oswald, *Die Pflanzen der Pfahlbauten* (Zürich 1865).
- Hintermann, Dorothea, *Der Südfriedhof von Vindonissa. Archäologische und naturwissenschaftliche Untersuchungen im römerzeitlichen Gräberfeld Windisch-Dägerli. Veröffentlichungen der Gesellschaft Pro Vindonissa, 17* (Brugg 2000).
- Hüster-Plogmann, Heide, *Archäozoologie im Spannungsfeld von Geistes- und Naturwissenschaften. In: Über die Grenzen und zwischen den Disziplinen. Fächerübergreifende Zusammenarbeit im Forschungsfeld historischer Mensch-Umwelt-Beziehungen*, ed. Thomas Meier/Petra Tillessen (Budapest 2011) 467–470.
- Meier, Thomas/Tillessen, Petra (eds.), *Über die Grenzen und zwischen den Disziplinen. Fächerübergreifende Zusammenarbeit im Forschungsfeld historischer Mensch-Umwelt-Beziehungen* (Budapest 2011).
- Potthast, Thomas, *Terminologie der fächerübergreifenden Zusammenarbeit. Kurzer Problemaufriss und ein Vorschlag zur Verständigung über n>1-Disziplinaritäten. In: Über die Grenzen und zwischen den Disziplinen. Fächerübergreifende Zusammenarbeit im Forschungsfeld historischer Mensch-Umwelt-Beziehungen*, ed. Thomas Meier/Petra Tillessen (Budapest 2011) 11–15.
- Rütimeyer, Ludwig, *Untersuchungen der Thierreste der Pfahlbauten aus der Schweiz. Mitteilungen der Antiquarischen Gesellschaft in Zürich 13/2* (Zürich 1860).
- Samida, Stefanie/Eggert, Manfred K. H., *Archäologie als Naturwissenschaft? Eine Streitschrift. Reihe Pamphletliteratur 5* (Berlin 2013).
- Trumm, Jürgen/Fellmann Brogli, Regine/Frei-Stolba, Regula/Kahlau, Thomas, *Bestattet und begraben. Ein neu entdecktes römisches Gräberfeld in Vindonissa. Archäologie Schweiz 36, 2013, 26–33.*
- Vilà, Carles/Savolainen, Peter/Maldonado, Jesús E./Amorim, Isabel R./Rice, John E./Honeycutt, Rodney L./Crandall, Keith A./Lundeberg, Joakim/Wayne, Robert K., *Multiple and ancient origins of the domestic dog. Science 276, 1997, 1687–1689.*

Hélène Réveillat

Archaeoethanatology, the Recognition of Funerary Practices

Recent Examples

Precursory Works

During the early 1980s, the development of preventive archaeology in France and the multiplication of necropolises and cemeteries discoveries led H. Duday to develop a specific approach on human remains. This approach aimed to answer new questions concerning funerary practices and thus, management and development of those funerary spaces.¹ While anthropologists until then had operated in laboratories only, this new way required the collection of data directly in the field. Researchers became “archaeo-anthropologists”, requiring a combination of skills such as a deep knowledge of human bones and taphonomy. For 20 years, the expression “field anthropology” was widely used, creating confusion through its connotation with both social anthropology and the differing meaning of the word “anthropology” in Anglo-Saxon countries. To overcome this ambiguity, H. Duda and B. Boulestin proposed to further use “archaeoethanatology” in a 2005 publication. The objective of this newly named discipline is “to reconstruct the attitude of ancient populations towards death by focusing on the study of human skeleton and analysing the acts linked to the management and treatment of the corpse”.²

The Archaeoethanatomical Discussion on Human Bone Deposits

In his 2009 lectures³, H. Duda explains how to recognize different characteristics of human bone deposits⁴ in detail. He shows how to determine if the deposit is “primary” (Fig. 4.1) or “secondary” (Fig. 4.2)⁵ or, in case of several subjects, if they

¹ Duda 1994, 1990, 1987; Duda et al. 1996, 1990; Duda/Sellier 1990.

² Duda 2009, 6.

³ Duda 2009.

⁴ Here we only talk about inhumations and not cremations.

⁵ The expression of “primary deposit” is used when the place of the first deposit is the definitive burial. Unlike, with a secondary deposit bones are discovered in another place that the one where decay took place. If the anatomical integrity is preserved or at least if there is an anatomical logic, it is a primary deposit. Almost all bones are more or less at their places. In the case of a secondary deposit,



Fig. 4.1: Example of primary deposit (Bruges, France;   E. Augendre).

it's not the place of the decay, we don't have any anatomical organisation and we can sometimes have more than one subject. Bones were picked up and placed in a pit different from the place where the decay took place. It's important to talk about secondary deposit and not about secondary burial because in this last case, we have a planning that doesn't often exist.



Fig. 4.2: Example of secondary deposit (Bruges, France; © S. Virelli).

were placed at the same time (during epidemics e.g.) or spanning a longer period of years. In the first case we are speaking of a multiple burial (Fig. 4.3), in the second one of a collective burial (Fig. 4.4).

A great part of the work of H. Duday is, devoted to the understanding of taphonomic aspects of the burial and to the reconstitution of the inhumation mode. Most graves are indeed filled with ground when excavated and/or don't present any preserved funerary architecture. Observations are essential. If the body is placed in a filled in space, the flesh is replaced by fine sediment immediately after its disappearance. In Fig. 4.5, a deposit of an adult dated to the recent Neolithic in the north-east of France, connexions are intact, while balances are preserved (scapulae, vertebrae, ribs, hip bones ...). In an empty space, like a wooden coffin, it is the opposite: bones are able to move during decay and connexions between them can be lost. Fig. 4.6 shows a medieval adult buried in the south-west of France. The mandible had fallen off and is not connected to the skull anymore. Same is true for the left femur, the tibia and the patella. All bones of the feet moved, there is no connexion preserved. In all of these cases, because of the



Fig. 4.3: Example of multiple burial (Verdun, France;   P. Kuchler).



Fig. 4.4: Example of collective burial (Bruges, France;   L. Biscarrat).

homogeneity of the filling, we can eliminate the hypothesis that this resulted from an animal disturbance or vegetation. The deceased had not been directly placed in the ground in this way. Empty spaces will sometimes be easily recognizable, like in the case of a sarcophagus or a nailed coffin, but in more ambiguous cases, taphonomic



Fig. 4.5: Decay in filled space (Gougenheim, France; © Y. Thomas).

observations sometimes allow suggestions concerning the architecture of the burial.⁶ Furthermore, information on the corpse treatment itself is deductible, if it was wrapped in a shroud or the head put on a support, even if no organic remains is preserved.⁷

⁶ For example Réveillas et al. 2012.

⁷ Buquet-Marcon et al. 2009.



Fig. 4.6: Decay in an empty space (Bruges, France;   L. Maccanin).

Two Examples of Wooden Architectures

A medieval and a modern cemetery were excavated by the Preventive Archaeology Centre of Bordeaux M  tropole in 2014, upstream of urban planning around the church Saint-Pierre in Bruges, a city in the north suburb of Bordeaux.⁸ Almost 200 burials were discovered there. Thanks to funerary architecture, stratigraphic data and radiocarbon analysis, 2 were dated to the Merovingian period, 3 to the Carolingian period, 66 to the 11th–15th centuries and 93 to the 16th–18th centuries (14 remained undated). The 5 early medieval burials are witnesses of a precocious funerary space, unknown until this excavation in the area. They may mark the beginning of the parochial cemetery, cited in written sources and used since the 11th–12th centuries until the early 1820's, when it was abandoned for another funerary place outside the village.

Inhumations present different types of architecture according to the respective period, with the use of stone during medieval times (sarcophagus and stones cofferings) or wood (wooden cofferings, coffins or simple covers). In modern times, perennial materials were replaced by wooden coffins, nailed most of times. Whatever the period, objects remained rare, encompassing some pilgrimage shells and pieces of garment.

When all the components of funerary architecture have disappeared, all observations on the skeleton become very important to be able to understand how the corpse of the deceased was treated. We here choose two examples to discuss the nature and architecture of funerary wooden structures: grave SP 1215, concerning a child, dated to the 13th–15th centuries, and grave SP 1738, an adult, dated to the Carolingian period.

⁸ Masson 2017.

Burial of a Young Medieval Child

Located near the church, north-west of the old entrance, the pit was recognized due to differences between the colour of the sediment inside and outside the grave and the presence of a stone placed south of the skull of the subject, maybe originally used as a grave's signalisation element. With a rectangular plan, vertical walls and a flat bottom, the pit measures 67 cm in length, 20 cm in width and 20 cm in height. The subject, a child deceased around the age of 1, was deposited on the back, with a south-north orientation, head to the south. The superior members are slightly flexed, the hands are directed towards the pelvis. The inferior members are flexed to the right (Fig. 4.7).



Fig. 4.7: Young medieval child in wood container (Bruges, France; © M. Maury).

Observations on the skeleton show some movements inside (ribs, vertebrae, hands, pelvis) and outside (skull fragments, left ilium, left fibula and feet) the initial volume of the body, allowing to suggest a variant filling and decay in an empty space, where the bones had the possibility to go out of the initial space of the cadaver. No archaeological clues such as stones⁹ or nails are present to indicate a funerary architecture; we only

⁹ Except the one at the head.

have the limits of the grave. This sparse information does not allow to determinate whether this empty space was created thanks to the presence of a wooden container or of a simple wooden cover. On observing the skeleton, we can note that several bones are lined up together on the east and north sides (Fig. 4.8). On the right side of the skeleton, that's the skull, the distal extremity of the humerus diaphysis, the proximal extremity of the ulnar diaphysis and the distal extremity of the femur diaphysis; at the feet, two metatarsals and one phalange. H. Duday proposed the expression of "linear delimitation effects" to describe such alignments. They reflect the presence of a wall against which bones laid, like the one of the pit, a coffering or a coffin. In this case the bones are distant from the pit's walls, so the linear delimitation effects cannot have been caused by them: they prove the presence of another solid element between the edge of the grave and the corpse, an element which disappeared during decay, like wooden planks. Thus, it's possible to conclude that this child was deposited in a coffering (directly build in the grave) or in a pegged coffin (build outside the grave).



Fig. 4.8: Linear delimitation effect (Bruges, France;    M. Maury, H. R       ).

The skull appears face upwards, in a constrained position, here again at distance from the pit wall. It can have been caused by the container but also by a tight shroud.

An Adult Subject Dated to the Carolingian Period

Also located near the present church, west of the entrance, this burial is positioned 50 cm deeper than the nearest later grave. The limits of the pit remain hypothetical; it

was disturbed at the south by the building of the church. The subject, a young man deceased between the age of 20 and 29, was deposited on the back, with a north-south orientation, head to the north. Superior members on the right side are hard flexed, hands directed towards pelvis; inferior members (and probably left superior members too) are extended (Fig. 4.9).

Bone movements are numerous, inside and outside initial volume of the corpse (ribs, vertebrae, radius, *etc.*). No difference of sediment appears in the filling of the pit and the observed movements do not seem random, as we shall indicate afterwards. We can thus exclude any later intervention, like pillage or a burrow, and suggest decay in an empty space.

A number of significant anomalies in the skeleton's order near different parts of the body are observable (Fig. 4.10–4.11; see numbers [1]). The skull appears on the right lateral side (1), its mandible disconnected, and lies face downwards, having slipped to the east, chin ahead of the first thoracic vertebrae (2). Atlas and axis are completely disconnected; the axis appears behind the right scapula spin. The other cervical vertebrae lay between right scapula and skull, on inferior face, with connection between the fourth and the sixth (3). The thoracic vertebrae are completely mangled (4). The first fourth and the tenth stayed in the axis of the body and in anterior view. The fifth thoracic vertebra moves against the mandible, to the west regarding the sixth, which stayed in connexion with the seventh. The eighth vertebra appears on its right lateral face, the ninth one on its lower front face, turning to the east. The eleventh one is on the same side but migrated into left the hemi-thorax. The last thoracic vertebra, on its upper side with a left lateral component, rotated by 180°, posterior edge to the north, and also slipped into the left hemi-thorax (5). The lumbar vertebrae are completely mangled as well. The first three, on their front face, appear near the twelfth thoracic vertebra, the third turned, the upper side towards the south. The fourth appears with its front face up, the fifth on the upper right lateral side. The sacrum, on the right lateral side, turned by 180° (6).

The ribs are also dislocated, the right ones specifically; all of them slipped to the centre of the skeleton, ahead of the vertebrae (7) and four of them, all right, moved to the south, their sternal extremity between the hip bones (8).

The right clavicle appears on the inferior side between skull and homolateral scapula, in antero-lateral view (9). On the left, the scapula is on the lateral face, the clavicle “verticalised” on the inferior side (10). Connexions between the scapula and the clavicle are not preserved, as between the scapula and the humerus. The right humerus (lateral side) slightly slipped to the exterior, as the left humerus (anterior side with a medial component) head had fallen between the pit edge and the scapula. Connexions with radius and ulnas are not preserved. The right ulna, on the anterior face, passed ahead of the right radius. Both of them moved to the east and the south (11). The left radius and ulna (back side) slipped to the south-east, the distal epiphysis at the level of the left ischium and sacrum (12).



Fig. 4.9: Carolingian male adult subject (Bruges, France;   M. Maury).

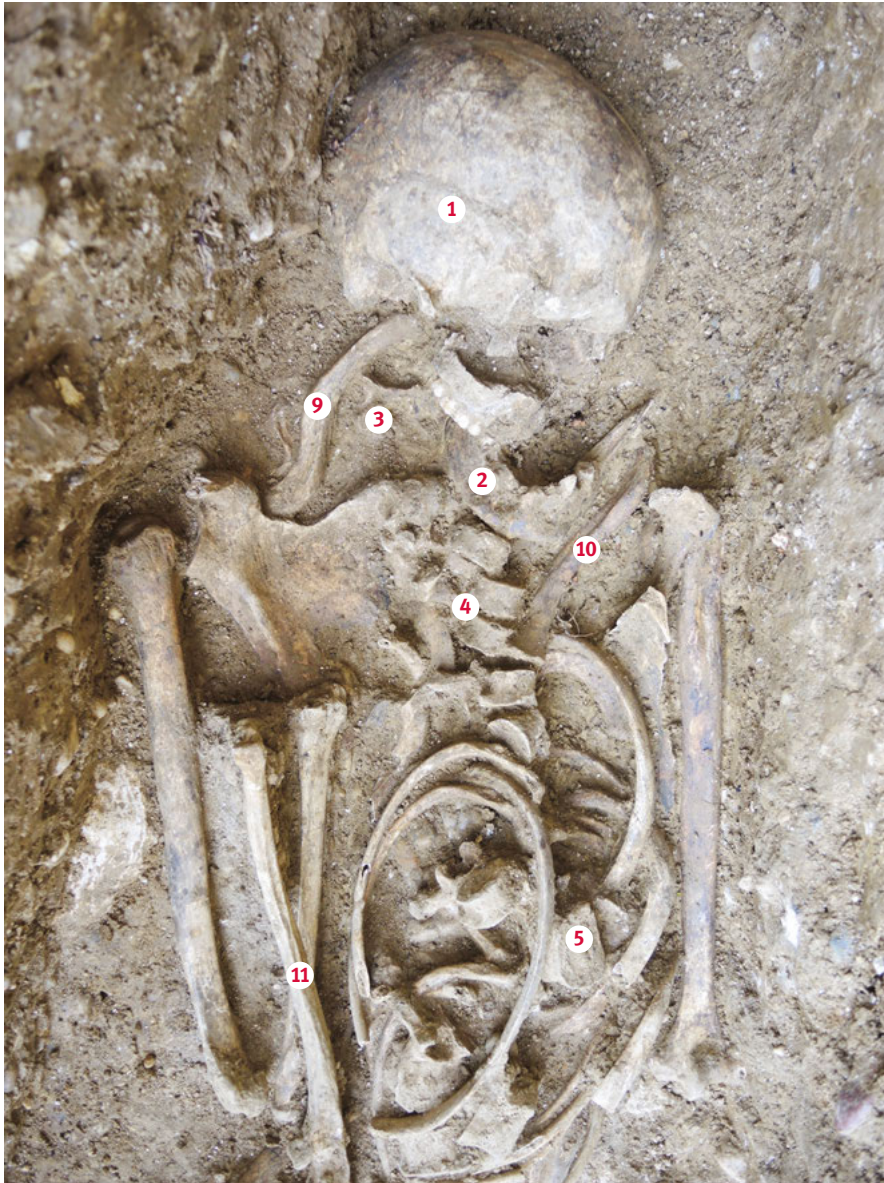


Fig. 4.10: Detail of superior part of skeleton (Bruges, France; © M. Maury).

The hip bones rotated slightly to the exterior and are disconnected from both femurs. The right one turned completely and appears on its back side, followed by the tibia and the fibula, on half-back side (13). On the left, the femur revolved and moved to the west: it was discovered ahead of the right femur, on the back side (14). Tibia and fibula turned outwards.



Fig. 4.11: Detail of central part of skeleton (Bruges, France;   M. Maury).

All those observations allow suggesting different hypotheses on the general architecture of the container, the disposition of its constitutive elements and their setting up in the grave. The numerous movements are not only caused by the decay space.

A linear delimitation effect is visible to the right of the humerus, the hip bones and the distal epiphysis of the left femur (Fig. 4.12, red line). Distant from the side of the pit, this effect was probably caused by a lateral wooden plank against which those bones rested.

The position of the vertebral extremities of the ribs, which went up and passed ahead of the vertebral bodies, can be explained by the presence of two big planks



Fig. 4.12: Linear delimitation effect and reconstitution of planks and ties breaks. See the text for further explanation (Bruges, France; © M. Maury, H. Réveillas).

placed on a west-east axis, side by side. Their break in a longitudinal direction, with a “V” collapse, caused the climb of the ribs and probably the rotation of the right inferior member (violet line).

Two big transversal break zones can also be recognized. The first is located near the scapular belt. It occurred obliquely, along a north-east/south-west line, as one group of bones fell to the north-west and the second one to the south-east. It induced the slipping of the mandible and the fall of the clavicles and the cervical vertebrae.

The second break happened along the pelvic belt, here resulting in an opposition north-west/south-east, explained by an obliquely break and the rotation of the sacrum and the movement of the left femur (blue lines).

Those two transversal breaks can be explained by the presence of wooden ties placed obliquely under lengthwise planks. This fitting allowed the creation of secondary empty spaces wherein bones like the mandible, the clavicles and the left femur fell. However this phenomenon remains difficult to explain. It can be used to assure the presence of a plane bottom or to answer to practical aspects. The wooden ties were initially placed obliquely regarding the longitudinal planks or moved when those ones decayed.

This subject was thus buried in a casing or a pegged coffin, the bottom planks lying on wooden elements allowing a heightening, which then created secondary spaces during decay.

The Use of Wood in Stone Architecture

When stone architecture is present, it remains important to establish precise observations on skeletons to be sure to understand the entire setting up of the grave and to know if any perishable materials were used jointly with perennial ones. Grave SP 156 e.g., found in 2013 during the excavation of a medieval cemetery in the south suburb of Bordeaux, upstream of urban planning around the church,¹⁰ is characterized by the presence of a stone coffering (Fig. 4.13). A man deceased at more than 30 years of age was excavated. He was deposited on his back, following a north-west/south-east orientation. The right superior member was flexed, the hand ahead of the chest, the left superior member slightly flexed, inferior members in extension.

Bone movements are numerous both inside and outside the initial volume of the cadaver, e.g. the skull, the ulnas, the clavicles, the right femur, *etc.* They allow to suggest decay in an empty space, which is unsurprising given the stone architecture. There are however dislocations with position anomalies in the case of both ulna and radius and the left femur. These anomalies cannot be explained by the decay in space only, a human intervention or bioturbation. An axis is visible from the right hip bone to

¹⁰ It was also excavated by the Preventive Archaeology Centre of Bordeaux Métropole (Réveillas 2014).



Fig. 4.13: Example of wood and stone architecture (Villeneuve-d'Ornon, France; © S. Virelli).

the left knee, which could match the break of wooden planks, and it could have caused the push of the left femur distal epiphysis and the right hip bone to the front, the rotation of the sacrum and the movement of both radius and ulnas. The presence of



Fig. 4.14: Example of flexible cover (Villeneuve-d'Ornon, France;   L. Maccanin).

those wooden planks could possibly be explained by the irregular bottom of the grave (There is a difference of 4 cm between the north-west side and the south-east side).

The fall of the skull was caused by the difference in altitude between the bottom of the cephalic alveoli and the bottom of the grave. A break took place during decay and induced this rotation.

Gestures Towards Deceased

In some cases, we can also propose some hypotheses on gestures that could have been made towards the deceased. Due to a lack of remains, it can indeed be difficult to know if the body was wrapped into a shroud or wearing clothes. Some observations on the skeleton can however give us some information.



Fig. 4.15: Detail of hands (Villeneuve-d'Ornon, France; © L. Maccanin).

A modern grave (SP 37) discovered in Villenave-d'Ornon too is presented, with an adult male subject buried in a nailed coffin (wood and nails are preserved) (Fig. 4.14). He was laid on the back, the head faced south/south-west. Right superior member is flexed at 90  , left superior member is hard flexed with hand ahead left shoulder and inferior members are extended. Limits of coffin were known but it's nevertheless obvious that bone movements are limited, especially hands and feet elements (Fig. 4.15–4.16), regardless of those bones being far from the wooden plank that could have retained them. They were probably not moving because of the presence of a shroud or garment, even if no trace was preserved.



Fig. 4.16: Detail of feet (Villenave-d'Ornon, France;    L. Maccanin).

In the same grave, there is a total dislocation between skull and cervical vertebrae and between the cervical vertebrae themselves. This movement is caused by the rotation of the head, possibly because a support of perishing material disappeared during decay.

Conclusion

With those few examples, limited to some precise cases, we show that archaeoethanatology provides essential information concerning funerary practices that have to be applied on all excavations of human remains. An archeo-anthropologist is required to realize those observations, which demands both biological and archaeological knowledge. With data collected from excavations, it's possible reconstruct burial architecture, even when perishable materials are destroyed by decay. At the cemetery or necropolis scale, it allows discussion of treatments of the deceased, to see if differences exist, but also to get a better understanding of the organisation of the funerary space, since any gathering according to those elements or changes during times are observable.

References

- Buquet-Marcon, Cécile/Pecqueur, Laure/Detante, Magali, Parés d'habits invisibles. In: Rencontre Autour des sépultures habillées. Groupe d'Anthropologie et d'Archéologie Funéraire, ed. Bruno Bizot/Michel Signoli (Saint-Ouen-l'Aumône 2009) 65–76.
- Duday, Henri, The archaeology of the dead. Lectures in archaeoethanatology. Studies in funerary archaeology 3 (Oxford 2009).
- Duday, Henri, Anthropologie “de terrain”, archéologie de la mort. In: La Mort, Passé, Présent, Conditionnel. Colloque du Groupe Vendéen d'Études Préhistoriques (La Roche sur Yon 1994) 33–58.
- Duday, Henri, Contribution de l'anthropologie de terrain à l'interprétation architecturale d'un ensemble funéraire. La tombe 12 du tumulus 2A à Nordhouse (Bas-Rhin). Les Nouvelles de l'Archéologie 40, 1990, 15–18.
- Duday, Henri, Organisation et fonctionnement d'une sépulture collective néolithique. L'Aven de la Boucle à Corconne (Gard). In: Anthropologie Physique et Archéologie. Méthodes d'étude des sépultures, ed. Henri Duday/Claude Masset (Paris 1987) 89–104.
- Duday, Henri/Courtaud, Patrice/Crubézy, Éric/Sellier, Pascal/Tillier, Anne-Marie, L'anthropologie “de terrain”. Reconnaissance et interprétation des gestes funéraires. Bulletins et Mémoires de la Société d'Anthropologie de Paris 2/3, 1990, 29–49.
- Duday, Henri/Houët, Francis/Villena-Mota, Núria, De la fiabilité des liaisons ostéologiques. Bulletins et Mémoires de la Société d'Anthropologie de Paris 8/3, 1996, 373–384.
- Duday, Henri/Sellier, Pascal, L'archéologie des gestes funéraires et la taphonomie. Les Nouvelles de l'Archéologie 40, 1990, 12–14.

Masson, J., Place de l'  glise Saint-Pierre    Bruges (Gironde). Rapport final d'op  ration de fouille. Centre d'arch  ologie pr  ventive de Bordeaux M  tropole/minist  re de la Culture (SRA Aquitaine-Limousin-Poitou-Charentes) (Bordeaux 2017).

R  veillas, H  l  ne, Villenave d'Ornon. Place de l'  glise Saint-Martin. Rapport final d'op  ration de fouille. Service d'Arch  ologie Pr  ventive de Bordeaux M  tropole/minist  re de la Culture (SRA Aquitaine) (Bordeaux 2014).

R  veillas, H  l  ne/Gleize, Yves/Kacki, Sacha/Cartron, Isabelle/Castex, Dominique, R  flexions sur la nature et l'architecture des fonds de coffrage. L'exemple d'une tombe du haut Moyen   ge du cimetiere de Jau-Dignac-et-Loirac (Gironde). In: Le bois dans l'architecture et l'am  nagement de la tombe. Quelles Approches? Actes de La Table Ronde, ed. Florence Carr  /Fabrice Henrion. Association Fran  aise de l'arch  ologie M  rovingienne, M  moires 22 (Saint-Germain-en-Laye 2012) 303–308.

II Migrations: Mobility and Communication

Sebastian Schmidt-Hofner

Barbarian Migrations and the Agrarian Economy of the Later Roman Empire in the Fourth Century CE

When in 408 the Roman army (backed by a lot of Roman money) successfully drove a Hunnic force out of Thrace, a larger group of Sciri who were allied with the Huns fell into the hands of the empire. A couple of months later, Theodosius II issued the following instructions concerning their treatment:

[...] Therefore, we grant to all persons the opportunity to supply their private possessions with men of the aforementioned group. And all persons shall know that they shall hold those whom they have received by no other title than that of the colonate (*ius colonatus*), and that no one shall be permitted either fraudulently to take anyone of this group of *coloni* away from the person to whom he had once been assigned by deceit or to receive such an individual as a fugitive, under the penalty which is inflicted upon those who harbor persons that are registered in the tax rolls of others (*censibus adscriptus*) or *coloni* who are not their own. (§1). Moreover, the landowners may use the labor of these captives like that of free persons (*opera autem eorum [...] libera utantur*) [lacuna]; and no one shall be permitted to transfer such persons, as though they had been given to him as a present, from the obligations of the tax rolls (*a iure census*) to that of slavery, or to assign them to urban service (sc. as domestic slaves). Those who receive such persons shall be permitted, because of the constraints in agrarian production, to retain them for a two-year period in any provinces they please, provided that these provinces are across the sea, and thereafter to place them in permanent homes, for which purpose their residence in the regions of Thrace and Illyricum shall be absolutely prohibited to them. Only within a five-year period shall it be permitted to make a transfer openly and freely within the confines of the same province. The furnishing of recruits shall also be suspended during the aforementioned twenty-year period. The distribution of these people throughout the transmarine provinces shall be made to those who so wish through petitions to apply to your court (i.e. that of the praetorian prefect of *Oriens* Anthemius, who was the recipient of the law).¹

¹ CTh 5,6,3. Translations of the Codex Theodosianus are taken from Pharr 1952, with slight alterations. Unless indicated otherwise, all dates are CE.

Note: This chapter is a reprint, by kind permission of John Hopkins University Press, of an article published under the title “Barbarian Migrations and Socio-Economic Challenges to the Roman Landholding Elite in the Fourth Century CE” in *Journal of Late Antiquity* 10.2, 2017, 372-404. It originated in the context of the Kollegforschergruppe ‘Migration and Mobility in Late Antiquity and the Early Middle Ages’ based at Tübingen University and funded by the Deutsche Forschungsgemeinschaft. I thank Paolo Tedesco and Lisa Eberle, both at Tübingen, as well as Noel Lenski as editor and the anonymous referees of *JLA* for helpful remarks on earlier versions of this paper. – Style and format of the contribution have been adopted to the standards used in the present volume.

<https://doi.org/10.1515/9783110616651-005>

This text is famous for giving one of the most detailed accounts of the practical arrangements of barbarian settlements in the Roman empire.² But its significance goes far beyond this. As a paradigmatic example, the law points to an important but neglected motivation of such settlements and of the barbarian immigration into the empire in the fourth and early fifth century in general: their economic function as a source of agrarian labor. This paper argues that the settlement of the Sciri as well as similar measures must be seen against the background of specific economic challenges that the Roman landholding elites faced in the fourth century, particularly in its latter half. These challenges created a strong demand for agrarian workers whom the elites needed in order to maintain and increase productivity in a highly competitive environment. As a result, elite landholders in the fourth century had a keen interest in increasing the pool of agrarian labor through barbarian immigrants, and they therefore welcomed the intake of new settlers – be they captives of war, chattel slaves, or “voluntary” immigrants who sought relief from economic hardship, warfare, or political pressure at home by gaining admission to the empire.

To be sure, such a use of barbarian immigrants was nothing new. The Roman state had a long history of settling barbarians on its territory; in the fourth century alone such settlements are attested by the dozen.³ Moreover, the economic interest of the Roman landholding elites in barbarian immigration had always existed and has long been recognized by scholars, even though in most modern accounts the governmental interest in new taxpayers and recruits receives far more attention than the interests of private landholders.⁴ There is, however, reason to re-evaluate the phenomenon with regard to the fourth and early fifth century. While earlier scholarship

² The most comprehensive treatment of this is Grey 2011a.

³ For evidence of such settlements since the time of Augustus cf. Ste. Croix 1981, 509–518, and Modéran 2004.

⁴ Recent contributions tend to emphasize the ideological, military (i.e. recruits for the Roman army or border defense), and fiscal interest on the Roman side, while the economic dimension and the role of the landholding elites are noted only in passing, if at all: cf. Lieu 1986, 486 (“the Romans had no coherent plan of settlement for these prisoners and did not seem to have any economic aim in their deportation beyond using them as cheap farm-laborers”); Heather 1991, 158–165, at 160; Mirkovic 1993; Wirth 1997, 35–39; Whittaker/Garnsey 1998, 279–281; Heather/Moncur 2001, 262–263; Halsall 2007, 176 and 183. But see Charanis 1961, 150–151 (for Byzantium); Stallknecht 1967, 22–27, 30; Ste. Croix 1981, 248–249; Asche 1983, 112–122; Barnish 1986, 175–176 (for the fifth and sixth centuries); and, most importantly, Whittaker 1982 and 2004 as well as the magisterial survey by Modéran 2004, *passim* (but cf. his conclusions 390: “Les préoccupations économiques, prédominantes au temps du fondateur du principat, [...] semblent ainsi avoir été au IV^e siècle [...] dépassés par le souci de renforcer les armées”). This paper builds on these studies but carries the argument further by identifying the Roman landowners as a driving force for immigration (and not just as beneficiaries of imperial foreign policy) and by situating it in the socio-economic context of the fourth century. Recently Ziche 2011 has argued that there was strong ideological resentment on the Roman side against barbarian settlements on Roman soil. This is based on some of the texts discussed in the second part of this paper. In my reading, they imply exactly the opposite.

tended to understand barbarian settlements in this epoch as a measure against a general demographic and economic decline in the Roman Empire, recent decades have seen a complete reversal of our picture of the late Roman economy. Also, in the wake of this reappraisal a new picture begins to emerge of how certain social and economic developments at the time affected the landholding elites of the empire. Against this background, the economic context and significance of barbarian immigration into the Empire in the fourth and earlier fifth century appear in a new light. With the argument outlined above, this paper offers a reinterpretation of the phenomenon that takes the reassessment of the socio-economic framework into account. In so doing, this paper also makes a case for bringing together two fields of study that scholars have rarely connected: the history of migrations and of the late Roman economy. The paper will first sketch the economic challenges to the landholding elites of the time in light of the new picture of the late Roman economy. In the second part it presents evidence that proves the link between these challenges and barbarian immigration into the Empire in the fourth and early fifth centuries.

The Socio–Economic Challenges of the Late Roman Elite in the Later Fourth Century

Until late in the second half of the twentieth century, the commonly held view of the late Roman economy emphasized depression and decay. According to this model, demographic decline, tremendous fiscal pressure, and repeated warfare on Roman soil all contributed to ongoing economic subsidence beginning in the third century. In recent decades, this picture has changed dramatically. The notion of fiscal pressure, for example, has been rightly questioned, and evidence like the numerous references in legal sources to “abandoned land” (*agri deserti*), long read as indicators of unproductivity and demographic decline, has been reinterpreted. More importantly, both an increase in and reinterpretation of the archaeological evidence for settlement patterns, material culture and trade has made clear that many regions of the empire enjoyed considerable and at times extraordinary prosperity in the fourth century. In the Eastern Mediterranean or in North Africa this equalled or surpassed the levels of economic performance witnessed in the High Empire, and in certain places in the East this continued well into the sixth century. Commercialized agrarian production formed the basis of this prosperity and also fuelled other sectors like specialized industry and trade.⁵ Against this macroeconomic background – which

⁵ For general overviews of the new picture of the late Roman economy, see Whittaker/Garnsey 1998 for the fourth century and Ward-Perkins 2000 for the fifth and later; Chavarría/Lewit 2004; Lewit 2004; Harper 2011, 10–16; Banaji 2012; Grey 2012; Zerbini 2015 and other papers in Lavan 2015. For a

cannot be explored in any depth here – a number of social and economic phenomena that have long been regarded as indications of crisis begin to appear in a different light. These phenomena as such are well known, but it is necessary to briefly restate them with a view to the challenges they created to the landholding elite. One is the issue of labor supply in the agrarian sector.

Famously, fourth-century imperial legislation is filled with efforts to inhibit the social and geographical mobility of the agrarian workforce by tying the peasants to the soil they tilled through a hereditary bond, a legal instrument that scholars traditionally call “the bound colonate.” There is a long-standing scholarly debate as to whether the hereditary binding of *coloni* to their soil emerged out of the fiscal registration of taxpayers in the wake of Diocletian’s tax reforms, or whether it grew out of private dependencies of tenants working a landlord’s possession that were translated into an institution of public law. Many would now deny that “the colonate” was anything like a unified legal institution and that *coloni* represented a clearly defined status group; the terms *colonatus* and *colonus* rather seem to have been umbrella words for a broad variety of legal statuses and agrarian labor relations. Equally controversial are the questions of how widespread the colonate was as a legal institution binding tenants to the soil of a landlord; how its extent compared to that of rural slavery, contract labor, classical *locatio conductio*-tenancies, and free small-holders; as well as what loss of freedom it practically entailed.⁶

reassessment of the *agri deserti* see the seminal article by Whittaker 1976 as well as Jaillette 1995; Grey 2007a and below n. 31.

⁶ The literature is vast and opinions are divided on almost all questions of detail. Thus the debate can be summarized here only in the briefest outline. The current state of the debate is best approached through the contributions to Lo Cascio 1997 and the overviews of recent scholarship in Scheidel 2000; Grey 2007b, 156–160; and Schipp 2009. For earlier scholarship, see Marcone 1988. The basis of all contemporary debates is the seminal articles by Carrié 1981 and 1983, arguing that the colonate, in the sense of a legal institution binding tenants to the soil of a landlord, is a “myth” of modern historiography and legal thought, while the limitations for *coloni* (which, in his view, were grossly exaggerated in scholarship) were purely a matter of fiscal registration that tied *coloni* to their *origo*. Many have supported Carrié’s views in recent years, as exemplified by Grey 2007b (who also argues that *colonus* etc., was an umbrella term for a variety of statuses and modes of agrarian production). But see Sarris 2011 and Lenski 2017, who strongly emphasize the limitations of *coloni* who were tied to the soil. Sirks 2008 steers middle ground; while he acknowledges that the colonate by the reign of Justinian had become a coherent legal institution and created a strong bond tying peasants to their place of fiscal registration, in his view the legal insistence on the free status of *coloni*, among other things, cautions against a picture of the *coloni* deteriorating into serfdom even in the sixth century. For the broad variety of agrarian labor relations that prevailed in the late Roman world see the summary in Grey 2012, 656–657. For slavery, see below n. 35. The role of wage labor has recently been underlined by Banaji 2001, ch. 8, and Sarris 2006, ch. 2–3, but see the review of Banaji 2001 by Kehoe 2003, esp. 714–716, and Freu 2013, arguing that wage labor was used mainly for specialized agricultural tasks.

Whatever the answer to these questions, the sheer abundance of relevant provisions shows that peasant mobility came to be regarded as an enormous problem in the fourth century. This clearly emerges from the harsh rhetoric of the legal texts concerning *coloni*. One law insists: “They may serve as slaves of the land (*inserviant terris*) – not just on the basis of a fiscal bond but under the name and in the legal condition of a *colonus*”; others talk of legally tied peasants as *servi terrae* or *coloni servilis condicionis*.⁷ Even if the binding of peasants to their status and soil may initially have been solely a matter of fiscal administration, this rhetoric leaves no doubt that soon more was at stake. On the one hand, the mobility restrictions reflect the concern of the imperial government to maintain a stable base of taxpayers. On the other, there can be no doubt that the intensification of legal efforts to bind peasants to their status and soil was driven by the interest of the landowning elite who solicited or, as members of the governing class of the empire, actually made these laws. As we shall see, fourth-century landowners had more than one reason to be concerned about peasant mobility.

The pertinent imperial legislation likes to censure the migration of peasants from their native soil as “absconding” or “flight,” thus suggesting that agency lay only with the peasants. A famous edict of Constantine, for example, thunders that “*coloni* who meditate flight must be bound with chains and reduced to a servile condition, so that by virtue of their condemnation to slavery they shall be compelled to fulfill the duties of a free man” (CTh 5,17,1). It is, however, revealing to look more closely at the social dynamics behind the ‘flight’ of the *coloni*. The same Constantinian edict, for example, continues that “any person in whose possession a *colonus* that belongs to another is found not only shall restore the aforesaid *colonus* to his *origo* (that is, place of registration) but shall also assume the capitation tax for this man for the time that he was with him.” Landowners profited twice from employing a peasant registered elsewhere: they not only benefited from additional labor power but also enjoyed that labor free of its concomitant capitation tax, provided they could manage to hide the fugitive *coloni* from the tax authorities. Indeed, reclaiming the capitation tax from the landowner who had housed the peasant was an often-repeated concern of the pertinent legislation.⁸ Landowners thus had a strong interest in harboring peasants belonging to someone else. The abundance of pertinent provisions implies that this was indeed a widespread practice. Some texts even imply that landowners engaged in active recruiting among the dependent workforce of their peers. A law of 386, for example, blames landlords for housing peasants belonging to someone else’s

7 CJ 11,53,1 (a. 371); 11,52,1 (a. 393); CTh 5,17,1 (Constantine).

8 CTh 5,17,1 (cited above); 11,1,7 (a. 361); 11,24,1 (a. 360); 11,24,6 (a. 415); CJ 11,48,8. In CTh 5,17,1 and 11,1,7 it is unclear whether the harborers of fugitive peasants had to pay the capitation tax to the state or to the former *dominus*, who had still been assessed for the fugitive. In CJ 11,48,8, as in CTh 11,24,1 (where the fugitives seem to be freeholders), it is explicitly the imperial treasury that receives the compensation.

sollicitatione, that is “after they had incited” the *colonus* to abscond.⁹ The multiplication of legal prohibitions against the “flight” of the *coloni* and their subsequent employment on the estates of other landlords, although rooted in a variety of concerns, thus seems particularly to have been motivated by a competition for labor among the landholding elite, with the repetition of laws against peasant mobility representing the voice of the losers in this competition.

Occasional glimpses into the realities of rural life in nonlegal sources confirm the same picture. One example is the letter of an anonymous large landowner in North Africa to a peer named Salvius concerning a legal dispute between the two over *coloni* working on the letter-writer’s estate in around 400. Both were lawyers; during their legal training, they had together learned, “by which right and according to which procedure *coloni* are reclaimed, who is entitled to bring an action, and who is not entitled to the result of an action,” as the letter informs us.¹⁰ Such conflicts thus seem to have been a frequent issue in Roman courts. In the dispute under question in our letter, Salvius appears to have claimed that the *coloni* were registered on a piece of land he owned and had illegally “absconded.” He therefore had demanded them back and threatened to take the issue to court. In response, the author of the anonymous letter denies Salvius’s claims by arguing, among other things, that the land in the latter’s possession where the *coloni* were allegedly registered was far too small to be the *origo* of so many people. Tellingly, however, he tries to convince Salvius to avoid the courts and accept a private meeting of the two to find a solution. Perhaps Salvius’s claims were not as unfounded as the letter tries to suggest. In any event, it illustrates the seriousness of the competition for agrarian labor among the elite.

This struggle for agrarian labor power among the landowning elites is borne out by other phenomena. For example, fourth-century legislation repeatedly insisted that descendants of *coloni* retained this status, even if this was against the principles of the Roman law of status. For instance, by decree the offspring of a marriage between a daughter of a registered *colonus* and free man of non-*coloni* status was to inherit the mother’s birth status even though, as a *colona*, she was technically a free person capable of entering a *matrimonium iustum*, whose offspring would normally inherit

⁹ CTh 5,17,2: *Quisquis colonum iuris alieni aut sollicitatione susceperit aut occultatione celaverit...* The absconding of registered peasants because of the *sollicitatio* of another landowner (as opposed to *sponte*, “out of his own impulse”) is also mentioned at CTh 5,18,1 (a. 419). In CTh 5,6,3 (a. 409): *fraude aliquem abducere* (as opposed to *fugientem suscipere*) seems to mean the same.

¹⁰ For the text (transmitted in three manuscripts of Orosius’ *Historiae adversus paganos* and long falsely attributed to Sulpicius Severus) and a commentary see Lepelley 1989; the translation (from §2) is that of Sirks 2001. Competition over the labor of *coloni* (or their offspring) could also have been behind the conflict Sidonius Apollinaris had with a landowner in his neighbourhood over an abduction marriage, see his Ep. 5,19 with the reconstruction in Grey 2008.

the father's status.¹¹ These regulations appear to be geared to the interest of landowners in keeping their workforce stable. So does the increasing tendency to substitute the payment of cash for the obligation to furnish recruits, a privilege that was often granted to high-ranking senators at the time. The fervent protests of the landholding aristocracy of Italy against the general levy for the war against Gildo in 397, which forced Honorius to allow the commutation of recruits into cash, illustrates the interest of the landowning elite in keeping its agricultural workforce in place.¹² Moreover, from around 400 onwards, registered *coloni* were banned from military service, a rule that was explicitly introduced to “look after the rights of the landlords.”¹³ In addition to obtaining imperial laws such as these, landowners also resorted to illegal practices. Numerous imperial decrees, for example, prohibit the harboring of deserters as agrarian laborers.¹⁴ One constitution intervenes against the practice of alienating land while keeping the workforce attached to it. Another bans what it calls an “old trick with regard to registered *coloni*” (*quod in originariis saepe actitatum est*): buying only a small parcel of land out of a large estate but taking the entire workforce of the estate with it.¹⁵ Evidently, the supply of agrarian labor was a pressing concern.

Traditionally, the abundant evidence for the “flight” of *coloni* has been read as an indication of the pitiful state of the peasantry in a climate of economic decline and fiscal depression. Confirmation for this was thought to be found in texts like an edict of Constantius II reporting that “a multitude of peasants located throughout Egypt have betaken themselves to the protection of those persons who are supported by their high rank of various degrees and even to dukes.”¹⁶ Together with a number of similar passages, this text was taken as evidence that peasants fled pressing fiscal demands and greedy landlords by seeking the protection of powerful magnates, only to lose their independence and, in the long run, also their land, to these patrons.

11 For the marital law of the colonate see Munzinger 1998, 44–93. The earliest evidence for the above-mentioned aspects of the marital law for *coloni* in general is CTh 12,19,1 (a. 400) and 5,18,1 §3–4 (a. 419), referring to *vetera constituta*; with regard to imperial *coloni*, the rule can be traced back to the 360s, see Schmidt-Hofner 2008, 280–284.

12 For the *aurum tironicum* see Jones 1964, 614–619; Delmaire 1989, 321–329; Zuckerman 1998; Lenski 2002, 313–319. See Munzinger 1998, 40–42, for the elite as the driving force behind these regulations. On the Gildo affair, see CTh 7,13,13 and 14 (a. 397) and Symm. Ep. 6,58; 62; 64. On commutation into cash as a privilege to high-ranking officials, see for example CTh 7,13,15 (a. 402), 18 (a. 407), 20 (a. 410).

13 CJ 12,33,3 (around 400); 11,48,18 (a. 426): “because in that respect we look after the rights of the landlords and the honor of the state” (*quia in hac parte et dominorum iuri et publicae consilium honestati*).

14 Cf. CTh 7,18, passim; CTh 7,18,2 and 4, for example, clearly concern larger elite estates under the supervision of a *procurator* and consisting of various tracts of land. Cf. Zuckerman 1998, 110–113 for the background to these desertions in forced conscription.

15 CTh 13,10,3 (Constantius II); CJ 11,48,7 (a. 371/375).

16 CTh 11,24,1 (a. 360).

Scholars have long cast doubt on this gloomy picture, and the new assessment of the late Roman economy has further undermined it.¹⁷ Most recently, Dossey's work on the peasantry of late Roman Africa has made a crucial contribution to calling the traditional picture into question.¹⁸ In her view, the peasantry of the fourth and fifth centuries fully profited from the economic boom of fourth-century North Africa. They fared better overall and were more integrated in the Roman world than they had ever been before – an interpretation based, among other evidence, on the density of settlements, the widespread use of high-quality ceramics, and the dissemination of high-quality building materials, including luxury amenities like bathhouses, some of them probably provided by absentee landlords as incentives for their workers. Crucially, Dossey argues that it was precisely this prosperity that lay at the root of the social tensions between the North African peasantry and the landholding elite in the fourth and early fifth centuries, which also fuelled the Donatist controversy. In Dossey's view, the prosperity not only allowed the peasants to better their condition, it also helped them develop claims to fully participate in the Roman system and have rights within it. At the same time, Christian discourses provided them with a way to articulate their rights or grievances against the landowning elite in relation to matters such as debt. In sum, prosperity led to an increased self-confidence among the North African peasantry as well as to tensions in their relationship with landowners.

There is good reason to believe that Dossey's picture holds true for other regions of the empire as well. As mentioned above, economic prosperity was not restricted to North Africa, nor was Christianity. Indeed, similarly self-confident and demanding peasants are also attested elsewhere. Evidence for this comes, for example, from a sermon of John Chrysostom in 400 CE urging landowners to build churches on their estates in order to convert the peasantry. The text provides illuminating glimpses of the life on a typical large estate of the time: the peasants enjoy baths, taverns, and markets provided by the landlord; and Chrysostom implies that the landlords did this *dia doxan*, to enhance their prestige among the peasantry, in other words to ensure their loyalty. At the same time, Chrysostom seems to envisage tensions between peasants and landlords. For he warns the latter that all these amenities only make the peasants audacious, while a church and a priest on the estate would “drive away intemperance,” “drunkenness,” and “luxury,” and would secure “peace (*eirēnē*) among the farmworkers” and “stability (*asphaleia*) on the estate.”¹⁹ Chrysostom, it seems,

¹⁷ Seminal is Krause 1987.

¹⁸ Dossey 2010. Cf. also Whittaker–Garnsey 1998, 293–294; Lenski 2017.

¹⁹ Joh. Chrys. In Act. Hom. 18,4–5 (PG 60,147–148.). (I owe this reference to Rudolf Haensch.) The erection of a bathhouse by a landowner for his peasants (“to all the tillers of the land for the benefit of all”) is also recorded in IGLS 4.1685 (sixth-century, from Androna in Apamene). A similar case probably in IGLS 4.1490.

presupposed a certain degree of uneasiness between peasants and landlords that threatened the smooth running of their estates and tried to sell them his church-building program as a remedy for that problem.

In his *On patronage* (Or. 47), delivered in the 380s, Libanius famously betrays a similar uneasiness when he describes the problems he had with the peasants in a village he owned in Syria. These, he claims, gained the patronage of a high-ranking military officer. Relying on this patronage, they bullied neighbors, took their property, and resisted the tax-collecting curials. They also used patronage to avoid their duties as tenants to their landlords. This is where Libanius himself comes in: his own tenants had also refused to pay the rent, so Libanius brought the matter to court, and everything went well until the patron of the peasants intervened and stopped the investigation. There is reason to believe that Libanius stops short of telling us the whole story here,²⁰ but in any event the text nicely illustrates the kinds of problems that landowners had, or could make others believe they had, with self-confident peasants playing games to their own advantage.

Against this background, the evidence presented earlier for peasant flight and patronage appears in a new light: These passages by no means show an indiscriminately desolate peasantry; rather, the sources at least partially attest to self-confident peasants actively seeking their own advantage in a booming economic environment. One of the strategies the peasants applied was to exploit the fierce elite competition for agrarian labor by moving to another estate in order to negotiate better conditions with the new landlord. This is the situation we find, for example, in a law of Valentinian I showing a broad variety of possible relations between a landlord and a ‘fugitive’ peasant harbored on his estate: some peasants were exploited without receiving a fair remuneration for their work; but others, who managed to hide the fact that they were *coloni* belonging to someone else, were envisaged by the legislator as being able to enter a leaseholding contract and work the land for their own profit “as if out of their own will and like free men” or as being employed as wage laborers on a contractual basis. Conditions of work in the agrarian sector were thus at least partly a matter of negotiation and, to a certain extent, choice.²¹ On a revisionist reading, therefore, texts like those of Libanius or the laws on rural patronage appear to show that the peasants were trying to play the landlords against each other to their own advantage – even though in the long run they sometimes risked being absorbed into a powerful magnates’ estate, as is attested in a number of texts.²²

20 Carrié 1976; Krause 1987, 83–87.

21 CJ 11,48,8 (368/375). The conclusion drawn from this law might be confirmed by P.Oxy. 27: 2479, a petition from a registered farmer (*georgos enapographos*) who, having left his farm three years earlier, asked his former landlord to receive him back. Despite its submissive language, the point of the petition seems to be that the farmer negotiates with the landlord that he will not be forced to pay the taxes for the time of his absence. (I owe this reference to Paolo Tedesco.)

22 As, for example, in CTh 11,24,2 (a. 368), or 11,24,6 (a. 415).

All this is not to say that life was easy for the rural population in Late Antiquity, and it would be foolish to deny that fiscal and economic pressure as well as oppression through the state and seigniorial authorities was a constant feature of rural life. Nonetheless it seems clear that in the fourth century the landholding elite was more than once confronted with a new and challenging situation: they not only had to fight against a notorious labor shortage but also struggle with a workforce that often enough was able to assert its rights with self-confidence and, because of the competitive economic environment, was constantly threatening to leave in search of better conditions elsewhere. The bargaining power agrarian workers could have in this situation is nicely illustrated by an episode of the early 420s from Numidia: when the notoriously unscrupulous bishop Antoninus, who had been driven from his see at Fussala, decided to establish himself at a nearby senatorial estate, the *coloni* of the estate, resenting him, petitioned the absentee owner, a *clarissima femina*. They threatened that “if she allowed this to happen, they would immediately leave the estate” (*se continuo migraturos*). The estate owner and the diocesan bishop, Augustine of Hippo (as he himself relates), promptly withdrew their support of Antoninus.²³

Manpower shortage and a self-confident peasantry, however, were not the only challenges that the landowning elite faced. In the fourth century, the Roman Empire saw a massive expansion of the state apparatus. Because the upper echelons of this apparatus were mostly recruited from the municipal elites, local communities came to be confronted with a large group of active or retired high-ranking office-holders who became powerful patronage brokers in the cities where they resided. We have already encountered these powerful patrons in the law on peasant patronage cited above, where patrons were described as “persons who are supported by their high rank of various degrees and even dukes.” Other laws mention members of the chancellery of a *comes*, *magistri militum* and *comites*, honorary proconsuls, vicars, and the like as patrons; in Libanius’s speech it was a high-ranking military man.²⁴ The existence of these high-ranking, influential patrons threatened the landowning elites not only because their patronage played a key role in mediating shifting relations between other landowners and peasants. These men also had a massive impact on elite landholding patterns. They were often well off as a result of the salaries they earned and the additional semi-official and sometimes illegal income they could acquire while in office. What is more, as Banaji has demonstrated, they also profited from the economic effects of changes in the monetary system and fiscal administration. After many decades of inflation and monetary instability, in the

²³ Aug. Ep. 20*, 10 (CSEL 88: 100). In the course of the affair (on which see the lucid reconstruction by Frend 1983, as well as Dossey 2010, 137–141) the peasantry several times resisted attempts to exploit them and actively intervened in their own interest (see especially §14, 17, 19).

²⁴ CTh 11,24,1 (whence the quote), 3; 4. For the rise of the bureaucratic elite in the fourth century in general Heather 1994; Sarris 2006, ch. 10.

course of the fourth century the gold coinage, because of its stable value, became the dominant means of exchange for all larger transactions, including tax payment. According to Banaji, the social consequences were dramatic in the highly monetized economy of the Roman empire, as these changes gave a significant economic advantage to people with access to gold. This economic, or monetary, advantage in Banaji's view can help explain why, in the long run, many freeholding farmers became dependent on rich landholding magnates. However, this economic development also affected the landholding elites: it shifted the dynamic in the land-market and gave those men a distinct advantage who, as a result of their office-holding in the imperial state apparatus, had regular access to gold through their salaries and other income. In fifth-century Egypt, this development led to the formation of large estates – the so-called “Great Houses” – in the hands of the new imperial aristocracy. And the same dynamic may also have contributed to the resurgence of aristocratic *villae* (as representational buildings and centers of large estates) elsewhere in the fourth and fifth century, particularly in the West.²⁵

Contemporary complaints about *honorati*, imperial office-holders, putting pressure on the land market by buying out the land of the curial elite – their peers who had not entered imperial service – speak to the same socio-economic dynamic. The speeches of Libanius, himself a landowner, are full of such complaints. In Oration 49, for example, Libanius complains about “those who comfortably reap the harvest from the fields of the emperor” – that is, the office-holders in the imperial administration – turning up “from everywhere” to buy the land of councillors ruined by the fiscal demands of the empire. Oration 48 paints a similar picture: “If any of the *honorati* admires a councillor's estate, and proceeds from admiration to desire, it is no sooner said than done: the councillor is forced to sell, and the *honoratus* is all ready to buy.” And, what makes it worse, much of this was done with the connivance of leading decurions: “In some cases, you personally put down the money, in others you stand in for persons of influence and curry favor at their tables by means of the property of the councillors”.²⁶ One of these land-grabbing *honorati* is directly attacked in Oration 62, another speech that engages with the social dynamics created by the enlargement of the imperial service. Libanius upbraids him for being wealthy because he used office-holding to enrich himself through usury at the cost of many a family, “unbending before floods of tears, bawling and bellowing: ‘Sell your estates, sell your slaves, sell your family tombs, and, if you can, sell yourself too.’”²⁷

²⁵ Banaji 2001, ch. 3. For the connection with the villa culture of the time Sarris 2006, 121–126; Banaji 2012, 597–607. But contrast Vera 2012, 117, citing further critics of the idea, and below n. 29.

²⁶ Lib. Or. 49,2 (see also 13–14, 20 for the accusation of collusion by leading decurions); Or. 48,37. Translations from Norman 1977, 463 and 453.

²⁷ Lib. Or. 62,63–66, quotation at 64. The attacked person remains anonymous. For the date of the speech see Norman 2000, 87–88; the translation at 106–107. See also Lib. Or. 2,54–55.

These passages are polemical, and Libanius's accusations exaggerated. Wealthy decurions are well-attested throughout the fourth and earlier fifth centuries, and scattered evidence shows that they continued to exist well into the sixth century, even though the numbers might have decreased and many rich curial families were absorbed into the bureaucratic aristocracy.²⁸ Moreover, evidence from Asia Minor, Egypt, Northern Syria, and North Africa, among other places, shows that small- and medium-sized landholdings continued to exist into the sixth century. Although a concentration of land is discernible in the documentary sources, such as the fiscal registers from mid-fourth century Egypt, the accumulation of property in the hands of the office-holding elite apparently was never as complete as earlier scholarship has maintained.²⁹ However, it is beyond doubt that the competition for land was intense in the fourth century, particularly in its latter half, and it is very likely that this competition, in part at least, resulted from the social dynamics created by expansion of the imperial service.

This is suggested also by evidence beyond the speeches of Libanius. A law of 386, for example, ordains that estates (*praedia rustica vel urbana*) of city councillors can be sold off only if the provincial governor has been informed and assented to the transaction. According to the law, the purpose of the provision was to make sure that the seller was not “circumvented by the stratagems or overwhelmed by the power of the purchaser”³⁰ – this very likely meant a high-ranking office-holder. But competition for land existed not only between *honorati* and *curiales*; the problem affected the

28 Evidence for the wealth of decurions is collected in Lepelley 1979–1981 (for fourth- and early fifth-century Northern Africa) and Laniado 2002 (up to the sixth century). For the fate of the curial order and the transformation of the governing class in the cities of the empire in the fourth and fifth centuries, see Liebeschuetz 2001 and the alternative model proposed by Schmidt-Hofner 2014.

29 Such is the conclusion of the general survey of landholding patterns in *Oriens* by Decker 2009, ch. 2, esp. 65–79. For the fourth-century evidence from the Hermopolite land lists and from Oxyrhynchus, both in Upper Egypt, see Sarris 2006, 179–181. But as late as the sixth century a place like Aphrodito in Egypt seems to have been the home of many small- and medium-sized landholdings, see Wickham 2005, 411–419; cf. also Bransbourg 2016, summing up the debate at 308 and 402. The same is suggested by the large and carefully constructed houses and churches in the rich villages of northern Syria (mainly fifth to sixth centuries) as described by Tchalenko 1953–1958 and Tate 1992. See also Foss 1995, and the summary by Tate 1997 of his findings and historical conclusions, as well as Wickham 2005, 443–457. By way of example, see Theod. HR 17,3, a tale of a rich village in the Lebanon where only free smallholders lived; or by the world of small-scale perpetual leaseholders on an estate owned by a curial as apparent from the North African legal documents from the 490s known as the *Tablettes Albertini*, Weßel 2003, 30–44. The fourth-century census inscriptions from the Aegean and Asia Minor show a highly fragmented landownership including small and medium properties but also evidence for elite accumulation and the dominant role of the *honorati*, Harper 2008, 90–97 (see also 84–90 for their date); cf. Thonemann 2007, 472–475. But see also the warnings against underestimating the rise of the large aristocratic estates in the East voiced by Sarris 2004 and 2011. A balanced position is taken by Wickham 2005, 245; Decker 2009; Banaji 2012, 607–610.

30 CTh 12,3,1 (a. 386); cf. 12,3,2 (a. 423).

landholding elites more generally. Evidence for this comes, for example, from a number of laws that assure the holders of perpetual leases of imperial domains – normally men of the provincial elite – that no one can cast them out of their tenancy by using his influence or bidding a higher rent. A constitution of 393 is illustrative of these provisions: “It has come about through the arrogance of wicked men that all the best lands are serving their greed for gain and profits, and only such inferior fields are left in the province as none of the aforesaid men deign to hold. ...”.³¹ The repeated appearance of the topic in legislation shows that such attempts to expel leaseholders of profitable land through a higher bid or other methods were common. To judge from extant legal evidence, so were other unlawful practices deployed in the competition for land.³² It is thinkable – if ultimately impossible to prove – to link these texts at least in part to the dynamics described among the landholding elite in the later fourth century.

In sum, Roman landholding elites in the fourth-century experienced an intensification of the competition for wealth and property that forced them to increase the productivity and profit from their land in order to survive in this fiercely competitive environment. This development exacerbated the problem that landowning elites had with the labor supply. As economic growth largely depended on the availability of agrarian labor, they felt an ever-stronger pressure to keep their labor pool stable or, if possible, to increase it. At the same time, they were confronted with a self-confident peasantry that was able to exploit the fierce competition among landholders, the increased demand for labor, and the shifting relations of power and patronage within the elite. To be sure, none of these phenomena was entirely new in the fourth century; there had always been competition for land and labor among Roman landowners. But the density of the evidence discussed suggests that, for the above-mentioned reasons, the competition acquired a new quality and intensity in the fourth century. Landholders met these challenges with a variety of strategies. As to the land market, legislation was issued to enforce a closer surveillance of land transactions and to prohibit illegal practices of land acquisition. With regard to the labor supply, landowners provided incentives to ensure the loyalty of their peasants; they solicited legislation to tighten control over the existing workforce; and they made an effort to

³¹ CTh 5,14,33. Parallels at CTh 5,15,15; 16; 21; CJ 11,71,5. The high social rank of leaseholders is explicit only in CTh 5,15,15, but generally likely as leases were given to the highest bidders. Cf. Whittaker/Garnsey 1998, 283. A similar practice can be observed elsewhere: As recently argued by Chouquer 2014, 132–133, the fiscal mechanism of *adiectio sterilium* (by which the tax obligation of uncultivated land was allocated to other possessions) was not necessarily a coercive instrument by which the Roman state secured its tax revenue; it often served the interest of the landowner, as the allocation apparently went along with substantial tax immunities. See CTh 5,15,14 = CJ 11,59,3 (a. 364). The abundance of laws concerning this mechanism, on which in general see Choquer 2014, 126–134, can therefore be interpreted as evidence for another way landholding elites tried to gain control over additional land.

³² Cf. e.g. the provisions in CTh 4,22; 4,18,1; 2,26,5.

enhance their share of the empire's agrarian labor pool by taking advantage of peasant mobility and by a variety of other, often illegal means.

Late Roman Landowners and the Uses of Barbarian Immigrants

In this situation immigration provided a remedy. It thus seems a priori likely that the landholding elites welcomed the intake of barbarians, whether voluntary or forced, as potential laborers. Examining the actual deployment of barbarian immigrants further strengthens this case. The evidence for these practical aspects of barbarian settlements is limited. Some of the newcomers appear to have received land as freeholders (often of uncultivated land, either *agri deserti* or virgin land). Others were settled on imperial land, possibly with a status similar to imperial *coloni*.³³ In these cases it would appear that the interests of the Roman state in additional taxpayers and potential recruits shaped these settlements. And yet it is clear that individual Roman landowners also profited from the intake of barbarian laborers. For one thing, there is ample evidence that the slave trade between the barbarian world and the empire was flourishing in the fourth and earlier fifth centuries; Synesius of Cyrene famously grumbled that even moderate Constantinopolitan households were replete with "Scythian" slaves.³⁴ It has long been recognized and has been re-stated forcefully in recent years that slaves remained an important source of labor in the agrarian sector as well: contrary to a widespread view in earlier scholarship, slavery was never entirely supplanted by other forms of bondage like the colonate. In many regions including Italy, the Aegean and Western Asia Minor, agricultural slavery remained at least one among several sources of labor. There is – to my knowledge – almost no positive evidence to prove that slaves of barbarian extraction were used as farm workers; but given the high numbers of slave imports into the empire this is more than likely.³⁵

³³ For an overview of the varying conditions of settlement, see Stallknecht 1967, 22–27; Ste. Croix 1981, 247–248, and Modéran 2004, esp. 362–289.

³⁴ De Regno 20,2; cf. 21,1: "It is those from whom we get our slaves everywhere, because of their lack of land." For trade with barbarian slaves in Late Antiquity, see Harper 2011, 83–99; Lenski 2011, 193–194.

³⁵ The case that slavery continued to play an important role has been stated most forcefully in recent years by Harper 2011 who goes so far as to claim that the Late Roman Empire continued to be a "slave society"; cf. Grey 2011b with a succinct survey of the scholarly debate and the most important contributions. But cf. Lenski 2017, questioning Harper's view of a "slave society" on the basis of a systematic survey of the North African evidence that shows a preponderance of *coloni* as agrarian laborers. A similar picture for Italy and elsewhere is drawn by Vera 2012 who argues that the evidence for large late Roman landholdings worked by slaves is limited to a few cases and points out that the use of slaves in agriculture in general made little difference as they worked under the same economic regime like *coloni*, i.e. as tenants paying rent to a landowner. Evidence for agrarian slavery is

As regards larger groups of incoming barbarians, whether they were prisoners of war or immigrants by choice, there is clear evidence that Roman landowners did make use of them as agrarian laborers. The first source to prove this is a panegyric to Constantius Chlorus delivered in 297 or 298 on the occasion of the recapture of Britain from the usurpers Carausius and Allectus some months before. One of Constantius's deeds that receives praise is the subjugation and subsequent deportation of Chamavi and Frisii from the Lower Rhine area, who apparently had been allied with Carausius. "With their wives and children," the panegyrist relates, "[...] they moved to land long since deserted (*loca olim deserta*) in order to restore to cultivation through their servitude what they themselves, perhaps, had once devastated by their plundering." The text then gives interesting details about the deployment of the captives: "In all the porticoes sit captive bands of barbarians" – men, old women and wives, boys and girls, vividly described by the panegyrist – "parcelled out to the inhabitants of your provinces for service (*hos omnes provincialibus vestris ad obsequium distributos*), until they may be led out to desolate lands (*solitudines*) assigned to be cultivated by them." And Gallia herself is put on stage, rejoicing that, "it is for me now that the Chamavian and Frisian plows, and that vagabond, that pillager, toils at the cultivation of the neglected countryside and frequents my markets with beasts for sale, and the barbarian farmer lowers the tax (*annona*)!"³⁶ Private landowners thus clearly benefited from the immigrant workforce. To the audience the issue was evidently important enough that it was taken up again at the very end of the panegyric. There Diocletian as well receives praise for having transferred people from Asia to "the desert lands of Thrace," while the Augustus Maximian is lauded because "*laeti*, restored by right of *postliminium*, and the Franks, admitted to our laws, have cultivated the empty fields of the Arvii and the Treveri." And once again the audience is reminded of Constantius's own benefactions: "Whatever land remained abandoned in the territory of the Ambiani, Bellovaci, Tricasses, and Lingones turns green again under cultivation by the barbarian."³⁷

collected by Harper 2011, ch. 4; for the Aegean evidence, coming from the later fourth-century census inscriptions, see Harper 2008. A famous example for slaves working elite possessions from Italy is V. Melaniae Lat. 10,1 and 18,4. Barbarian slaves in agriculture: one case in point is Radagaesus's people, if admittedly under special circumstances: cf. n. 49. For Sozomen 9,5,5–7 see below n. 39.

36 Pan. Lat. 8(5); 8,4–9,3, trans. Nixon/Rodgers 1994, 121–122. For the historical background see Nixon/Rodgers 1994, 104–108 and 212–213, n. 28. *Annona* is often understood as (lowered) "price for food" (as a consequence of increased productivity through the additional workforce), but the word normally means "tax" in late Roman official language, and it is much more likely that the landholding elites rejoiced at lowered tax pressure (because of the enlarged number of taxpayers and/or the increased surplus their own workers would produce) than at a diminution of the profit they could realize from their products.

37 Pan. Lat. 8(5),21,1. For the historical background of these episodes see Nixon/Rodgers 1994, 141–142 n., 75–76.

Further evidence for landowners profiting from barbarian immigrants comes from imperial legislation. The provisions of the law of 409 cited at the beginning of this article concerning the settlement of captive Sciri include that everyone may have the opportunity “to supply their private possessions (*proprii agri*) with men of the aforesaid race” by submitting an application to the office of the Praetorian Prefect. Moreover, the landowners are given remarkable latitude in deploying their share of the Sciri wherever it pleased them (provided they were not settled on the European side of the Bosphorus). The government restricted itself to ensuring that the new workforce benefited the state through taxes and by enhancing agrarian productivity: the law stipulated that, “no one shall be permitted to transfer such persons [...] from the obligations of the tax rolls (*a iure census*) to that of slavery, or to assign them to urban service” (as domestic slaves) – as slaves, the Sciri would have benefited only the landowners who were free to sell them or deploy them in other businesses, while their status as *coloni* guaranteed that they worked to the advantage of both the landowners and the imperial treasury as well as contributed to the food supply. Moreover, the government even abstained from drawing the Sciri as recruits into the imperial army for twenty years. Although there is no reason to presume that barbarian settlements always followed the pattern described in this law,³⁸ it is clear that in 409 the measure was aimed at benefiting Roman landowners. A contemporary of the settlement bears witness to this analysis. According to the church historian Sozomen, the Sciri were, “allocated at a low price, while others were given away into servitude (*douleia*, probably meaning tied *coloni*) as a present” – to deserving members of the elite and imperial protégés, one may suppose. Sozomen claims to have himself witnessed some of them working as farmers in Bithynia near Mount Olympus, in the hinterland of Constantinople where many elite members had their estates; there they “lived apart from one another, and cultivated the hills and valleys of that region.”³⁹

Less well-known but equally important as evidence for barbarian laborers benefiting Roman landowners is a constitution of Honorius issued in April 399:

38 As pointed out by Grey 2011a.

39 Soz. 9,5,5–7; translation Hartranft 1983, 422. The translation of Sozomen’s passage reads, “Some of them were, therefore, sold at a low price; while others were given away as slaves for presents (τοὺς μὲν ἐπ’ ὀλίγοις τιμήμασιν ἀπέδοντο, τοὺς δὲ πολλοῖς προῖκα δουλεῦν παρέδουσαν), upon condition that they should never be permitted to return to Constantinople, or to Europe, but be separated by the sea from the places familiar to them. Of these, a number was left unsold (ἄπρατον); and they were ordered to settle in different places.” It is impossible to tell what status is implied for those left unsold. “Sold at a low price” and “given away as slaves for presents” sounds as if some of the Sciri were treated as slaves rather than *coloni*, as indicated by the terms described in Theodosius’s law. The vague phrasing might be a consequence of the blurred perception (and the secondary importance) of the subtleties of such status distinctions in everyday life.

Since persons of many nations seek the felicity of the Romans (*sequentes Romanam felicitatem*) and have betaken themselves to Our Empire, and since they must be provided with letic lands (*terrae laeticae*), no person shall obtain any of these lands except in accordance with Our written allowance (*adnotatio*). Since some men have either seized more land than they obtained from Us, or by the collusion of the chief decurions (*principales*) or of the *defensores*, or by rescripts surreptitiously obtained have acquired a measure of land greater than the official calculation (*ratio*) demanded, a suitable inspector shall be dispatched who shall recall whatever lands have been either delivered illegally or seized wrongfully by any persons.⁴⁰

The constitution is one of the few sources furnishing information about the status and settlement of *laeti*, a term that is normally – and not least on the basis of this text – taken to denote voluntary immigrants who, as the constitution says, “seek the felicity of the Romans and have betaken themselves to Our Empire,” as opposed to conquered and subdued captives of war (called *dediticii* or the like).⁴¹ *Laeti* settlements, attested in Gaul, Spain, and Italy (but not in Africa, implying that this law, addressed to Val. Messala Avienus, prefect of Italy and Africa, might have referred to a situation in Italy)⁴² appear to have been integrated to the administrative structure of the *civitates*, as our law and some other sources suggest.⁴³ The constitution itself refers to a situation where “by the collusion” of municipal magistrates and leading citizens and by way of “surreptitiously obtained imperial rescripts” “some” claimed more of the *terrae laeticae* than what the imperial administration had provided for them. Both the question of who exactly benefitted from the illegal rescripts as well as the implications of the law for the legal and economic conditions of the *laeti* remain debated. The most convincing reading is that the *laeti* were settled as *coloni* on public land – that is, on imperial or municipal land that then came to be called *terrae laeticae* – that was leased out to Roman landlords. In return for the rent they received from their *laeti-coloni*, these landlords managed the land as well as the (potentially difficult) barbarian *coloni*. Importantly, they were held responsible for the taxes of the *terrae laeticae* and perhaps collected them themselves – a solution that sounds very Roman indeed in its practicality and cost-efficiency for the state. If this is true, the situation that prompted the constitution in all probability was not that some *laeti* received more land than others. Rather, it was Roman landlords who had, in

⁴⁰ CTh 13,11,10.

⁴¹ That at least seems to be the use of the term in the later fourth century, whatever its origins. For the *laeti* in general see Jones 1964, 620; Szidat 1993, with further references.

⁴² For the recipient, see PLRE 2: 760–61 Messala 3. Gothofredus 1736–1743, vol. 5, 148–149, ad CTh 13,11,9 (sic!) connects the law with Claud. Eutr. I, 377–383, mentioning negotiations of Suebi, Chauci, and Sugambri – the latter two being Frankish – who had “sued for peace” with Stilicho; he gave them *leges et iura* or *reges* and *foedera* and drew some of them as recruits into the army. The text, however, mentions no agrarian settlement.

⁴³ Not. Dig. Occ. 42,33–44 gives a list of *praefecti laetorum* (and therefore *laeti* settlements) in Gaul, Italy, and the Iberian peninsula ordered by *civitates*; for the *laeti* in the *civitas Lingonum* it says that they are *per diversa* (sc. *loca*) *dispersi* (42,37).

collusion with members of the municipal elite, secured for themselves a larger share of the land with its *coloni*, while their Roman peers, who had been outmaneuvered, had countered by soliciting an imperial rescript against their actions.⁴⁴ On this reading the constitution not only further supports the view that the Roman landholding elites benefited from this immigrant labor force. It also attests to a heated conflict over land and the barbarian workforce on it that was occurring within the municipal elite. The constitution thus provides another example for the fierce elite competition for an agricultural workforce and land – and, indeed, for barbarian immigrants.

These texts thus provide explicit proof for the proposition that landholding elites across the empire profited from barbarian immigrants as agrarian workers and that they competed for control over them. Moreover, a number of sources reporting barbarian settlements in situations when the Romans were strong enough to dictate terms may refer to barbarian *coloni* and the like working on private land without explicitly saying so. The *Historia Augusta*, for example, reports of a multitude of “barbarian slaves,” “Scythian farmers,” and “Gothic *coloni*,” as well as “slaves” filling the provinces after the Claudius Gothicus had vanquished the Gothic invaders in 269.⁴⁵ This very much sounds like a reflection of fourth-century dealings with barbarian captives or refugees of war. The same source tells us that Aurelian planned

44 Szidat 1995, building on Ste. Croix 1981, 248 n. 33. The phrasing of the surviving excerpt of the constitution is ambiguous as to whether the possessors of the *terrae laeticae* were *laeti* or Roman landlords. Even though the whole affair very much looks like a conflict between members of the Roman elite, it is, therefore, in principle possible that the ultimate source of the struggle and the machinations mentioned in the law arose from competition for land among *laeti* (presumably the more eminent persons among them) rather than among Roman landlords. And one could also speculate that the *laeti*, instead of being the tenants of Roman landlords, received the land as freeholders or as tenants of imperial domains who were directly subordinate to an imperial procurator or a similar official. Whatever the circumstances, in the end the (Roman) municipal elite must have had something to gain from colluding with the *laeti* and supporting them in their dealings with the imperial administration. It seems implausible that without their interference newly immigrated people successfully solicited an imperial rescript in their favor or, on the other hand, launched a protest against such a maneuver that would result in the present constitution. And the gain the Roman elite hoped for can hardly have been anything other than getting access to land or labor, however that functioned in practice. In one way or another, therefore, one comes to the above-mentioned conclusion that the text attests to a competition among the Roman elite. Most recently, Janßen 2004, 113, proposed that, through giving larger estates to some of the *laeti* (as freeholders), the municipal elite wished to shift fiscal burdens on them or limit the number of newcomers. This is, however, already made impossible by the wording of the law, which leaves no room for doubt that at issue were claims to larger shares rather than the compulsion to take them: cf. *amplius quam meruerant occuparunt; inprobe ab aliquibus occupata*.

45 SHA Claud. 9,4. A passage in the letter to the Senate of Rome, SHA Prob. 15,2 (*omnes iam barbari vobis arant, vobis iam serviunt et contra interiores gentes militant*), does not refer to barbarian captives on Roman soil, as some take it, but to client states beyond the frontier, as is made clear by the last part of the sentence.

to settle captive barbarians on fertile but derelict tracts of land along the Aurelian Way in Etruria and Liguria who would produce wine for the provisioning of the city of Rome – provided, however, that the owners of the *agri deserti* agreed. There have been different efforts to explain what kind of measure the author of the text envisaged, not least due to a textual problem with the passage. Some have understood the text to mean that Aurelian planned to take the land and then give it to barbarian settlers; others believe the landowners kept (or received) *agri deserti* and were to be given the settlers as *coloni*.⁴⁶ It is impossible to judge the historical value of the story; but if the latter reading is correct, it may again reflect a retrojection of practices of the fourth century into a third-century context.

To this we can add further sources. Ammianus reports that after the crushing defeat of the Taifali by the Roman general Frigeridus in 377 the survivors were sent to Italy “to farm the land around Modena, Reggio Emilia, and Parma”⁴⁷ – an arrangement that very much recalls the situation envisaged in the 399 law and thus may have benefited the local municipal elites. The same impression emerges from a passage in Eunapius mentioning Gothic captives of war in custody in Roman cities and households in 366 CE.⁴⁸ Ausonius, in the *Mosella* (v. 9), mentions Sarmatians as *coloni* in the vicinities of Tabernae (Rheinzabern); even though the term can also mean *coloni* on imperial land or simply “farmers,” it could just as well attest to dependant barbarians working Roman elite estates. After the defeat of Radagaisus’s army in 406 it is reported that “the number of captive Goths was so large that a multitude of men was sold off (into slavery) for a *solidus* each, like cattle of the cheapest kind.”⁴⁹ Such a large number of slaves could hardly have been absorbed for household labor only. Not least, in some cases where barbarian immigrants are reported to have been settled as *tributarii*, this does not necessarily imply that they were freeholders paying

46 SHA Aurel. 48,2: *Statuerat igitur dominis locorum incultorum, qui tamen vellent, *gratia* / *gratis* dare atque illic familias captivas constituere. Gratia*, as given in one group of manuscripts, is grammatically impossible. The Loeb edition, as others, replaces it with *pretia*, implying that Aurelian bought the lands before giving them to the barbarians. Hartke 1951, 279–281, emends *gratia* to *gratiam*, arguing that Aurelian offered the landowners an abatement for the tax obligation but confiscated the land. Using the same emendation, Paschoud 2002, 216 holds that Aurelian freed the landowners from their tax obligation provided they accepted the settlers on their land; Modéran 2004, 364 agrees. Hohl, in his first Teubner edition (slightly altered in the later one), stuck to the alternative manuscript tradition *gratis dare* and emended *qui tamen* to *quid tamen* (cf. Hohl 1913, 407). By this reading, the landowners would be given land for free and receive the barbarians to cultivate it. In these latter interpretations the question remains what use the landowners had from the barbarian *coloni*, as the wine they produced had to be delivered to the city of Rome: *ut nihil redituum fiscus acciperet sed totum p.R. concederet*. The system envisaged could have been that the landowner retained a share of the wine for independent commercialization.

47 *Vivos omnes circa Mutinam Regiumque et Parmam Italica oppida rura culturos exterminavit*: Amm. 31,9,4.

48 Eun. Hist. frg. 37 (Blockley 1983, 52); Zos. 4,10,2.

49 Oros. 7,37,17.

tax (the normal meaning of *tributum*); in legal documents, *tributarius* could also be employed for dependent farmers (“*coloni*” or the like) when it pertained to their duties as taxpayers.⁵⁰

Moreover, immigration as a source of labor also seems to have become a particularly strong concern in elite discourse in this period, especially in the last decades of the fourth century. The texts to prove this are, as we shall see, highly unusual and thus make a strong case that the use of barbarian immigrants as agrarian laborers gained particular importance in this time, not only in discourse but also as a social reality. One of these texts is Themistius’s Oration 16, delivered in the presence of the emperor Theodosius I on the occasion of New Year’s celebrations on January 1, 383, before the assembled elite of the Eastern empire. The official remit of the speech was to praise the new consul, the general Fl. Saturninus, and thank the emperor in the name of the senate for awarding him the consulate. But its true agenda was political and highly delicate: to justify the peace that Theodosius had made with the Goths in the autumn of 382 – four years after the devastating battle of Adrianople and after five years of constant warfare in Thrace and adjacent regions. Saturninus had been one of the chief negotiators of the peace.⁵¹

Theodosius, so Themistius, “was the first who dared entertain the notion that the power of the Romans now lay neither in weapons, nor in breastplates, spears, and unnumbered manpower, but that there was need of some other power and provision, which [...] subdues all nations, turns all savagery to mildness and to which alone arms, bows, cavalry, the intransigence of the Scythians [...] yield”: prudence and forgiveness “for those who had done wrong,” in a word, peace.⁵² For, Themistius asks, even if it had been possible to utterly destroy the enemy, “would it have been better to fill Thrace with corpses or with farmers? [...] To progress through a wilderness or through cultivated land? To count up the number of the slaughtered or those who till the soil? To colonize it with Phrygians or Bithynians perhaps, or to live in harmony with those we have subdued? I hear from those who have returned from there that they are now turning the metal of their swords and breastplates into hoes and pruning hooks, and that while paying distant respect to Ares, they offer prayers to Demeter and Dionysus.” Themistius further elaborates on the theme in a later passage: “Now the whole continent is settled, land and sea garland their leaders; [...] the roads are open, mountains are free from fear, plains now bear

⁵⁰ As in CTh 10,12,2 §2–3 (a. 368? 370? 373?); CTh 11,7,2 (a. 319); CJ 11,48,12 (a. 400); Sidon. Ep. 5,19; cf. also Modéran 2004, 369–370. On barbarian *tributarii* see Amm. 19,11,6 (status proposed fraudulently by the Limigantes in 357 in order to win the favor of the Roman responsables) and 28,5,15 (Alamanni in the Po valley).

⁵¹ For the date and occasion of the speech see Heather/Moncur 2001, 255–264, who also identify a second, more implicit political theme of the speech, Theodosius’ relations with Gratian.

⁵² Them. Or. 16,207c–208b. Translation from Heather/Moncur 2001, 275–277.

fruit, and the land around the Danube does not leap in the theatre of wars but devotes itself to sowing and ploughing.”⁵³

All this, like Themistius’s encomium on the blessings of the peace in general, can easily be dismissed as empty rhetoric. Too obvious is the agenda to sell a peace that many in the audience found humiliating and detestable. Furthermore, the barbarian warrior-turned-into-farmer is an all too well-attested and long-standing stereotype in triumphalist Roman panegyric: to mention only a few examples from the fourth century, we have already encountered the theme in the panegyric of 297 or 298 on Constantius Chlorus. Similar ideas could be heard in a panegyric of 310 on Constantine, which marvels at the Franks who, “having been settled in the deserted regions of Gaul, now promote the peace of the Roman Empire by cultivating the soil.”⁵⁴ So too in a panegyric Libanius held before a local audience in Nicomedia ca. 345, in which he praised Constantius II for having rendered uncultivated land in Thrace fertile by bringing in thousands of Persian war captives.⁵⁵ The idea appears to be a *topos*.

At the same time, in no other extant imperial panegyric does the theme of barbarians cultivating land inside the empire take up so much space as in Themistius’s speech of 383. Moreover, spoken in the high ceremonial context of New Year’s celebrations and in the presence of the emperor and the greater part of the eastern elite, the words of the doyen of the eastern Roman Senate carried much weight and were surely carefully and deliberately chosen. In 383 Theodosius found himself in an awkward situation. He had concluded a controversial peace without any decisive victory that accorded the enemy land on imperial soil under conditions unusually favorable to a barbarian group. The peace by no means compensated the losses that five years of devastating warfare had inflicted upon the provincials (including, presumably, some members of Themistius’s audience), to say nothing of the blow that such a peace dealt to the ideology of the empire and its elite. It is very likely that there was much resentment in the audience and perhaps even doubt about Theodosius’s abilities as ruler.⁵⁶ In such a situation, neither

53 Them. Or. 16,211a–b and 212 a–b.

54 Pan. Lat. 6(7),6,2; cf. Nixon/Rodgers 1994, 225–226 nn. 24–25 for the historical background.

55 Lib. Or. 59,83–85; see Leppin/Portmann 1998, 78 n. 96, and 22–43 for the highly controversial date and historical background of the speech.

56 For the much-debated terms of the Gothic peace in 382 see Heather 1991, 158–165; Schulz 1993, 65–78. 178–179; Halsall 2007, 180–185. For contemporary critique and the tensions between Theodosius and the eastern elite with regard to the peace, see Errington 1996, 14–15: “It is clear from the unusual vehemence with which Themistius expresses his arguments that opposition was anticipated among the listeners”; “Theodosius had trouble with hard-liners in the Constantinopolitan Senate.” Compare the contemporary episodes of anti-Gothic sentiment mentioned in Zos. 4,40; 4,26; Amm. 31,16,8. Indirect evidence for elite resentment against Theodosius’s policy comes from Them. Or. 15, held in January 381; the text is a desperate attempt to mask the absence of military victory over the Goths with praise of Theodosius’s achievements in the internal

an experienced spin-doctor like Themistius nor his audience would have been content with platitudes. It thus seems likely that Themistius tried to justify the peace with arguments that the elite found convincing. Given its prominence in the speech, immigration as a source of agrarian prosperity would appear to have been such an argument, and apparently an important one. In view of the economic pressures on the elites described in the previous section of this paper this is hardly surprising. Themistius thus tried to capitalize on current concerns of the elite, even though the Gothic immigrants of 376 to 382 were not available as labor power for the elite – or at least not yet. And for those in the audience who did not want to let themselves be convinced so easily, Themistius resorted to a subtle threat: would it be better, he asked in the passage quoted above, to re-settle Thrace with Phrygians or Bithynians than with Goths? Phrygia and Bithynia belonged to the hinterland of Constantinople and the heart of the Eastern empire, where many members of the elite present in the audience had possessions. Loosing agrarian laborers in that region through a large-scale relocation of the population clearly was not a welcome prospect. Themistius played on elite anxieties when trying to convince a critical audience of the landholding elite that the settlement of Goths was in its own best interest.

All this makes the panegyric of New Year's Day 383 strong evidence that barbarian immigration as a source of labor supply was an important theme in contemporary elite discourse. In this context it is perhaps significant that the same topic occurs also in another panegyric for Theodosius. When Pacatus Drepanius in 389 addressed the Western elite in the city of Rome, he also briefly touched upon the Gothic peace: The Goths, he claimed “were taken in our service and made themselves available – for you, emperor, as soldiers, for the land” – i.e. our land – “as farmers.”⁵⁷ It is likely that this was also geared at an elite discourse that welcomed barbarian immigrants as a source of labor. Further evidence for such a discourse comes from the two laws from 399 and 409 discussed in the previous section. These texts were not just legal dispositions. Imperial legislation of the late empire always had a propagandistic aspect; emperors used legislation to communicate with their subjects and promote their policies through a medium that had very wide scope and, by virtue of being normative, conveyed the notion of a strong imperial commitment to the relevant topic. In more than a few cases it can even be shown that this effect was the primary reason for enacting an imperial

administration of the empire and repeated invitations to cooperation. Cf. Leppin 2003, 51–69 for the wider context of Theodosius's uneasy relationship with the eastern elite in these years.

⁵⁷ Pan. Lat. 2(12),22,3, translation Nixon/Rodgers 1994, 473. See also Pan. Lat. 2(12),32,3, mentioning that the newly settled Goths exempted the provincials from furnishing recruits (against Maximus). A potential parallel can be found in Them. Or. 34,22 (ca. 384/385), with Heather/Moncur 2001, 304–310 for date and context and 327 n. 155 for a textual problem in this passage. Penella 2000, 34, tentatively suggests that some passages in Them. Or. 30, a (progymnastic?) encomium of agriculture might allude to the Visigothic treaty of 382 and that the whole piece may therefore have a political dimension; but this remains very speculative. I thank David Pitz for pointing me to this text.

decision as a general law rather than as a case-specific rescript.⁵⁸ For example, the proliferation of laws on *Kolonenflucht* and related matters was probably at least in part due to an imperial policy to demonstrate awareness of a major elite concern.

That the two laws on barbarian settlements from 399 and 409 had a similar propagandistic purpose is a priori likely as the topic is unusual for legislation. While each of the dozens of settlements known from the fourth century alone must have created a mass of internal administrative communications, these never surface in the general and broadly publicized legislation that was collected in the Theodosian and Justinianic Codes. Apart from the two laws of 399 and 409, elsewhere in the codes barbarian settlements are mentioned only in passing or in the context of other concerns.⁵⁹ The decision to issue a general law dealing specifically with this topic thus was a statement of its own. It communicated to the elite that the imperial government was aware of a major concern of theirs, the need for agrarian workers, and that it was taking steps to cater to their interests. This is borne out by the historical context of these texts as well as the more specific concerns they address. The 399 law falls in the first years of the boy emperor Honorius when legislation massively courted the elites in other respects as well.⁶⁰ In a climate of intensive competition for workforce and agrarian surplus, an imperial announcement that the government would not tolerate some individuals receiving privileged access to the immigrant workforce through illegal practices was probably well received among the landowning elite in Italy.

Similarly, the 409 law was issued only a few months after the seven-year old Theodosius II had ascended the throne. Through the distribution of the Sciri as *coloni* to private landowners, the massive concessions it made to the interests of the landlords, and the unusual decision to broadcast the measure in a general law, the new government arguably made an effort to win the sympathies of the Eastern elite by demonstrating its care for their concerns. It seems more than a coincidence that Anthemius, the praetorian prefect, was put in charge of dealing with landholders and apportioning the captive Sciri to them. Anthemius, the scion of a leading Eastern Roman family, an ex-consul, *patricius*, and prefect between 405 and 414, was regarded by contemporaries as the man pulling the strings at Theodosius's court.⁶¹ It is quite possible that he was behind staging the distribution of the Sciri *coloni* to win the favor of the governing classes of the East for his regime and to instill loyalty among the beneficiaries of his generosity. What is more, in distributing the captive Sciri to Roman landowners, the 409 law explicitly addresses the problem of

⁵⁸ Schmidt-Hofner 2015 and forthcoming.

⁵⁹ As one subset of the soldiery, barbarian settlers are briefly mentioned in CTh 7,13,16; 7,20,12; 7,15,1; Nov. Val. 9 and Nov. Theod. 24. CTh 7,20,10 mentions a *praepositus laetorum* among other officers. CTh 11,30,62 appeals by *gentiles* or their *praefecti*. CTh 3,14,1 interdicts marriages between gentiles and Romans. Nov. Sev. 2 mentions *laeti* among other corpora *publicis obsequiis deputata*.

⁶⁰ Schmidt-Hofner forthcoming.

⁶¹ See PLRE 2: 93–95 Anthemius 1. For a contemporary assessment of his position see Soc. 7,1,1.

manpower shortage in the agrarian sector – it is “because of the constraints in agrarian production” (*pro rei frumentariae angustis*), that landlords receive almost complete license to deploy the laborers as they wished.⁶² By repeatedly asserting that it was strictly forbidden, “to take anyone of this class of *coloni* away from the person to whom he had once been assigned or to receive such a one as a fugitive,” the law also addressed a major concern of the elite we have encountered in the beginning of this paper. Read in this way as propaganda geared to elite concerns, both laws thus make a strong case that the landholding elite in the later fourth century regarded barbarian immigration as a remedy to their economic problems. Moreover, the fact that the issue appears in general legislation at all is, like the unusually broad treatment of the barbarian farmers in Themistius’s Oration 16, an indication that the use of immigrants as agrarian laborers was a particularly characteristic (if surely not entirely new) concern of the later fourth and early fifth century. It is probably no mere coincidence that these texts coincide with the decades in which the social and economic dynamics described in the first part of this paper gained particular momentum.

Conclusions

The immediate conclusion that can be drawn from the arguments presented in this paper is that there is reason to think that the economic challenges faced by landowning elites in the Roman empire and their interest in agrarian labor power from outside of the empire played a considerable role in motivating (forced or voluntary) immigration into the empire in the fourth and earlier fifth centuries. More generally, this argument points to an aspect of the history of migrations in Late Antiquity that has been neglected in all the debates of recent decades on identity and ethnicity, on transformation vs. decline, or on confrontation vs. accommodation: the economic context and consequences of these migrations. Taking these questions more seriously has important consequences for our understanding of late antique migrations. Take, for example, the question of the causes and motivations for the immigration into the Empire. Scholarship on this question tends to focus on coercion and military pressure at home. But economic incentives may have played a larger role than is often

⁶² The phrase is sometimes understood as referring to a crop shortfall in 409 in the eastern empire and linked with sources attesting an increase in the price of foodstuffs at Constantinople in that year and to problems with the army supply in Palestine, see Lippold 1973, 964–965.; Stathakopoulos 2004, 223. But it is by no means certain that these irregularities attest to a large-scale crop failure and food shortage; in fact both Lippold and Stathakopoulos adduce evidence suggesting that these irregularities had no natural cause but came from problems with shipping from Egypt. Not least in case of a massive crop shortfall, it would be astonishing if the landowners were given complete freedom as to where to employ the Sciri farm workers. *Pro rei frumentariae angustis* is, therefore, better taken as a reference to more general conditions.

assumed – on both sides of the border. The mass migrations of 376 or 405 and following are often attributed to Hunnic military pressure. In both cases, however, it has long been suspected that the traditional narrative of the Huns pushing forward entire populations cannot alone explain why some – and not all – Goths, Vandals, Suebi, etc. decided to make a move as radical as giving up their homes rather than try to find an arrangement with the Huns.⁶³ Hopes for economic gain, together with the knowledge of strong demand for agrarian labor power on the Roman side of the river in the fourth century and an established practice of Roman intake of laborers in that century might have had a stronger influence than is often assumed. Furthermore, with regard to the Roman side, it was not necessarily out of weakness (as has been argued) that the Roman government agreed to let in such a large group as the Tervingi in 376, or motivated merely by the prospect of gaining recruits, as Ammianus has Valens's advisers argue.⁶⁴ The motivation for such an unusual move might have also been the economic interests of the landowning Roman elite – even if that particular investment proved to be a massive mistake.

References

- Asche, Ulrike, *Roms Weltherrschaftsidee und Außenpolitik in der Spätantike im Spiegel der Panegyrici Latini*. Habelts Dissertationsdrucke, Alte Geschichte 16 (Bonn 1983).
- Banaji, Jairus, *Agrarian Change in Late Antiquity. Gold, Labor, and Aristocratic Dominance* (Oxford 2001).
- Banaji, Jairus, *Economic Trajectories*. In: *The Oxford Handbook of Late Antiquity*. ed. Scott Fitzgerald Johnson (Oxford 2012) 597–624.
- Barnish, Sam J. B., *Taxation, Land, and Barbarian Settlement in the Western Empire*. *Papers of the British School at Rome* 54, 1986, 170–195.
- Batty, Roger, *Rome and the Nomads. The Pontic–Danubian Realm in Antiquity* (Oxford 2007).
- Blockley, Roger (ed., transl. and comm.), *The Fragmentary Classicising Historians of the Later Roman Empire II* (Liverpool 1983).
- Bransbourg, Gilles, *Capital in the Sixth Century. The Dynamics of Tax and Estate in Roman Egypt*. *Journal of Late Antiquity* 9, 2016, 305–414.
- Carrié, Jean-Michel, *Patronage et propriété militaires au IV^e siècle*. *Bulletin de Correspondance Hellénique* 100, 1976, 159–176.
- Carrié, Jean-Michel, *Le colonat du Bas-Empire: un mythe historiographique?* *Opus* 1, 1981, 351–370.

⁶³ For example, Kulikowski 2007, 127–128 points to the fact that the Huns appear on the Danube only more than a decade later and concludes that Hunnic pressure must have built up much more gradually (see already Heather 1991, 135–142). Batty 2007 underlines that immigration from regions beyond the Danube was a constant feature of the history of the area throughout Roman times and also emphasizes the economic motivations of the migrants. Sarris 2015 posits that the primary aim of the Gothic immigrants of the 370s was to continue their accustomed lifestyle in a vibrant sedentary agriculturalist economy within the Empire.

⁶⁴ Amm. 31,4,4. For Valens having no choice but to let the Tervingi in, see Heather 1991, 130–135, but see Lenski 2002, 345–350.

- Carrié, Jean-Michel, *Un roman des origines. Les généalogies du 'colonat' du Bas-Empire*. Opus 2, 1983, 205–251.
- Charanis, Peter, *The Transfer of Populations as a Policy in the Byzantine Empire*. *Comparative Studies in Society and History* 3, 1961, 140–154.
- Chavarría, Alexandra/Lewit, Tamara, *Archaeological Research on the Late Antique Countryside*. A Bibliographic Essay. In: *Recent Research on the Late Antique Countryside*, ed. William Bowden/Luke Lavan/Carlos Machado (Leiden, Boston, Köln 2004) 3–51.
- Chouquer, Gérard, *Cadastrés et fiscalité dans l'Antiquité tardive* (Tours 2014).
- Decker, Michael, *Tilling the Hateful Earth. Agricultural Production and Trade in the Late Antique East* (Oxford 2009).
- Delmaire, Rolkand, *Largesses sacrées et res privata. L'aerarium impérial et son administration du IV^e au VI^e siècle* (Rome 1989).
- Dossey, Lesley, *Peasant and Empire in Christian North Africa* (Berkeley 2010).
- Errington, R. Malcolm, *Theodosius and the Goths*. *Chiron* 26, 1996, 1–27.
- Foss, Clive, *Near Eastern Countryside in Late Antiquity*. A Review Article. In: *The Roman and Byzantine Near East. Recent Archaeological Research*, ed. John H. Humphrey (Ann Arbor 1995), 214–234.
- Frend, W. C. H., *Fussala. Augustine's Crisis of Credibility (Epist. 20*)*. In: *Les lettres de Saint Augustin découvertes par Johannes Divjak*, ed. Claude Lepelley (Paris 1983) 252–65.
- Freu, Christel, *Les salaires de la terre dans l'antiquité tardive*. *Antiquité Tardive* 21, 2013, 283–98.
- Gothofredus (Godefroy), *Jacobus* (transl. and comm.), *Codex Theodosianus cum perpetuis commentariis*. (Leipzig 1736–1743).
- Grey, Cam, *Revisiting the 'problem' of agri deserti in the late Roman empire*. *Journal of Roman Archaeology* 20, 2007a, 362–76.
- Grey, Cam, *Contextualizing colonatus. The origo of the late Roman Empire*. *Journal of Roman Studies* 97, 2007b, 155–75.
- Grey, Cam, *Two Young Lovers. An Abduction Marriage and its Consequences in Fifth-Century Gaul*. *The Classical Quarterly* 58/1, 2008, 286–302.
- Grey, Cam, *The ius colonatus as a Model for the Settlement of Barbarian Prisoners-of-War in the Late Roman Empire?* In: *Romans, Barbarians, and the Transformation of the Roman World. Cultural Interaction and the Creation of Identity in Late Antiquity*, ed. Ralph W. Mathisen/Danuta Shanzer (Franham, Surrey 2011a) 147–160.
- Grey, Cam, *Slavery in the Late Roman World*. In: *The Cambridge World History of Slavery 1. The Ancient Mediterranean World*, ed. Keith Bradley/Paul Cartledge (Cambridge 2011b) 482–509.
- Grey, Cam, *Concerning Rural Matters*. In: *The Oxford Handbook of Late Antiquity*, ed. Scott Fitzgerald Johnson (Oxford 2012) 623–66.
- Halsall, Guy, *Barbarian Migrations and the Roman West 376–568* (Cambridge 2007).
- Harper, Kyle, *The Greek Census Inscriptions of Late Antiquity*. *Journal of Roman Studies* 98, 2008, 83–119.
- Harper, Kyle, *Slavery in the Late Roman world, AD 275–425* (Cambridge 2011).
- Hartke, Werner, *Römische Kinderkaiser. Eine Strukturanalyse römischen Denkens und Daseins* (Berlin 1951).
- Hartranft, Charles D. (transl.), *The Ecclesiastical History of Sozomen. Nicene and Post-Nicene Fathers II.2* (Grand Rapids 1983) (reprint of 1890 edition).
- Heather, Peter J., *Goths and Romans 332–489* (Oxford 1991).
- Heather, Peter J., *New Men for New Constantines? Creating an Imperial Elite in the Eastern Mediterranean*. In: *New Constantines. The Rhythm of Imperial Renewal in Byzantium, 4th–13th Centuries*, ed. Paul Magdalino (Aldershot 1994) 11–33.
- Heather, Peter J./Moncur, David, *Politics, Philosophy, and Empire in the Fourth Century. Select Orations of Themistius* (Liverpool 2001).

- Hohl, Ernst, Beiträge zur Textgeschichte der *Historia Augusta*. *Klio* 13, 1913, 387–423.
- Jaillette, Pierre, Les dispositions du Code Théodosien sur les terres abandonnées. In: *Le III^e siècle en Gaule Narbonnaise. Données régionales sur la crise de l'Empire*, ed. Jean-Luc Fiches (Aix-en-Provence 1995) 333–404.
- Janßen, Tido, *Stilicho. Das weströmische Reich vom Tode des Theodosius bis zur Ermordung Stilichos (395–408)* (Marburg 2004).
- Jones, Arnold Hugh Martin, *The Later Roman Empire 284–602* (Oxford 1964).
- Kehoe, Dennis, Aristocratic Dominance in the Late Roman Agrarian Economy and the Question of Economic Growth. *Journal of Roman Archaeology* 16, 2003, 711–721.
- Krause, Jens-Uwe, *Spätantike Patronatsformen im Westen des Römischen Reiches* (München 1987).
- Kulikowski, Michael, *Rome's Gothic Wars from the Third Century to Alaric* (Cambridge 2007).
- Laniado, Avshalom, *Recherches sur les notables municipaux dans l'Empire protobyzantin* (Paris 2002).
- Lavan, Luke A. (ed.), *Local Economies? Production and Exchange of Inland Regions in Late Antiquity* (Leiden 2015).
- Lenski, Noel, *Failure of Empire. Valens and the Roman State in the Fourth Century A.D.* (Berkeley 2002).
- Lenski, Noel, Captivity and Romano-Barbarian Interchange. In: *Romans, Barbarians, and the Transformation of the Roman World. Cultural Interaction and the Creation of Identity in Late Antiquity*, ed. Ralph W. Mathisen/Danuta Shanzer (Farnham, Surrey 2011) 185–198.
- Lenski, Noel, Peasant and Slave in Late Antique North Africa, c. 100–600 CE. In: *Late Antiquity in Contemporary Debate*, ed. Rita Lizzi Testa (Newcastle upon Tyne 2017) 113–155.
- Lepelley, Claude, *Les cités de l'Afrique romaine au Bas-Empire 1–* (Paris 1979–1981).
- Lepelley, Claude, Trois documents méconnus sur l'histoire sociale et religieuse de l'Afrique romaine tardive retrouvés parmi les spuria de Sulpice Sévère, *Antiquités Africaines* 25, 1989, 235–262.
- Leppin, Hartmut, *Theodosius der Große* (Darmstadt 2003).
- Leppin, Hartmut/Portmann, Werner (transl., comm. and intro.), *Themistios, Staatsreden* (Stuttgart 1998).
- Lewit, Tamara, *Villas, Farms and the Late Roman Rural Economy (Third to Fifth Centuries AD)* (Oxford 2004).
- Liebeschuetz, J. H. W. G., *Decline and Fall of the Roman City* (Oxford 2001).
- Lieu, Samuel N. C., Captives, refugees and exiles. A study of cross-frontier civilian movements and contacts between Rome and Persia from Valerian to Jovian. In: *The Defence of the Roman and Byzantine East*, ed. Philipp Freeman/David Kennedy (Oxford 1986) 475–505.
- Lippold, Adolf, s. v. Theodosius II. *Paulys Realencyclopädie der classischen Altertumswissenschaft (RE)*, Suppl. 13 (Stuttgart 1973) 961–1053.
- Lo Cascio, Elio (ed.), *Terre, proprietari e contadini dell'impero romano. Dall'affitto agrario al colonato tardoantico* (Rome 1997).
- Marcone, Arnaldo, *Il colonato tardoantico nella storiografia moderna* (Como 1988).
- Mirković, Miroslava, Ansiedlung und Rekrutierung von Barbaren bis 382. In: *Klassisches Altertum, Spätantike und frühes Christentum. Festschrift Adolf Lippold*, ed. Karl-Heinz Dietz (Würzburg 1993) 425–434.
- Modéran, Yves, L'établissement des barbares sur le territoire Romain à l'époque impériale. In: *La mobilité des personnes en Méditerranée de l'antiquité à l'époque moderne*, ed. Claudia Moatti (Rome 2004) 337–397.
- Munzinger, Michael, *Vincula deterrimae condicionis. Die rechtliche Stellung der spätantiken Kolonen im Spannungsfeld zwischen Sklaverei und Freiheit* (Munich 1998).
- Nixon, Charles E. V./Rodgers, Barbara S. (transl. and comm.), *In Praise of Later Roman Emperors. The Panegyrici Latini* (Berkeley 1994).

- Norman, Albert F. (ed., transl. and introd.), *Libanius. Selected Works II. Selected Orations* (Cambridge, Mass. 1977).
- Norman, Albert F. (transl. and introd.), *Antioch as a Centre of Hellenic Culture as Observed by Libanius* (Liverpool 2000).
- Paschoud, François (ed., transl. and comm.), *Histoire Auguste V,1. Vies d'Aurélien, Tacite* (Paris 2002).
- Pharr, Clyde (transl. and introd.), *The Theodosian Code and Novels and the Sirmondian Constitutions* (Princeton 1952).
- Penella, Robert (transl. and introd.), *Private Orations of Themistius* (Berkeley 2000).
- Sarris, Peter, *Rehabilitating the Great Estate. Aristocratic Property and Economic Growth in the Late Antique East*. In: *Recent Research on the Late Antique Countryside*, ed. William Bowden/Luke Lavan/Carlos Machado (Leiden, Boston, Köln 2004) 55–71.
- Sarris, Peter, *Economy and Society in the Age of Justinian* (Cambridge 2006).
- Sarris, Peter, *Aristocrats, Peasants, and the State in the Later Roman Empire*. In: *Der wiederkehrende Leviathan. Staatlichkeit und Staatswerdung in Spätantike und Früher Neuzeit*, ed. Peter Eich/Sebastian Schmidt-Hofner/Christian Wieland (Heidelberg 2011) 375–392.
- Scheidel, Walter, *Slaves of the Soil*. *Journal of Roman Archaeology* 13, 2000, 727–732.
- Schipp, Oliver, *Der weströmische Kolonat von Konstantin bis zu den Karolingern (332–861)* (Hamburg 2009).
- Schmidt-Hofner, Sebastian, *Reagieren und Gestalten. Der Regierungsstil des spätrömischen Kaisers am Beispiel der Gesetzgebung Valentinians I.* (Munich 2008).
- Schmidt-Hofner, Sebastian, *Der Defensor civitatis und die Entstehung des städtischen Notablenregiments in der Spätantike*. In: *Chlodwigs Welt. Organisation von Herrschaft um 500*, ed. Mischa Meier/Steffen Patzold (Stuttgart 2014) 487–522.
- Schmidt-Hofner, Sebastian, *Ostentatious Legislation. Law and Dynastic Change. AD 364–365*. In: *Contested Monarchy. Integrating the Roman Empire in the 4th Century AD*, ed. Johannes Wienand (Oxford 2015) 67–99.
- Schmidt-Hofner, Sebastian, *Alltag als Argument. Gesetzgebung und Propaganda im Codex Theodosianus*. In: *Himmelwärts und erdverbunden. Beiträge aus der Arbeit des Forschungsclusters 7 des DAI "Lebensrealitäten in der Spätantike"* ed. Rudolf Haensch/Philipp von Rummel Rahden/Westfalen (forthcoming).
- Schulz, Raimund, *Die Entwicklung des römischen Völkerrechts im vierten und fünften Jahrhundert n. Chr.* (Stuttgart 1993).
- Sirks, A. J. B., *The Farmer, the Landlord, and the Law in the Fifth Century*. In: *Law, Society, and Authority in late Antiquity*, ed. Ralph W. Mathisen (Oxford 2001) 256–271.
- Sirks, A. J. B., *The Colonate in Justinian's Reign*. *Journal of Roman Studies* 98, 2008, 120–143.
- Stallknecht, Bernt, *Untersuchungen zur römischen Aussenpolitik in der Spätantike 306–395 n. Chr.* (Bonn 1967).
- Stathakopoulos, Dionysios, *Famine and Pestilence in the Late Roman and Early Byzantine Empire* (Aldershot 2004).
- Ste. Croix, G. E. M., *The Class Struggle in the Ancient Greek World from the Archaic Age to the Arab Conquests* (London 1981).
- Szidat, Joachim, *Laetensiedlungen in Gallien im 4. und 5. Jahrhundert*. In: *La politique éditiltaire dans les provinces de l'Empire romain. II^{ème}–IV^{ème} siècles après J.-C.*, ed. Regula Frei-Stolba (Bern 1993) 283–293.
- Szidat, Joachim, *Terrae laeticae* (Cod. Theod. 13, 11, 10). In: *Historische Interpretationen. Festschrift Gerold Walser*, ed. Marlies Weinmann-Walse (Stuttgart 1995) 151–159.
- Tchalenko, Georges, *Villages antiques de la Syrie du Nord 1–3* (Paris 1953–1958).
- Tate, Georges, *Les campagnes de la Syrie du Nord du II^e au VII^e siècle* (Paris 1992).

- Tate, Georges, Expansion d'une société riche et égalitaire. Les paysans de Syrie du Nord du II^e au VII^e siècle, *Comptes rendus de L'Académie des inscriptions et belles-lettres* 141, 1997, 913–941.
- Thonemann, Peter, Estates and the Land in late Roman Asia Minor. *Chiron* 37, 2007, 435–478.
- Vera, Domenico, Questioni di storia agraria tardoromana: schiavi, coloni, villae. *Antiquité Tardive* 20, 2012, 115–122.
- Ward-Perkins, Bryan, Land, Labor, and Settlement and Specialized Production and Exchange. In: *The Cambridge Ancient History XIV*, ed. Averil Cameron/Bryan Ward-Perkins/Michael Whitby (Cambridge 2000) 315–345; 346–391.
- Weßel, Hendrik, *Das Recht der Tablettes Albertini* (Berlin 2003).
- Wickham, Chris, *Framing the Early Middle Ages. Europe and the Mediterranean 400–800* (Oxford 2005).
- Wirth, Gerhard, Rome and its Germanic Partners in the Fourth Century. In: *Kingdoms of the Empire. The Integration of Barbarians in Late Antiquity*, ed. Walter Pohl (Leiden 1997) 13–55.
- Whittaker, Charles R., *Agri deserti*. In: *Studies in Roman Property*, ed. M. I. Finley (Cambridge 1976) 137–165. 193–200. Reprinted in: *Land, City and Trade in the Roman Empire III* (Aldershot 1993).
- Whittaker, Charles R., Labor Supply in the Later Roman Empire. *Opus* 1, 1982, 171–179. Reprinted in: *Land, City, and Trade in the Roman Empire IV* (Aldershot 1993).
- Whittaker, Charles R., The Use and Abuse of Immigrants in the Later Roman Empire. In: *La mobilité des personnes en Méditerranée de l'antiquité à l'époque moderne*, ed. Claudia Moatti (Rome 2004) 127–153.
- Whittaker, Charles R./Garnsey, Peter, Rural Life in the Later Roman Empire. In: *The Cambridge Ancient History XIII*, ed. Averil Cameron/Peter Garnsey (Cambridge 1998) 277–311.
- Zerbini, Andrea, The Late Antique Economy: Regional Surveys. In: *Recent Research on the Late Antique Countryside*, ed. William Bowden/Luke Lavan/Carlos Machado (Leiden, Boston 2015) 41–60.
- Ziche, Hartmut, Barbarian Raiders and Barbarian Peasants. Models of Ideological and Economic Integration. In: *Romans, Barbarians, and the Transformation of the Roman World. Cultural Interaction and the Creation of Identity in Late Antiquity*, ed. Ralph W. Mathisen/Danuta Shanzer (Farnham, Surrey 2011) 199–219.
- Zuckerman, Constantin, Two Reforms of the 370s. Recruiting Soldiers and Senators in the Divided Empire. *Revue des études byzantines* 56, 1998, 79–139.

Susanne Brather-Walter

Bow-Brooches as Ethnic Indicators?

A Myth of Early Medieval Archaeology

In memoriam Max Martin (1939–2016).

Introduction

The traditional view of bow-brooches is that they have always been regarded as outstanding markers in suggesting ethnic interpretations for their origins. This may sound strange, precisely because fibulae can hardly be surpassed in diversity and variance. Along with varied scales and designs, they are assigned to a certain *gens*. In one case, the entire fibula is used for assignment; in another case it is merely the footplate that is used as a significant feature. This one-dimensional approach not only obscures the possibility of other essential contexts and connections, but also prevents a systematic typology. Even day there is no reliable scheme of shape and ornament; so far all attempts failed because of their fundamental lack of systematic classification.

One example clarifies this statement: Regarding the Ostrogothic supremacy in Italy, there is no single fibula of the type “Bittenbrunn” in the Apennine peninsula to date, but this type is traditionally suggested as ‘Ostrogothic’.¹ This absence has been mentioned many times, but it remained largely disregarded in publications of relevant find complexes.² Some years ago V. Bierbrauer published an article with the title “Ostgoten außerhalb ihrer *patria*?”³ (“Ostrogoths outside of their *patria*?”), where additional observations of ‘missing’ ‘Ostrogothic’ brooches in Italy are brought together. The overall interpretation argues for exogamy of Ostrogothic women – who were apparently buried with their brooches only (!) outside Italy. A similar situation characterises types of bow brooches classified as “Thuringian”: the specimen are much more represented outside Thuringia (however it was geographically limited in history) than inside this region.⁴

The same is true regarding a group of brooches of the so-called type “Reutlingen”, which has been identified by U. Koch as ‘typically Alamannic’ because

¹ For the current state of mapping see Windler 2012, 46 fig. 53.

² Koch 1998, 233–235.

³ Bierbrauer 2005.

⁴ Brather 2004, 285 fig. 38.

of the geographical limits of their find spots.⁵ Considering the distribution known today by more detail, a different interpretation emerges: A distinct ornament of the side panels of the foot plates can be observed, and thus two fibula series appear – with different ornamentation and varying distribution. A more careful reading of distribution maps can thus provide us with much more insights than a mere reduction to ethnic differences. Moreover the general heterogeneity of these brooches contradicts a sharp definition as one “type” – it has much greater fluidity in its variations.

Three perspectives shall be outlined in the following pages. First, technical aspects provide us with information beyond typology indicating transitions between different brooch ‘types’ as well as differences within certain types. Second, regional variation becomes apparent within certain types, again indicating the deficient typological argument often used in the discussion of geographic brooch distributions. Finally, chronology can show that changes of material culture do not necessarily coincide with political events, and that beyond typology even size played a role. These considerations are the basis for a larger study in preparation that will establish a new typological system of early medieval bow brooches.

Technical Aspects

Technical aspects are focused on the materiality of the bows, specifically their craft, shape, material and metal-processing techniques. Below are presented some brooch types and their arrangement, focused on variants and criteria beyond the traditional types that contradict their primarily ethnic interpretation. Instead, the many variations offer alternative ways to position brooches into a new culture historical framework.

For instance, fibulae of the type “Schwenningen”⁶ can be subdivided in respect to the garnet inlays along the middle ridge along bow and foot into two variants. While the origin of round hemispheric garnet inlays is documented as to the right of the river Rhine,⁷ evidences of fibulae containing rectangular flat grinded garnet plates are limited to the region left of the river Rhine.⁸ What interpretation of this divergent distribution we may propose? Is it a matter of early medieval ‘fashion’, or a reflection of different production regions, of different suppliers respectively, or should it be assumed that there are different sources of garnet? These variants in shape and distribution are not limited to this group of fibulae, but can also be observed for further types. Moreover, further progress can be made in identification

⁵ Koch 1969, 167 fig. 4.

⁶ Kühn 1974, 888–894.

⁷ E.g. Fützen (D): Kühn 1974, pl. 275 no. 74,2.

⁸ E.g. Sainte-Sabine (F): Kühn 1974, pl. 276 no. 74,9.

through the examination of the garnets by infrared-reflexion spectroscopy of larger series of fibulae in order to get more detailed information of their origin.

In another case, at first glance, the brooch type “Eisleben-Stößen”⁹ appears to represent a homogeneous group. Yet it can be subdivided by thorough examination into two variants, the first variant characterised by high-rectangular gemstone frames as well as cast-on buttons,¹⁰ while the second variant possesses transversely oriented rectangular frames and buttons fastened by tenons.¹¹ Additionally, their almost standardized size is astonishing, which leads to the assumption that two different moulds have been used with corresponding distribution areas – Bavaria and Thuringia on one hand, France and Hungary on the other – framing the Central European variant.

Technical differences between western and eastern variants also determine two further types of fibulae: (a) the radiating motif on the top plate of a brooch from Envermeu in France¹² was worked out plastically, while the knobs are co-casted and therefore lack plasticity; (b) with another item from Szentés-Kökenyzug in Hungary,¹³ however, the radiating bow is reproduced recessed, whereas the knobs are mortised and worked out three-dimensional. Similarly, two further fibula series belong together: type “Szentendre grave 54/Cividale San Giovanni grave 154”,¹⁴ and type “Várpalota grave 19/Testona”.¹⁵ Furthermore, the direct comparison reveals another aspect of variation: the quality of production.¹⁶

Then as now, craft production has to meet the ‘taste’ of the customers – only then the products can be sold and the craftsmen will be paid. This is particularly evident with the brooch type “Aldingen/Gelbe Bürg”¹⁷ – it exists as variants with three,¹⁸ four,¹⁹ and five knobs.²⁰ In this case, only the corpus of the fibula was cast, with the knobs subsequently riveted to the head plate in a second step. This manufacturing is sufficiently flexible to be able to respond to changes in fashion, such as the conversion from three- to five-knob brooches. As only two additional holes have to be drilled into the head plate, the model itself does not have to be replaced.

9 Kühn writes type “Wittislingen” (D): Kühn 1974, 891–894. – A. Koch defines this group of brooches as type “Eisleben-Stößen”: Koch 1998, 44–45.

10 E.g. Eisleben (D): Kühn 1974, pl. 276 no. 75,3.

11 E.g. Belluno (I): Kühn 1974, pl. 276 no. 75,9.

12 Kühn 1974, pl. 263 no. 65,19.

13 Kühn 1974, pl. 263 no. 66,4.

14 E.g. Cividale (I): Kühn 1974, pl. 291 no. 80,9.

15 E.g. Nocera Umbra or Testona (I): Kühn 1974, pl. 330 no. 96,13,16.

16 It should also be mentioned that the naming of the types is, in turn, the expression of an ethnic classification implying a people’s migration.

17 Schach-Dörge 2004, 26 fig. 15.

18 E.g. Sindelfingen (D): Kühn 1974, pl. 239 no. 1,9.

19 E.g. Charnay (F): Kühn 1974, pl. 240 no. 1,26.

20 E.g. Dittenheim (D): Kühn 1974, pl. 246 no. 6,3.

The fibulae gathered in Fig. 6.1 once again demonstrate the diversity of this find category. All of the brooches have a unique head plate motif, which is implemented technically in three different versions. The motif was either carved out in the round

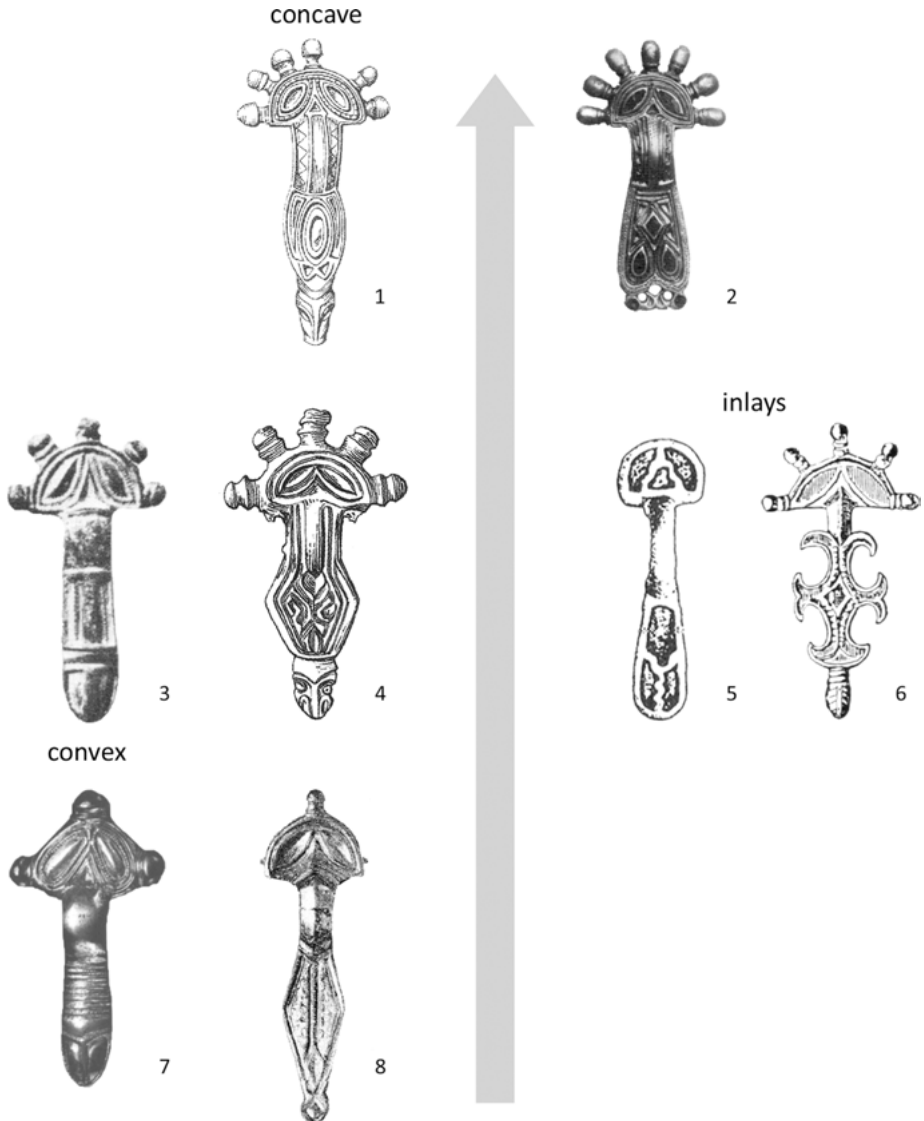


Fig. 6.1: Variants of a specific motif on the head-plate: concave, convex or consisting of inlays. 1 Praha-Podbaba (CZ); 2 Kent (GB); 3 Mühlhausen (D); 4 Nový Šaldorf (CZ); 5 Nordafrika; 6 Kiskőrös (H); 7 Heidenheim/Brenz (D); 8 Herten, grave 68 (D). – Not to scale (samples re-arranged after Droberjar 2008; 240 fig. 8,5; Garscha 1970; pl. 10B,1a–c; Kühn 1974; pl. 239 no. 1,3, 1,15; pl. 259 no. 62,6; pl. 263 no. 66,6; Martin 1994; 560 fig. 146,1).

(fibulae on the left),²¹ or worked out convex (fibulae in the centre),²² or shaped like gem inlays (fibulae on the right).²³ In this way, the fibulae look quite different, although the basic motif is identical. What should be emphasised then – the motif or the technique? Both aspects seem to be relevant for archaeological interpretation.

Regional Variation

Figure 6.2 presents nine brooches²⁴; although they are based on the same composition principle with an arcuate band attached to a semi-circle, their motifs differ. This observation illustrates regional characteristics. In the West, the use of punched motifs and geometric decorations such as zigzag ornaments were preferred, while vegetal motifs and spiral ornaments were popular in the East.

Many motifs were simply mirrored which gives them a different look. The left example is from München-Feldmoching (Bavaria),²⁵ the right one from Várpalota (Hungary).²⁶ In these examples, the ornamentation is oriented either from the left or the right, but does this reflect anything more?

Sometimes certain motifs can have a wide distribution range, as Fig. 6.3 shows.²⁷ The almost pelt-shaped motif on the head plate is found on a number of fibulae, but in form and shape the brooches vary considerably, which underscores the many ways in which ornament and shape could be combined. The arrow symbolizes the direction of the development and the chronological trend respectively. Some fibulae already existed in the three-knob shape, while other brooches with the same motif seem to represent new creations. This relatively limited perspective, however, presents not only an impression of the range of variants of bow-brooches, but in some respect it also shows the dramatic increase in bow-brooches in time. The appearance of five-

21 Heidenheim/Brenz (D): Kühn 1974, pl. 239 no. 1,3. – Mühlhausen (D): Kühn 1974, pl. 239 no. 1,15.

22 Herten grave 68 (D): Garscha 1970, pl. 10B,1a–c. – Novy Šaldorf (CZ): Kühn 1974, pl. 263 no. 66,6. – Praha-Podbaba (CZ): Droberjar 2008, 240 fig. 8,5.

23 North africa: Martin 1994, 560 fig. 146,1. – Kent (GB): Kühn 1974, pl. 259 no. 62,6.

24 Finthen (D): Kühn 1974, pl. 248 no. 58,2; Brochon (F): Kühn 1974, pl. 258 no. 11,35; Gersheim (D): Kühn 1974, pl. 251 no. 61,4; Kranj (SLO): Kühn 1974, pl. 260 no. 63,16; France (D): Kühn 1974, pl. 241 no. 56,18; Waben (F): Kühn 1974, pl. 251 no. 60,34; Mahlberg (D): Fingerlin 1979, 27 fig. 1; Bonn (D): Kühn 1974, pl. 247 no. 6,24; “Transsylvania” (RO): Kühn 1974, pl. 244 no. 4,30.

25 Kühn 1974, pl. 249 no. 59,5.

26 Kühn 1974, pl. 403 no. 87,A3.

27 Altenerding (D): Sage 1984, pl. 188,2; Reinsdorf (D): Kühn 1974, pl. 263 no. 66,11; Reuden (D): Kühn 1974, pl. 263 no. 66,9; Sokolnice (CZ): Tejral 2002, 324 fig. 8,5; Záluží (CZ): Droberjar 2008, 235 fig. 5,20; Naumburg (D): Kühn 1974, pl. 263 no. 66,10; Kühn 1974, pl. 270 no. 71,1; Waging (D): Knöchlein 2002, 434 fig. 1,8; Groß Harras (A): Tejral 2008, 265 fig. 12,5; Závist/Prag (CZ): Droberjar 2008, 236 fig. 6,2; Praha-Podbaba (CZ), grave IV: Droberjar 2008, 236 fig. 6,1.

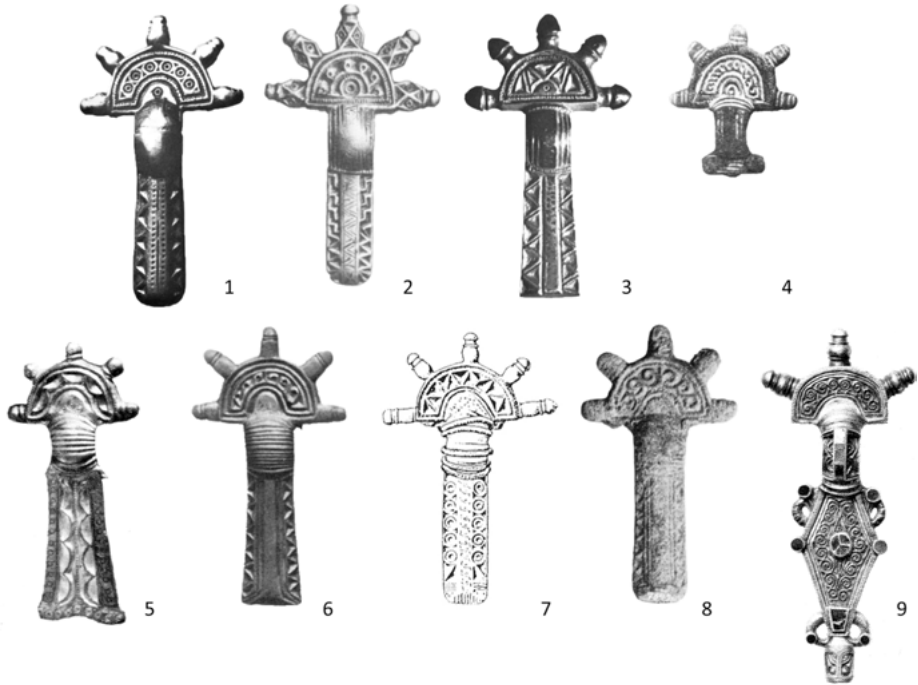


Fig. 6.2: Same circular partitioning on the head-plate, but different motifs. 1 Finthen (D); 2 Brochon (F); 3 Gersheim (D); 4 Kranj (SLO); 5 France; 6 Waben (F); 7 Mahlberg (D); 8 Bonn (D); 9 Transsylvania (RO). – Not to scale (samples re-arranged after Fingerlin 1979; 27 fig. 1; Kühn 1974; pl. 241 no. 56,18; pl. 244 no. 4,30; pl. 247 no. 6,24; pl. 248 no. 58,2; pl. 251 no. 60,34, 61,4; pl. 258 no. 11,35; pl. 260 no. 63,16).

knob bow-brooches is almost linked to the start of the ‘bow-brooch fashion’ and a corresponding expansion of their production.

The next example demonstrates how a far-reaching exchange of motifs and forms might have worked (Fig. 6.4).²⁸ In this particular case, the appearance of the identical fibula – both in shape and richness of motifs on head and foot plate (outward rolling spiral hooks on the head plate, a waffle-like pattern on the foot plate) has been described as supra-regional. Instead of emphasizing the striking similarities and affinities of these fibulae, they are generally divided into regional types, some of which should have coexisted in time, but sometimes should have followed one another chronologically. Thus brooches that in fact belong together are separated as the result of an a priori ethnic labelling, cutting regional and chronological ties.

²⁸ Group “Cutry/Naumburg/Kölleda”, e.g. Weimar (D): Kühn 1974, pl. 264 no. 66,15. – Type “Reuden”, Naumburg (D): Kühn 1974, pl. 263 no. 66,10–11. – Type “Oberwerschen”, Oberwerschen (D): Kühn 1974, pl. 264 no. 66,14. – Type “Mistřin”, Mistřin (CZ): Kühn 1974, pl. 269 no. 12,37; pl. 268 no. 12,24. – Type “Hahnheim”, Köngernheim (D): Kühn 1974, pl. 267 no. 12,4. – Type “Wien-Salvatorgasse”, Wien (A): Kühn 1974, pl. 268 no. 12,29.



Fig. 6.3: Same head-plate motif with regional variants. 1 Záluží, grave 58 (CZ); 2 Naumburg (D); 3 Altenerding, grave 343 (D); 4 Waging a. See (D); 5 Großharras (A); 6 Závist (CZ); 7 Praha-Podbaba (CZ); 8 Altenerding, grave 94 (D); 9 Reinsdorf (D); 10 Reuden (D); 11 Sokolnice (CZ). – Not to scale (samples re-arranged after Droberjar 2008; 236 fig. 6,1–2; 240 fig. 8,5; Knöchlein 2002; 434 fig. 1,8; Kühn 1974; pl. 263 no. 66,9, 66,10, 66,11; Sage 1984; 186,2; pl. 188,2; Tejral 2002; 324 fig. 8,5; 2008, 265 fig. 12,5).

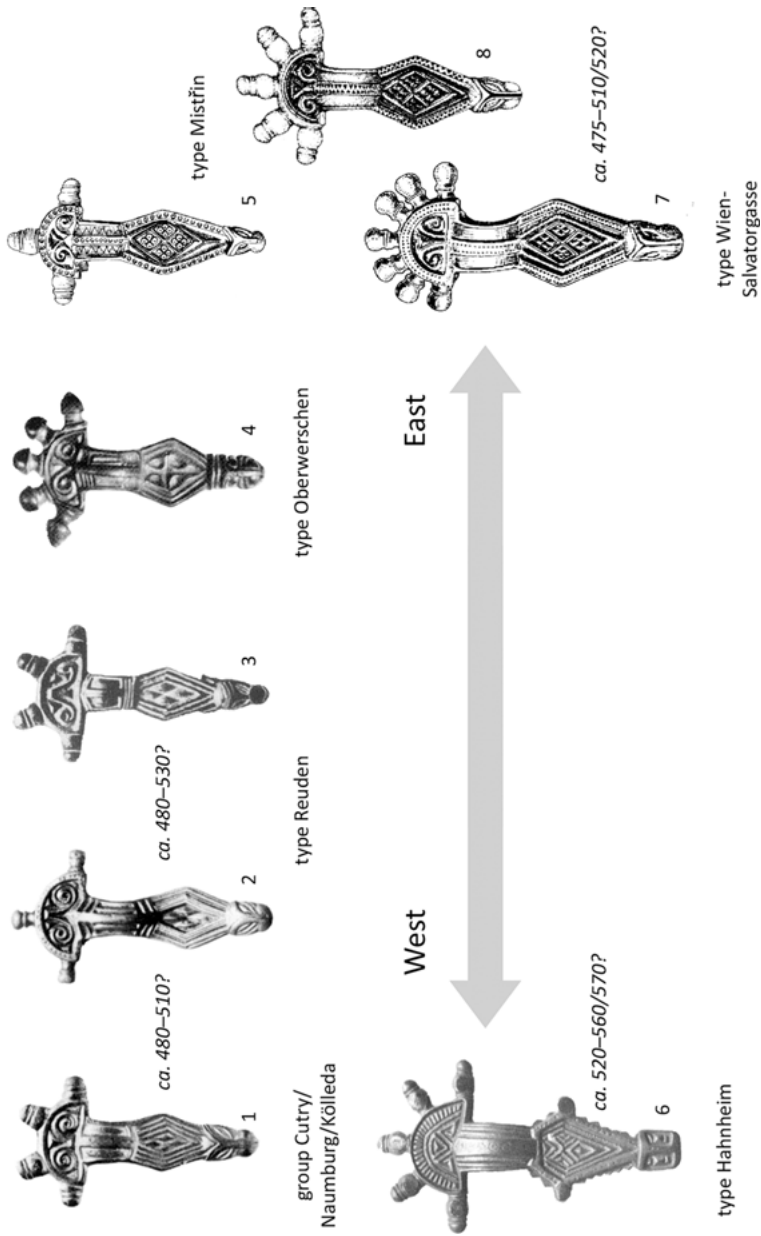


Fig. 6.4: Similar brooches indicating supra-regional communication throughout Central Europe, but subdivided into several types by archaeological research. This confuses chronology. 1 Weimar (D); 2 Reinsdorf (D); 3 Naumburg (D); 4 Oberwerschen (D); 5 Mistfîn (CZ); 6 Köngernheim (D); 7 Wien-Salvatorgasse, grave 52 (A); 8 Schletz, grave 10 (A). – Not to scale (samples re-arranged after Kühn 1974; pl. 263 no. 66,10, 66,11; pl. 264 no. 66,14, 66,15; pl. 267 no. 12,4; pl. 268 no. 12,29; pl. 269 no. 12,37; Tejral 2002; 323. fig. 7,3).

Moreover, the designation of the types sometimes switches depending on the researcher, and leading different labels for the same fibula wrongly suggesting different types. This serves as indication that a standardization of the type labelling is urgently needed, as well as a fundamental revision of existing typologies. Small differences between western and eastern manifestations of brooches, in turn, derive from technically varying production processes, such as moulded versus riveted knobs, or the motif of two spiral hooks, which in the west has been reduced to triangles in a stylized variant, and mirrored in Central Germany respectively.

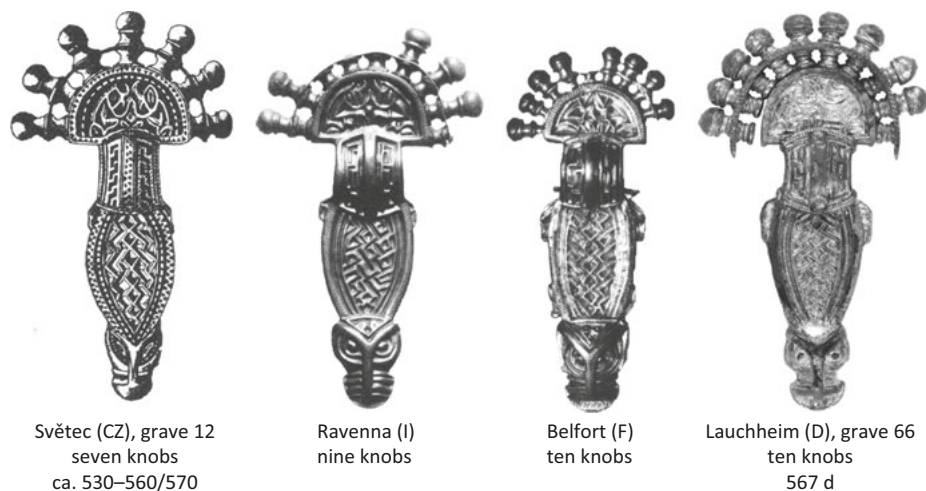


Fig. 6.5: All Lombard women? Similar brooches from different regions of Central Europe. – Not to scale (samples re-arranged after Kühn 1974, pl. 325 no. 95,2, 95,6, 95,7; Landesamt für Denkmalpflege Esslingen).

In a further example of a critically vague type description, the following group of brooches can be used (Fig. 6.5). In archaeological publications, at least nine different names can be found so far.²⁹ In order to verify the migration of a particular ethnic group, each newly discovered location of these fibulae has been added – through giving the brooches a new name or by amplifying the already existing name. For the brooch from Lauchheim (Ostalbkreis, Baden-Württemberg) a revision of the designation is required. The pair of brooches, dated by dendrochronology exactly to 567 AD,³⁰ shows

29 As type “Ravenna” or “Burghagel” by Kühn 1974, 1217–1224; 965–970. – Type “Schwaz/Ravenna” by Werner 1962, pl. 69 fig. 2,4 (triangular signature). – Type “Svete-Lucca” by Hajnal 2008, 314. – As type “Schwaz-Lucca-Belfort” by Haseloff 1981, 674ff. – Type “Belfort, Schwaz, Lucca” by H. Roth 1973, 27–29. – As type “Szentendre Grab 29-Světec-Lucca-Belfort” by Bierbrauer 1993, 123. – As “group Schwaz/Szentendre/Lucca/Belfort” by Koch 1998, 263–265. – As form “Světec-Szentendre Grab 29” or type “Světec/Szentendre Grab 29” by Tejral 2002, 342.

30 Stork 2001, 16–17.

that the written record and the archaeological evidence do not confirm each other: the brooches are not meant as ethnic markers of Langobardic women.

The large-scale distribution³¹ of the fibulae type – ranging from Switzerland in the West through Germany to the Czech Republic and Italy, is rather the expression of a far-reaching ‘fashion’ phenomenon mediated by a network of contacts and communication. The quality of the metal-work, and especially the construction of the fibulae with a so-called zone-knob-tape, clearly testifies to the fact that the brooches from Belfort and from Lauchheim are viewed as ‘imports’. In contrast to the traditional opinion, which suggests that these fibulae indicate the presence of women from Lombardy,³² the respective bow-brooch production may already have ended in the West at this time, and in general the ‘fashion’ in the West had largely changed.

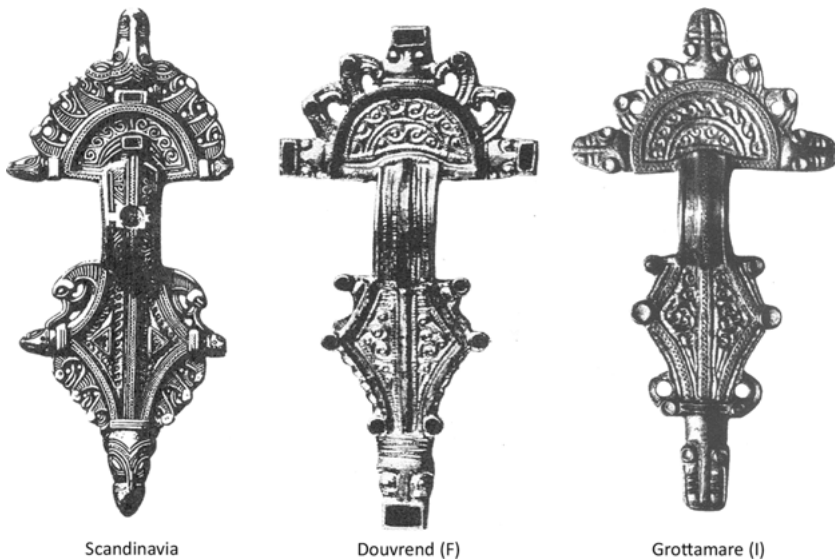


Fig. 6.6: Scandinavian archetype and continental adaptations, found in Northern France and Northern Italy. – Not to scale (samples re-arranged after Bierbrauer 1975; 284 pl. 23,1; Jørgensen 1994; 531 fig. 123,6; Koch 1998; pl. 37,1).

The distance of far-reaching contacts could have been in the early middle ages is illustrated by the three bow-brooches depicted in Fig. 6.6. The so-called ‘relief fibula’

³¹ Světec grave 12 (CZ): Kühn 1974, pl. 325 no. 95,7; Droberjar 2008, 240 fig. 8,12. – Ravenna (I): Kühn 1974, pl. 325 no. 95,6. – Belfort (F): Kühn 1974, pl. 325 no. 95,2. – Lauchheim grave 787 (D): kind notice by Benjamin Höke, Esslingen.

³² Bierbrauer 1993, 123.

from Scandinavia³³ served as a model for a series of similar bow-brooches in Douvrend (France)³⁴ and also Grottamare (Italy),³⁵ which in turn differed according to technical preferences and skills.

Recently Volker Hilberg³⁶ has developed a scheme and a catalogue of characteristics for Masurian bow-brooches (Northeast Poland). Each region was apparently integrated into a wide-ranging communications network. The geographic situation and the accessibility of certain regions may have been decisive for the intensity of external influences on local brooch production. Hilberg certifies the Masurian specimens as following: small size, simple construction, technically little effort, and low skills with the local craftsmen.³⁷ It is also interesting that all specimens are made of non-ferrous metal. Given these conditions, it is clear that there was a regional production of fibulae.

Chronology

Lauchheim, grave 974,³⁸ illustrates very well how archaeological chronology and scientific dating may confirm or contradict each other. The dendrochronological dating of the wood coffin provides us with a date of 487 ± 10 years,³⁹ which is half a 'generation' too early as in current archaeological chronologies suggested.⁴⁰ What is the reason of the difference? Can it be dismissed as a single, individual case that deviates from the expectations? Or should the entire chronology be revised based on scientific data? Probably both assumptions are true, and both interpretations are intertwined.

Yet further aspects have to be taken into consideration. On one hand, archaeological chronologies are not precise – otherwise they would just produce classification artefacts instead of detecting differences in time. On the other hand, archaeological chronology has to be based on typology and object combination – instead of being guided by historic events. The latter 'method' forces circular arguments, suggesting a congruence of developments in politics and material culture.

A first step in this direction has been taken: A new chronology for Southern Germany was developed at Freiburg Institute, revealing fundamental methodological problems evoked by the incorrect expectation that cultural development was directly

33 Jørgensen 1994, 531 fig. 123,6.

34 Koch 1998, pl. 37,1.

35 Bierbrauer 1975, 284 pl. 23,1.

36 Hilberg 2009, 336 pl. 9,23.

37 *Ibid.*

38 Banck-Burgess/Höke (forthcoming).

39 Billamboz/Becker 2001, 839 fig. 4.

40 Koch 2001, 74 pl. 14,X51 (SD 4–5, 510–555).

linked to political history.⁴¹ The material study of the relevant bow brooch type “Westhofen” revealed that we are obviously dealing with two different fibula series, one with small specimens of just 6–7.5 cm length,⁴² and one with larger items of 7.5–8.8 cm length.⁴³ The extent to which these two groups are chronologically related to each other (overlapping or replacing) remains a matter of further research (the preliminary evidence offers the impression that the smaller brooches are the ‘prototypes’).

Here the chronological approach becomes obvious. With regard to the development of size, it must be stated generally that bow-brooches increase in length with time; later examples are bigger than their ‘prototypes’. A certain fibula type demonstrates this exactly in that the five-knob variant has a length of about 7,7–8,8 cm,⁴⁴ the seven-knob variant 8,8–10,5 cm,⁴⁵ the nine-knob variant 10,5–11,0 cm.⁴⁶ The increasing size is accompanied by a formal one: the number of knobs on the head plate increases at the same time.

If the focus is limited to the motif on the head plate, and the fibulae are arranged according to the number of their knobs only,⁴⁷ stylistic ‘genealogies’ can be established. Due to the larger political dimensions of the ‘ethnic debate’, stylistic analysis has especially become less visible in the last few decades, for example the motifs and their development, and if they were noticed they are seen always in terms of a specific perspective only.

The increasing size has had a positive effect on artistic development in that it provides more space for decoration and details. Because it is a universal variable, all the bow-brooches can thus be brought into a general scheme. This is used to present large-scale stylistic analysis, but also to demonstrate the largely synchronous development of ‘brooch fashion’ in different regions, and to highlight and illustrate similarities in motif selection.

The most recent horizon of bow-brooches, geographically speaking, occupies only a small area with a concentration along the Lower Rhine.⁴⁸ In most of the

41 Friedrich 2016, 22–50.

42 For example Kreuznach (D): Kühn 1974, pl. 255 no. 9,15 or Horb-Altheim grave 55 and 65 (D): Beilharz 2011, pl. 41,3–4; 52,7–8.

43 For example Westhofen (D): Kühn 1974, pl. 255 no. 9,11 or Ulm (D): Kühn 1974, pl. 255 no. 9,9.

44 For example Nesles (F): Kühn 1974, pl. 256 no. 10,23.

45 For example Noyelles-Godault (F): Koch 1998, pl. 22,6.

46 For example Auxerre (F): Kühn 1974, pl. 258 no. 11,34 or Voutenay (F): Kühn 1974, pl. 259 no. 11,50.

47 Wiesbaden (D): Kühn 1974, pl. 302 no. 42,10. – Nikitsch (A): Kühn 1974, pl. 303 no. 86,4. – Kranj (SLO): Kühn 1974, pl. 303 no. 86,5. – Trossingen (D): Kühn 1974, pl. 331 no. 99,1. – Brochon (F): Kühn 1974, pl. 258 no. 11,35. – Laucha (D): Kühn 1974, pl. 258 no. 11,29. – Pleidelsheim grave128 (D): Koch 2001, Pl 52,4. – Basel-Gotterbarmweg (CH): Kühn 1974, pl. 250 no. 60,19. – Wurmlingen (D): Kühn 1974, pl. 329 no. 97,2. – France: Kühn 1974, pl. 258 no. 11,40. – Hilberg and Masurische 2009, 598 pl. 22 no. 188.

48 Hilberg 2005, 629–680.

neighbouring regions, the transition to a different fibula fashion can be observed, namely the ‘single-fibula fashion’ in the form of a large, predominantly circular disk-brooch.⁴⁹ The end of the bow-brooches is marked by fibulae, which act as a mere pendant on a fibula arrangement on the chest.⁵⁰

Perspectives

In summation, it can be noted that the common ‘ethnic interpretation’ is not a question posed by the archaeological record, but derives from the interpretation of written sources. This is shown by two essential, but misleading premises:

1. The development of material culture is oriented to historic events, which is why chronologies are oriented to it. But this argument should be the result of independent chronology, instead of deriving one from the other.
2. Material culture, here the bow-brooches, is divided into types, in order to define and distinguish regional groups. But this arrangement follows research perspectives, and the ‘geographic argument’ does not represent contemporary perceptions.

Combining both aspects has us not only led into circular argumentation, but also created artificial boundaries. Through a new approach, focussing on stylistic aspects, similarities and relations are now emphasized instead of suggestive differences. In many areas complex interrelationships developed,⁵¹ which are (not surprisingly from a perspective of practice) detached from written tradition. In this perspective, the complexity of brooch development can be recorded, and the interpretations become more challenging and promising reflecting overlapping networks and relations. Nonetheless, there have been influences from outside, which have had different regional effects. But the suggested ‘Germanic character’ of this group of objects cannot be maintained any further, as well as it seems to be impossible to assign certain types to different *gentes*.

References

- Banck-Burgess, Johanna/Höke, Benjamin, Lauchheim “Wasserfurche” Grab 974. Eine Baumsargbestattung der Zeit um 500 n. Chr. (forthcoming).
- Beilharz, Denise, Das frühmerowingerzeitliche Gräberfeld von Horb-Altheim. Studien zu Migrations- und Integrationsprozessen am Beispiel einer frühmittelalterlichen Bestattungsgemeinschaft. Forschungen und Berichte zur Vor- und Frühgeschichte in Baden-Württemberg 121 (Stuttgart 2011).

⁴⁹ Hilberg 2005, 200 fig. 3,1.

⁵⁰ Hilberg 2005, 199 fig. 2,b.

⁵¹ Brather-Walter 2017.

- Bierbrauer, Volker, Die ostgotischen Grab- und Schatzfunde in Italien. *Biblioteca degli studi medievali* 7 (Spoleto 1975).
- Bierbrauer, Volker, Die Landnahme der Langobarden in Italien aus archäologischer Sicht. In: *Ausgewählte Probleme europäischer Landnahmen des Früh- und Hochmittelalters. Methodische Grundlagendiskussion im Grenzbereich zwischen Archäologie und Geschichte* 1, hrsg. Michael Müller-Wille/Reinhard Schneider. *Vorträge und Forschungen* 41,1 (Sigmaringen 1993) 103–172.
- Bierbrauer, Volker, Verbreitung und Interpretation der ostgotischen Bügelfibeln. Ostgoten außerhalb ihrer italischen *patria*? In: *Reliquae gentium*. Festschrift für Horst-Wolfgang Böhme. *Studia honoraria* 23 (Rahden 2005) 37–47.
- Billamboz, André/Becker, Bernd, Die frühmittelalterlichen Grabkammern von Lauchheim im dendrochronologischen Datennetz Südwestdeutschlands. *Fundberichte aus Baden-Württemberg* 25, 2001, 831–870.
- Brather, Sebastian, Ethnische Interpretationen in der frühgeschichtlichen Archäologie. *Geschichte, Grundlagen und Alternativen*. Reallexikon der Germanischen Altertumskunde, Ergänzungsband 42 (Berlin, New York 2004).
- Brather-Walter, Susanne, Kommunikationsreichweiten und Kleidungsvarianten anhand merowingerzeitlicher Bügelfibeln. In: *Grenzen, Räume und Identitäten. Der Oberrhein und seine Nachbarregionen von der Antike bis zum Hochmittelalter*, ed. Sebastian Brather/Jürgen Dendorfer. *Archäologie und Geschichte, Freiburger Forschungen zum ersten Jahrtausend* 22 (Ostfildern 2017) 289–303.
- Droberjar, Eduard, Thüringische und langobardische Funde und Befunde in Böhmen. Zum Problem der späten Phasen der Völkerwanderungszeit. In: *Kulturwandel in Mitteleuropa. Langobarden, Awaren, Slawen*, ed. Jan Bemann/Michael Schmauder. *Kolloquien zur Vor- und Frühgeschichte* 11 (Bonn 2008) 229–248.
- Fingerlin, Gerhard, Ein reiches alamannisches Frauengrab aus Mahlberg in der südlichen Ortenau. *Archäologische Nachrichten aus Baden* 23, 1979, 26–31.
- Friedrich, Matthias, Archäologische Chronologie und historische Interpretation. Die Merowingerzeit in Süddeutschland. *Reallexikon der Germanischen Altertumskunde, Ergänzungsband* 96 (Berlin, Boston 2016).
- Garscha, Friedrich, Die Alamannen in Südbaden. *Katalog der Grabfunde. Germanische Denkmäler der Völkerwanderungszeit A* 11 (Berlin 1970).
- Hajnal, Zsuzsanna, Szentendre, Komitat Pest. In: *Die Langobarden. Das Ende der Völkerwanderung*, ed. Landschaftsverband Rheinland (Darmstadt 2008) 313–315.
- Haseloff, Günther, Die germanische Tierornamentik der Völkerwanderungszeit. *Vorgeschichtliche Forschungen* 17,1 (Berlin 1981).
- Hilberg, Volker, Griesheim Grab 400. Die Bügelfibeln der jüngeren Merowingerzeit im Rhein-Main-Gebiet. In: *Reliquae gentium*. Festschrift für Horst-Wolfgang Böhme. *Studia honoraria* 23 (Rahden 2005) 195–222.
- Hilberg, Volker, Masurische Bügelfibeln. Studien zu den Fernbeziehungen der völkerwanderungszeitlichen Brandgräberfelder von Daumen und Kellaren – Tumiany i Kielary 2. *Schriften des Archäologischen Landesmuseums* 9 (Neumünster 2009).
- Jørgensen, Lars, s. v. J. Römische Kaiserzeit und Völkerwanderungszeit in Skandinavien. In: *Reallexikon für Germanische Altertumskunde* 8 (Berlin, New York 1994) 523–536.
- Knöchlein, Reiner, Der älteste Fibelbestand des Reihengräberfeldes von Waging am See, Lkr. Traunstein, Oberbayern. *Archäologisches Korrespondenzblatt* 32, 2002, 433–446.
- Koch, Alexander, Bügelfibeln der Merowingerzeit im westlichen Frankenreich. *Monographien des Römisch-Germanischen Zentralmuseums* 41 (Mainz 1998).

- Koch, Ursula, Alamannische Gräber der ersten Hälfte des 6. Jahrhunderts in Südbayern. *Bayerische Vorgeschichtsblätter* 34, 1969, 162–193.
- Koch, Ursula, Das alamannisch-fränkische Gräberfeld bei Pleidelsheim. *Forschungen und Berichte zur Vor- und Frühgeschichte in Baden-Württemberg* 60 (Stuttgart 2001).
- Kühn, Herbert, Die germanischen Bügelfibeln der Völkerwanderungszeit in Süddeutschland (Graz 1974).
- Die Langobarden. Das Ende der Völkerwanderung. Ausstellungskatalog Bonn (Bonn 2008).
- Martin, Max, s. v. K. Späte Völkerwanderungszeit und Merowingerzeit auf dem Kontinent. In: *Reallexikon der Germanischen Altertumskunde* 8 (Berlin, New York 1994) 541–582.
- Roth, Helmut, Die Ornamentik der Langobarden in Italien. Eine Untersuchung zur Stilentwicklung anhand der Grabfunde. *Antiquitas* 3. Abhandlungen zur Ur- und Frühgeschichte, zur klassischen und provinzialrömischen Archäologie und zur Geschichte des Altertums 15 (Bonn 1973).
- Sage, Walter, Das Reihengräberfeld von Altenerding in Oberbayern 1. Katalog der anthropologischen und archäologischen Funde und Befunde. *Germanische Denkmäler der Völkerwanderungszeit* 14 (Berlin 1984).
- Schach-Dörges, Helga, Das frühmittelalterliche Gräberfeld bei Aldingen am mittleren Neckar. *Materialhefte zur Archäologie in Baden-Württemberg* 74 (Stuttgart 2004).
- Stork, Ingo, Fürst und Bauer, Heide und Christ. 10 Jahre archäologische Forschungen in Lauchheim/Ostalbkreis. *Schriften des Alamannenmuseums Ellwangen* 1 (Ellwangen 2001).
- Tejral, Jaroslav, Beiträge zur Chronologie des frühmerowingerzeitlichen Fundstoffes nördlich der mittleren Donau. In: *Probleme der frühen Merowingerzeit im Mitteldonauraum*, ed. Jaroslav Tejral. *Spisy Archeologického ústavu AV ČR Brno* (Brno 2002) 313–358.
- Tejral, Jaroslav, Ein Abriss der frühmerowingerzeitlichen Entwicklung im mittleren Donauraum bis zum Anfang des 6. Jahrhunderts. In: *Kulturwandel in Mitteleuropa. Langobarden, Awaren, Slawen*, ed. Jan Bemmann/Michael Schmauder. *Kolloquien zur Vor- und Frühgeschichte* 11 (Bonn 2008) 249–283.
- Werner, Joachim, Die Langobarden in Pannonien. Beiträge zur Kenntnis der langobardischen Bodenfunde vor 568. *Bayerische Akademie der Wissenschaften, phil.-hist. Klasse, Abhandlungen N. F.* 55 A (München 1962).
- Windler, Renata, Ein Gräberfeld des 5.–7. Jahrhunderts bei Flaach. *Zürcher Archäologie* 29 (Zürich, Egg 2012).

III Transformations: Continuity and Discontinuity

Roland Steinacher

Transformation or Fall?

Perceptions and Perspectives on the Transition from Late Antiquity to the Early Middle Ages

Did Migration Cause the Fall of the Roman Empire?

That savage invading Barbarians caused the *Decline and Fall* of the Roman Empire is a commonplace notion in European historical narratives. Thirty years of research has not changed this, either inside or outside academic circles. Recently published articles that incorporate the constant use of the metaphors “migration of peoples” (*Völkerwanderung*) or “Barbarian migration”, as well as “migration age”, underscore this fact. Comparisons of late antique and early medieval events to recent ones in fact seem to increase.

Some weeks ago Mary Beard, Professor of Classics at Cambridge University, contradicted Arron Banks, multi-millionaire and UKIP (United Kingdom Independent Party) funder, on Twitter.¹ Banks argued that the Roman Empire was effectively destroyed by immigration and at least in his view, a similar threat presently endangers the United Kingdom. For Banks, barbarian forces overran the Western Empire and caused the end of an era and its culture, society, and military strength. Beard responded that a complicated historical problem like this might be a subject on which to listen to experts and that “debate is great but treating one old version of Roman history as truth behind modern problems is dangerous.” Banks’ reply was simple but clear: “You don’t have a

¹ https://www.theguardian.com/books/2016/dec/06/who-said-it-arron-banks-or-mary-beard?CMP=tw_t_gu [31. 12. 2016]; http://www.huffingtonpost.co.uk/entry/ukip-arron-banks-mary-beard-rome_uk_5845c2d5e4b07ac7244927f6 [31. 12. 2016]; <http://plus.faz.net/evr-editions/2016-12-14/aRuLoYmeYuLSRsIWsEjllwU?GEPc=s2> [31. 12. 2016]; Arron Banks cf. https://en.wikipedia.org/wiki/Arron_Banks (20. 1. 2017).

Note: This article is based on my lecture “Umgestaltung und Integration oder Untergang und Eroberung? Sichtweisen und Probleme des Übergangs von der Antike zum Mittelalter” at the conference “Archäologie, Geschichte und Biowissenschaften Interdisziplinäre Perspektiven / Archéologie, histoire et sciences biologiques Perspectives interdisciplinaires” 19.–21. 11. 2015, Institut für Archäologische Wissenschaften. Frühgeschichtliche Archäologie und Archäologie des Mittelalters, Freiburg i. B. It was possible to write this text during a fellowship, *Forschungsstipendium*, of the Alexander von Humboldt-Stiftung at the Friedrich-Meinecke-Institut, Freie Universität Berlin. Henning Börm (Konstanz), Julia Ess and Philipp von Rummel (Berlin), Edward M. Schoolman (University of Nevada, Reno) and Jeffrey Grossmann (University of Virginia) helped with their expertise.

<https://doi.org/10.1515/9783110616651-007>

monopoly on history.”² There is also no monopoly on rejecting the expertise of academics, now a common phenomenon in European countries as well as the United States under Trump.

In May 2015, political scientist Joseph Nye compared a postulated decay of the United States to the fall of the Roman Empire in a *Huffington Post* article. “An absolute decline in [Rome’s] society, economy and institutions [...] left it unable to protect itself from hordes of invading Barbarian tribes.”³ In January 2016, Alexander Demandt, a former professor of Ancient history at the Freie Universität Berlin, wrote in the *Frankfurter Allgemeine Zeitung* about the fall of the Roman Empire. He asserted that the Empire encouraged immigration and welcomed foreigners. This “xenophilic attitude”, Demandt stated, was one of the reasons for its downfall: Foreign Barbarians entered the empire, destroyed Roman culture from the inside and ushered in the Dark Ages. The Roman “culture-bearing bourgeoisie” (*kulturtragendes Bürgertum*) had been destroyed by Barbarian hordes entering in great quantities, and that what culture remained was monopolised by clerics. Demandt is quite explicit regarding a final point: Given the recent immigration, a very similar development impends Germany and Europe in the near future.⁴

Some months earlier, the same Alexander Demandt cited Oswald Arnold Gottfried Spengler (1880–1936) in an interview with the German newspaper *Die Welt*. “Oswald Spengler outlined as early as 1931 that the major problem of times to come will be a conflict in between northern and southern countries. Spengler had a ‘coloured revolution (*farbige Weltrevolution*)’ in mind, meaning a threat by poor Southerners who would invade Europe sooner or later. This was an error: Nowadays the refugees arrive without weapons making everything even more complicated.”⁵ Demandt and many others assert that the refugee crisis was similar to the “migration of peoples” (*Völkerwanderung*), which in their view brought down the Roman Empire.

² https://twitter.com/Arron_banks/status/805508156143128576 [31. 12. 2016].

³ Nye 2015.

⁴ Demandt 2016a, 2016b.

⁵ Interview mit Alexander Demandt, *Die Welt*, 11. 9. 2015, URL <http://www.welt.de/geschichte/article146277646/Das-war-es-dann-mit-der-roemischen-Zivilisation.html> [4. 7. 2016]: “Schon Oswald Spengler hat 1931 erklärt, das große Problem der Zukunft werde nicht der Ost-West-, sondern der Nord-Süd-Konflikt sein. Er sprach von der ‘farbigen Weltrevolution’ oder auch von der ‘farbigen Front’. Spengler glaubte, man müsse mit der Bedrohung durch die armen Völker auch militärisch rechnen. Das war ein Irrtum. Heute sehen wir: Die Tatsache, dass die Flüchtlinge unbewaffnet kommen, macht das Ganze viel schwieriger.” – Examples of how Roman history is used and abused as a parallel to our days are endless: Merelli 2016. A map from 1923 with the Gothic migration from Scandinavia to Italy and Spain is reprinted there: “On this map, showing German migrations from 150 to 1066, shows the movements of the Goths. (University of Texas at Austin. Historical Atlas by William Shepherd (1923–26).” Interestingly enough, 1066, the Norman conquest of England and the battle of Hastings, ends – in Merelli’s view – the “German” migrations. US historian Nathan Pilkington collected and criticised some examples: Pilkington 2016.

Interestingly enough, this echoed a rising interest in the same events in literature from the 1920s. Oswald Spengler wrote *The Decline of the West* (*Der Untergang des Abendlandes*) between 1918 and 1922. After World War I, Germany entered a period of crisis and bewilderment and the end of Western civilization was imaginable for many. Spengler's model postulated that every civilization resembles an organism with a limited and predictable lifespan. Civilizations emerge, have a peak and diminish after roughly a millennium. Spengler preferred right wing politics; he never, however, supported the National Socialist party. Interpreting post-war Europe, he was sure – as cited by Demandt – that the southern peoples as well as the Russian communists would end European culture. Until the 1950s, Spengler remained well known and read. He influenced a wide range of scholars, including Arnold J. Toynbee, Egon Friedell and Gottfried Benn, as well as the ethnologists Leo Frobenius and Claude Lévi-Strauss. Recently, Spengler's work – surprisingly enough – has attracted new attention.⁶

Twelve years ago, two British scholars – Bryan Ward-Perkins and Peter Heather – started a new discussion on how to perceive the end of the Roman Empire. Their books on the *Fall of the Roman Empire*, published in 2005, initiated still current debates. Both authors criticised, roughly speaking, the concept of a “Transformation” of the Empire over the centuries as well as the “integration” of Barbarian peoples in a late Roman cultural and political system. Both argued for a sharp distinction in between civilized Romans and rude Barbarians, and acknowledged a sharp cultural, economic, and political demarcation line between Late Antiquity and the Early Middle Ages. In slightly exaggerated terms, Rome did not only fall; it was murdered by Northern and Hunnic Barbarians.⁷

Outside academic circles, these new views from inside the ivory tower were warmly welcomed. Praising Ward-Perkins' book, an anonymous author – most likely a German *Wutbürger* (which roughly equates in “angry citizen”) – argues in a blog post on his webpage how the general public is willingly cheated on and manipulated by a scholarly mainstream. To be clear here, Bryan Ward-Perkins and Peter Heather were much more sophisticated and differentiated than the cited anonymous angry citizen, and the phenomenon of debates reduced to some key words is highly problematic. The anonymous author characterises the European Science Foundation project “Transformation of the Roman World” (TRW) as a means of European elites to lie about the past, while Bryan Ward-Perkins had – in his view – revealed the truth. To him, academic elites in recent decades tried to explain the downfall of Roman civilization as something like a friendly “transition”, thus

⁶ Spengler 1918–1922. Cf. Demandt/Farrenkopf 1994; concerning Spengler's sources cf. Ferrari Zumbini 1999, 151–170; Farrenkopf 2001. David Engels compares – referring to Spengler – the decline of the Roman Republic and nowadays Europe: Engels 2014.

⁷ Heather 2005; Ward-Perkins 2005. Cf. the reviews by Hartmann 2007a, 2007b; O'Donnell 2005.

downplaying the major breaks between Antiquity and the Middle Ages. According to the blogger, arrogant scholars have developed a misrouting concept of history (*Geschichtsbild*) and are politically correct do-gooders (*Gutmenschen*, literally: good people). Their aim was to depict the invading Germanic Barbarians not as brutal conquerors and looters who broke into the Roman Empire, but as peaceful “immigrants” who later became “integrated”. It is striking how this text, written in 2007, anticipates many views and concepts of present right wing movements in the EU and the US. The academic elites are accused by the anonymous author of having created a historical myth to justify the modern political consent in Europe, even if greater parts of the Roman Empire remained outside modern Europe. In his view, a “postmodern research community” continues to ignore the hard facts of important political and military history while only caring about cultural phenomena. Moreover, modern scholars are said to be unable to stress the different qualities of cultures. They level cultural differences and thus ignore progress and the superiority of chosen societies.⁸ In its last 2016 edition, the right wing paper *Junge Freiheit* published an article by the journalist Wolfgang Kaufmann in which very similar arguments were raised. Again, a “postmodern research community” systematically hides the archaeological facts, misleading the public about the real dimension of Rome’s fall.⁹

Are basic facts and final conclusions possible when dealing with the end of the Western Roman Empire? Is it conceivable to compare late antique structures and events with recent ones? Did Barbarians attack and conquer the Empire, or was the encounter between Rome and the so-called Barbarians more complex than people tend to think? All these heavily loaded debates focus on the “migration period” of the fifth and sixth century. Rome was, however, in a constant exchange with so-called Barbarians living outside its imperial borders and many strangers entered the empire throughout its entire history. With these questions in mind, I want to discuss three points.

1. a) Ancient sources provide long-lasting stereotypes of the Barbarians and Northerners threatening Rome. The language, the ideas, the motives and the metaphors of fifth and sixth century writers, in many cases based on older ethnographical traditions, are surprisingly present in modern scholarship as well as the popular view of late Rome.
- b) Master narratives of Barbarians destroying the Empire have been invented and re-invented throughout European history.
- c) Furthermore, migration and invasion have been common explanations for historical backgrounds and identity in Antiquity.

⁸ URL <http://korrektheiten.com/2007/11/03/gelesen-bryan-ward-perkins-der-untergang-des-romischen-reiches-und-das-ende-der-zivilisation/> [4. 7. 2016]. Browsing the web, one can find a huge variety of texts attacking what is labeled “political correctness”. Since the 1980s, many different initiatives aimed at avoiding language, policies or measures used to offend or disadvantage particular groups and minorities in society. Cf. Friedman/Narveson.

⁹ Kaufmann 2016.

2. a) There have always been “inner” and “outer” Barbarians. We know of at least 40 accommodations of barbarian groups in between the reign of Augustus (27 BCE–14 CE) and that of Theodosius (dies 395). As Barbarian societies were integrated and settled on Roman soil, many of their members served in the Roman army, and many received citizenship after their service.
 - b) Every inhabitant of a conquered territory becoming a Roman province later had been a “Barbarian” first. Inside the Roman borders, a part of the population lived under circumstances very similar to those of the Barbarian periphery along the imperial borders.
3. a) There has never been a mass immigration nor a Barbarian invasion. The traditional view of invading hordes entering the Empire is simply not supported by evidence. The Empire changed throughout the third and fourth century. This was true for the centre as well as its periphery.
 - b) Smaller entities evolved, for example the “Gallic Empire” that functioned as a separate state from 260 to 274 and was a breakaway part of the Western Roman Empire. At the same time, new and great confederations of peoples evolved at the Roman borders, including the Goths and Vandals in the east, the Franks and the Alamanni in the west. Between the fourth and the sixth century things changed: Barbarian confederations entered the Empire and some of them took over parts of the West. But again, these military conflicts cannot be defined as a migration. Armies were on the march, many of them big enough to challenge the Roman government. Roman rulers, and this is an important point, had invited most of these Barbarian groups to enter the Empire to serve specific roles. Alaric and the Goths are a good example: Alaric started his career as the leader of a mixed band of Barbarians invading Thrace in 391. As a successful warlord, he managed to lead a Gothic army of some 20,000 men fighting for the emperor Theodosius as *foederati* at the Battle of Frigidus in 394. However, after the emperor had died, the Romans dismissed the Germanic mercenaries, and Alaric reacted by leading his force to Greece and plundered there. One way to secure peace was to pay the Barbarian leaders, the other was to integrate them into the Roman army. In response, emperor Arcadius appointed Alaric *magister militum*, master of the soldiers, in Illyricum. While in following years treaties were made and broken, until finally a catastrophe occurred: Alaric and his forces took and plundered Rome in 410, but as mutinous army commanded by a Roman general trying to blackmail the government to care for him and his men, and not an invasion force of Northerners.
 - c) Finally, the concept of a “migration age” itself depends on historical categories. Successful Barbarian elites ruling former parts of the Roman West had migration narratives written in their service. Using these texts, European scholars since the 15th century created the concept of a “migration of peoples”.

Barbarians, Northerners and Migration in Ancient Sources

Who is a Barbarian?

Greek writers defined identities of human societies in the known world and bequeathed each group an ethnonym. Since the sixth and fifth century BCE, these categories were most often not more than learned constructions. Greek ethnographers like Hekataios, Herodotus and Eratosthenes of Cyrene categorized the world north of the Alps as a western Keltike (Κελτική) and an eastern Scythike (Σκυθική) with the river Tanais (Don) as its frontier. According to their views, the Celts were farmers and infantrymen, while the Scyths were nomads who fought on horseback.¹⁰ Ancient ethnography described Celts and Scyths as the two *ethne* (ἔθνη) living in the northern parts of the inhabited world. Other parts of the world were inhabited by Thracians or Persians, Aethiopians, Libyans and *Maurousioi*. Given the longevity of their use and unevenness of their application, each of these terms is complicated and demands scholarly interpretation.¹¹ For example, in the fifth century BCE, Herodotus distinguished “ploughing” Africans west of “Lake Triton” (most likely the Gulf of Gabès) from “meat-eating as milk-drinking nomads” east of the Triton.¹² Furthermore, Herodotus’ Libyan excursus, *logos*, contains a differentiation in between immigrant Africans (i.e. Phoenicians and Greeks) and indigenous Africans (i. e. Libyans and Aithiopes).¹³ Egypt in contrast was regarded as a part of Asia with today’s North Africa west of its boundaries.¹⁴ But the North caused much more concern due to the known texts. Roman and Greek authors had a clear picture: Out of the cold North, uncountable numbers of peoples descended, in part a result of the fact that the ancients believed that a cold environment fostered human reproduction.¹⁵

The *Epitoma Rei Militaris*, a fifth century treatise by Publius Flavius Vegetius Renuatus dealing with warfare and military principles, is a good example for this. The ethnographic principles back in Vegetius’ mind were nearly 1,000 years old in his lifetime. Writing about where and whom to recruit for the army, the North and its

10 Geus 2002, 283–295, 333–335; von Bredow 2002; Timpe 1989; Kubitschek 1919, 2053–2056; Knaack 1907, 375–376.

11 Cf. Geary 2002, 46–49; Grünwald 2000a; Lund 1990.

12 Herodotus, *Historiae* 4, 186: meat-eating as milk-drinking nomads, νομάδες κρεοφάγοι τε καὶ γαλακτοπόται east – ploughing, ἀροτῆρες, Libyans west of the Triton. Cf. Zimmermann 1999; Camps 1961.

13 Herodotus, *Historiae* 4, 197, 2: Phoinicians and Greeks, Φοίνικες δὲ καὶ Ἕλληνες, Libyans and Aithiopes Λιβυες μὲν καὶ Αἰθίοπες. Cf. Huß 1996.

14 Huß 1990.

15 Woolf 2001; Hartog 1980; Halsall 2005, 2007, 45–57.

Barbarians became an important matter to discuss. Southerners were – in his opinion – the second choice for specific reasons. “On the other hand the peoples of the North (*septentrionales populi*), remote from the sun’s heat, are less intelligent, but having a superabundance of blood are readiest for war (*sunt ad bella promptissimi*). Recruits (*tirones*) should therefore be raised from the more temperate climes. The plenteousness of their blood supplies a contempt for wounds and death, and intelligence cannot be lacking either which preserves discipline in camp and is of no little assistance with counsel in battle.”¹⁶ It was a common place in Antiquity that Northern Barbarians were brave as well as good fighters. A prudent commander had to remember this. At the same time, however, a dichotomy arose: Barbarians were on the one hand dangerous and ferocious, on the other hand brave and admired for their fighting capacities.

Cimbrians and Germans – Most Dangerous Barbarians?

Some northern Barbarians were more dangerous than others. The *Cimbri* or in Greek *Kimbroi* (Κίμβροι) held a special place in Roman historical memory after having destroyed several Roman armies in the second century BCE. Historiographers styled them as a special threat from the North, and it is important to bear this in mind as Caesar’s invention of the *Germani* would have been impossible without the ferocious *Cimbri* as a historical allusion. Every Roman reader knew that these Barbarians were ready to fight at any time, had no fear of death, wanted booty and honour, and sacrificed even humans to their gods. Furthermore, they were nomads, and nomads were – according to the ethnographical patterns – tougher and more warlike than farmers or citydwellers.¹⁷ Posidonius of Apameia at the Orontes in Syria, who died c. 51 BCE (that is, in Caesar’s lifetime), described a fierce Celtic tribe named *Germanoi* (Γερμανοί). Posidonius continued the Roman history of Polybios (c. 203–120 BCE) and referred to Northern Barbarians delineating the Cimbrian wars. Among the Northerners he mentioned *Germanoi* as a fierce and very primitive Celtic tribe similar to the Cimbrians. These human beings used to eat incredibly huge amounts of meat and drink milk and unmixed wine for breakfast.¹⁸

From these accounts of Posidonius and his shallow knowledge of the North, Caesar fashioned the *Germani* and thus postulated a new Barbarian supragroup in between Celts and Scyths. Furthermore, Caesar made the Rhine a Roman frontier for centuries. It seems likely that Caesar needed such strong categories when Marcus

¹⁶ Vegetius, *De re militari* 1, 2. Translation following Milner 2011, 3–4. Cf. Steinacher 2010, 164–165.

¹⁷ Grünwald 2000b, 499; Steinacher 2011, 195.

¹⁸ Poseidonios, Fragment 22 (= Athenaios 4, 39, p. 153e). Caesar, *Bellum Gallicum* 4, 1, 8; 6, 22, 1, has similar stereotypes. The *Germani* eat only milk, cheese and meat.

Licinius Crassus victoriously crossed the Euphrates, and Caesar only made small thrusts beneath the Rhine. The consequences for our view of historical identities were, however, enormous. From this point forward, a new political terminology was in use later contemporary scholarship and political propaganda has used Caesar's definitions up to the 20th century.¹⁹ Starting with the Cimbrian wars, Tacitus built on Caesar and Posidonius, styling Romans and *Germani* as hereditary enemies. Interestingly enough, these categories never became accepted in Latin and Greek literature until the 16th century.²⁰ The term *Germani* was actually used only for a comparatively short time span. Since the third century, it appeared only randomly in sources. *Alamanni* and Franks were sometimes labelled *Germani*. Authors using the term alluded to Caesar but limited the specific expression to the Rhine area.²¹

Ancient and Modern Views on Migrating Barbarians

Seneca (c. 1–65 CE) was exiled by emperor Claudius and lived on the island of Corsica for a few years. During this time, he wrote a letter to his mother and later published it. Seneca reflected on the changes of his own life as well as the constant transformations of history. His conclusions are remarkable: Migrations and peoples on the move are the root of societies and political communities.²² Taking the Cimbrian Barbarians as an example, Seneca developed a catalogue of reasons for leaving one's home: An excess of population results in the lack of food, natural disasters and diseases. These points resemble remarkably explanations developed in modern scholarship. Economic and cultural differences in between the Barbarian lands and the Mediterranean attract the Northerners. Furthermore, he suggests that peoples, *gentes*, are never stable or fixed, but change constantly. The island of Corsica served as his example. After a dark and unknown antiquity, Greeks, Lugurians, Iberians and finally Romans settled there. "In fine, you will scarcely find any land which is still in the hands of its original inhabitants: all peoples have become confused and intermingled: one has come after another: one has wished for what another scorned: some have been driven out of the land which they took from another. Thus fate has decreed that nothing should ever enjoy an uninterrupted course of good fortune."²³

Seneca referred to known stereotypes and usual explanations. Historiographical as well as ethnographical texts discussed the change between an indigenous

¹⁹ Steinacher 2010, 164–165; Demandt 2007, 313; Dobesch 1995, 59–71; Timpe 1994.

²⁰ Tacitus, *Germania* 37, 2; cf. Beck et al. 1998, 8–10, further reading: 62–65.

²¹ Pohl 2004a, 2004b.

²² Seneca *dialogi* 7, 10 = *De Consolatione ad Helviam matrem*, Stewart 1889, 320–352.

²³ Seneca *dialogi* 7, 10 (translation by Aubrey Stewart): *Vix denique invenies ullam terram quam etiam nunc indigenae colant; permixta omnia et insiticia sunt*. Cf. Rosen 2009, 22–28.

population and immigrants. Erich Gruen pointed out that imagined multiple lineages, intertwined ancestry and compound kinships were central to ancient explanations of historical development. Furthermore, ethnicity or ethnic differences were not at the centre of such debates. “Ancient peoples did not usually deploy ethnic characterisation, whether historical or fictitious, to establish their distinctiveness from others, thereby to assert a separate or unique identity. They preferred a more complex self-perception that incorporated multiple mixtures and plural identities.”²⁴

On the other hand, Tacitus pictured his Germans as differing from these basic principles in ancient historical explanations. The Barbarians living east of the Rhine had not met other peoples in times past and remained very much the same. Roughly a century earlier, Caesar and Posidonius had started to characterise the inhabitants of the areas east of the Rhine as especially dangerous and ferocious. Tacitus added: “I share the opinion of those who are sure the German peoples, *Germaniae populi*, never interbred with other nations, *nationes*, and instead remained one people, *gens*, genuine and pure.”²⁵ The physical appearance and tenacity of the *Germani* confirmed – in Tacitus’ view – the purity of these peoples. Similar motifs are known since Herodotus. Ancient and particularly “natural” peoples unafflicted with complex heredity are, for example, Scythians and Egyptians. The Barbarians in the North are aggressive and belligerent, hard to stop when they get angry. These creatures are barely human and remain strangers to the inhabitants of the Mediterranean basin. The reason for not having met and intermingled with other populations was – according to Tacitus – that migration and change in ancient times depended on ships. As the German lands were only accessible from the *Oceanus*, the ocean-stream, in which the habitable hemisphere floated, located at the other edge of the world, ships from the civilized countries, *ab orbe nostro*, very rarely arrived there. Who from Asia, Africa or Italy would voluntarily cross this terrible and unknown sea and move to grim, cultureless and sad *Germania*.²⁶

Later authors built on such views, combining several threatening stereotypes and the concept of migration. There was overpopulation in the Barbarian countries of the North, as in the cold north, the climate is particularly healthy for humans and therefore the birth rate is unusually high. Thus, countless people are to come from there. The Barbaric hordes were depicted in a menacing way, the metaphors used were penetrating: waves, floods or lava. When Gothic groups arrived in Thrace after 376, the Roman military and civic administration failed to nourish and control them. Ammianus Marcellinus referred to *innumerae gentium multitudines*, countless

²⁴ Gruen 2013, 22.

²⁵ Tacitus, *Germania* 4, 1 (translation by Eric Herbert Warmington).

²⁶ Tacitus, *Germania* 2, 1: *Ipsos Germanos indigenas crediderim minimemque aliarum gentium adventibus et hospitibus mixtos, quia nec terra olim, sed classibus advehebantur, qui mutare sedes quaerebant, et immensus ultra, utque sic dixerim, adversus Oceanus raris ab orbe nostro navibus aditur*. Cf. Lund 1990; Rosen 2009, 26–27.

swarms of nations, flooding the Roman provinces. Ammianus cited Herodotus comparing the Persians and their great army, who had attacked Greece in the fifth century BC, to the events after 376.²⁷ Consequently, Ammianus integrated the problems with the Goths in the Balkans in his literary knowledge, saying that the world outside the Imperial frontiers was populated by innumerable human masses, all of which were waiting to attack the Romans. Similarly Synesius of Cyrene reported to emperor Arcadius (395–408) that there were no new Barbarian peoples north of the Black Sea. The strangers only constantly invented new names to fool the Romans. Both authors, Ammianus as Synesius, named far exaggerated figures to underpin the traditional theme of overpopulated Barbarian lands.²⁸

Becoming Roman or Staying Barbaric?

Were the Aliens Really Alien?

Yet Rome didn't succumb to a sudden influx of Barbarians at the gate, nor were Goths or other Germanic peoples "Barbarian" in the modern sense of the term. They had regularly interacted with the Roman Empire for more than 200 years and, in many cases, were educated, trained and employed inside its perimeters before they succeeded in destroying imperial authority in Italy, France, the Iberian Peninsula and North Africa during the fifth century. At various times over these two centuries, Barbarian soldiers and units served in Roman armies. In addition, at least since the conquests of Caesar in the first century BCE, Rome had influenced the political, social and economic structures beyond its borders. The *Imperium Romanum* exerted an enormous attraction on poorer societies to its north and east. The well-organised provinces of Egypt and North Africa, Sicily and Sardinia provided plenty of corn, wine, oil and other products, so that there was no lack of food in the Empire. Being recruited by Rome guaranteed allied warrior groups a certain supply for their own people. Agreements with foreign leaders were reached, soldiers recruited, and frequently Barbarian groups played off against each other. Some Roman officers were also slave traders, capturing and selling men and women from villages outside the imperial borders. In the view of the Romans, Barbarians had no human or civil rights. At the same time, Barbarian elites imported or plundered Roman prestige goods. As trade and spoils, ceramics, metal work, glass, weapons, belts, and jewellery were

²⁷ Ammianus Marcellinus, *Res Gestae* 31, 4, 7–8; cf. Rohrbacher 2002, 14–35. Herodotus, *Historiae*, 7, 59–60, Godley (ed.): The Persian army is counted, 1,700,000 men. 7, 61–80 gives a list of the different units following the provinces of the Persian Empire.

²⁸ Synesius of Cyrene, *Oratio de regno ad Arcadium imperatorem* 16; Orosius, *Historiae adversum Paganos* 7, 32, 1; cf. Wolfram 2009, 23 and note 77; Göckenjan 1995.

highly appreciated hundreds of kilometres away from the Rhine and the Danube. North and east of the imperial frontiers, warrior groups serving the emperors and keeping other Barbarians from the borderlines emerged. In these societies, social differences and internal conflicts grew rapidly, old structures collapsed and new groups formed. Border regions turned out to be places of acculturation. To sum up: Rome mediated an intense exchange in between Mediterranean cultures and proto-historical societies in the so-called Barbaricum.²⁹

“Inner Barbarians”

According to the Romans, societies established inside or outside the empire differed fundamentally. In the first phase of Roman public law, *provincia* designated primarily the sphere of action allotted to a particular magistrate, an acting official. Later, *Provincia* became the technical term for conquered territory ruled by a Roman governor, and “provincials” the expression for the inhabitants of such a territory. The “provincials” were Roman subjects who were distinguished from the citizens of Rome. Territories practically controlled by Rome but left under local rulers, like the North African territories of Juba I and II or the Armenian Regnum, existed beyond the provinces. Cities were not part of the province, nor were individuals who had received Roman citizenship *provinciales*. Before the Romans had started to dominate the conquered territories, there had been no such differences between the societies in Europe and the western Mediterranean outside the Greek and the Phoenician sphere of influence. Roman officials and authors adapted the Greek categories of a civilised self and of the Barbarians in the surrounding countries. During the Principate, a gradual disappearance of protected kingdoms and allied commonwealths took place. Roman citizenship was conferred upon all free inhabitants of the Empire in 212 by emperor Caracalla (*Constitutio Antoniniana*). In the following years, the term *provincia* became more and more territorial. At the same time *Barbaricum* appeared to name territories outside the Empire. Surprisingly enough, *ethnos* was used in Greek inscriptions for the Latin *provincia*. It seems likely that this alluded to the social meaning of *provincia*, designating groups of a different legal status. So ethnic names could have designed social groups within and beyond the frontiers. Outside and inside (as for example the Isaurians) the territory under Roman control, societies were bound to Rome by gifts, posts and treaties, war service and legal titles (*laeti, dediticii, foederati*) or they received *annona* (a tax paid in kind).³⁰

²⁹ Pohl 2005, 1–38.

³⁰ Mitthof 2012; Buraselis 2007; Steinacher 2014: Breoni and Venostes; Kulikowski 2007, 34–42; Demandt 2007, 319–324; Mathisen 2006; Woolf 2001.

The greater part of the imperial population remained in pre-Roman or “Barbaric” conditions. Poor farmers living in peripheral parts of Roman provinces, such as the Basque Countries or the *Aremorica* (the part of Gaul between the Seine and Loire rivers), had not received citizenship and were generally simply ignored by urbanites operating at the stop of the political and social system. Furthermore, Roman society had a strong hierarchy. Many people lived outside the cities without any rights or were unfree. Such considerations help to understand the seemingly rapid and dramatic fall of Roman order. Guy Halsall stressed that throughout the fifth century the Rhine had already lost its importance as a border river. Social order had changed dramatically north of the Loire. South of this line, Roman landlords and their tenants as well as urban structures remained intact. As Northern Gaul changed, a new social order arose. The contemporary comedy *Querolus* put it like this: The protagonist does not want to live according to Roman laws anymore. A friend advises him to leave for the Loire, apparently alluding to the new social structures evolving there. The Loire River had become a new frontier dividing again the “Barbarian” and the “Roman” world. Finally, it is important to stress that with few exceptions we only know elite-voices in our sources. These men had much to lose.³¹

A Changing Empire

The Third and Fourth Centuries

Even though research relativized the concept of an “imperial crisis”, the long third century (193–337) was a difficult time for the societies inside and outside the Roman borders.³² Fundamental changes took place, not least in people’s minds, and above all, imperial rule destabilised. The foundation of a second capital (Constantinople) questioned Rome as the ubiquitous and traditional centre of the Empire. The concept of Roman rule converted to an abstract and complicated ideal, and at the same time local political solutions gained importance.³³ An endless succession of civil wars caused the neglect of the frontiers. Finally, new political centres emerged as emperors resided in different cities. Important decisions were often taken in military garrisons at the borders. A decisive change, however, was that the link between the state, Christianity, and the Church, which was to be completed in the late fourth century, and the intensified emphasis on the dynastic principle, altered or broadened the foundations of the political system and the underlying ideology.

³¹ *Querolus* sive *Aulularia* 1, 2; cf. Halsall 2007, 232; Demandt 2007, 370; Drinkwater 1992, 209 and 215.

³² Strobel 1993; Witschel 1998.

³³ Pohl 2014.

Finally, it has to be stressed that the idea of a cultural break itself should be interrogated. One can frequently read that ancient Roman elites lost control over art and culture to the Church after the invasion of the Barbarians. In the gloomy cells of the monks, only a fraction of ancient literature survived. Alexander Demandt's article cited above argues with the "Barbarian invasion", the incursion and devastation opened up new opportunities for the clergy, who in their monopolisation of art, writing and knowledge took to censoring ancient books. When the church replaced the Roman state, monasteries kept what remained of Greek and Roman knowledge. Cities impoverished, the "culture-bearing bourgeoisie" (*kulturtragendes Bürgertum*) disappeared while the Barbarians were more interested in weapons than books. Germans remained strangers to education.³⁴

Such views not only debase medieval art and literature, but also ignore the fact that the culture of ancient writing, its tradition and transmission started to change long before the Barbarians arrived. As early as the third century, many books were not copied any longer or only kept in excerpts or summaries, so-called *epitomai*. Livy's books of Roman history are a prominent example. Neither Barbarians nor clerics acted as destroyers or censors, as it was the learned tradition itself that had changed. An eight-century library resembled in many details a fourth century one. At the same time, a learned monk knew the classics. Such a monk not only copied the biblical books, Augustine, Orosius or other Church Fathers, but he also read and preserved Vergil, Ovid, Pliny and Horace.

The Empire Disintegrates

During the third century, breakaway parts of the empire emerged. In 260, emperor Valerian (253–260) had been defeated and captured by Shahanshah (King of the Kings) Shapur near Edessa. A large part of the Roman field army in the east was lost. In the following, Egypt, Syria, Judea and Arabia formed the Palmyrene Empire for some years. The Roman units at the Rhine performed a coup and raised their own emperor ruling from 260 to 274 in on the Western parts of the Empire. This "Gallic Empire" (*Imperium Galliarum*) covered modern France, Spain, and Britain, thus consisting of territories roughly equating in what decades later would become the Gallic Prefecture. The Gallic secession was organised similarly to the Empire. It had *consules*, a senate, official monuments, inscriptions and coins as well as an army. The local elites supported the secession as in their perspective it worked to their

³⁴ Demandt 2016c: "Jetzt in der Not gewann die Sorge um das Seelenheil Vorrang. Die Kirche ersetzte den Staat, die Klöster bewahrten die Reste des Bildungsgutes. Die Städte, in denen die Grundbesitzer wohnten, verarmten. Das kulturtragende Bürgertum verschwand – die Germanen interessierten sich mehr für Waffen als für Bücher –, das Bildungswesen blieb ihnen als Fremden fremd."

advantage.³⁵ Of course, it remained necessary to pay the soldiers but the units concentrated on securing the borders and fighting local social uprisings. In 395, the ruling dynasty divided the empire again. After an intermittent calm, power struggles broke out again in the West, which once again escalated to violent civil wars. Thus, the attention of the West Roman government was dominated by a civil war. Summing up: These secessions are comparable with the fifth and sixth century, when Italy, Spain, Gaul and the African provinces became separate political units ruled by new military elites as Goths, Franks, Burgundians and Vandals.

When the political organisation of the empire was transformed, deep structural changes also affected the periphery. On the one hand, central distribution of funds and goods to Barbarian allies remained limited as the Empire was occupied with itself; on the other hand, some neighbours abused the weaknesses of the centre and plundered Roman territory. We can only guess what was going on outside the imperial frontiers, as written sources remain silent on these areas. But instead of a large number of smaller Barbarian groups known from the ethnographic works of Pliny or Tacitus in the first two centuries, they new neighbours consisted of several major confederations that appeared north and west of the Roman borders.

A period of relative peace was ended by the Marcomannic wars under the reign of Marcus Aurelius (161–180), shifting Roman activity to the middle Danube region. During the third century, the structures of the following centuries developed, and at the same time the term *Germani* gradually lost its significance. Goths and Heruli attacked the eastern provinces, and several treaties had to be signed to control these groups. In the middle of the third century, some Roman territories beyond the Danube had to be abandoned (Dacia, *decumates agri*). The majority of ethnic names used along the Rhine, Danube and Elbe Rivers had been replaced by new ones: the Alamanni and Franks appeared east of the Rhine, and behind them at the Elbe and the Weser, the so called Saxon name had emerged. Thuringians as Bavarians (as late as the early fourth to sixth century) represent even more recent tribal formations. The best source for the fourth century, is Ammianus Marcellinus, writing around 390. After the Marcomannic wars, the Gothic name steadily gained importance for Barbarian groups north of the Black Sea and the lower Danube. Some of the ethnic names mentioned by the ethnographers of the first two centuries CE on the banks of the Oder and the Vistula (*Gutones, Vandili*) reappeared in a similar form from the third century on in the area of the lower Danube and along the Carpathian Mountains.³⁶

It is very likely that Roman needs caused these developments. Simply speaking, a Roman general in the run-up to the imperial borders needed contacts and allies with sufficient fighting power to help him secure the frontier against looters. At the same

³⁵ Luther 2008; König 1981. Cf. concerning Palmyra: Hartmann 2001.

³⁶ Wolfram 1998, 78–85; Pohl 2005, 23–29, 165–175.

time, it was extremely attractive to work with the Romans.³⁷ Soon, however, allies and mercenaries became enemies: Soldiers, whatever their origin, tend to take what they desire. When after 375 the Huns appeared on the Roman frontiers, an already fragile system collapsed. Goths, Vandals and other confederacies crossed the imperial borders and took over.³⁸

Some years ago, Henning Börm in his concise *History of the West from Honorius (395–423) to Justinian (527–565)* compared these events with the wars of Alexander's successors. In his view, civil wars and power struggles within the elites resulted in the disintegration of the Roman West in several successor states while Barbarian soldiers and armies participated in the fighting. No migration of peoples destroyed the Empire, on the contrary, migrations were caused by the events and changes inside the Empire.³⁹

In fact, Barbarian soldiers were simply cheaper than Roman ones. A Roman inductee was six times more expensive than a Barbarian federate. As Late Roman society became more and more militarised, and a rich man was able to keep his own small army of Barbarians, many Roman generals had their own guards and offered their services.⁴⁰ Step by step, military commanders became more powerful than an emperor. This was true for “Barbarians” like Ricimer as well as for “Romans” like Aëtius. At the same time, the Barbarian troops knew exactly how to profit from a changing world. Specialised soldiers benefitted from the disappearance of Roman political structures and simply took over. Under favourable circumstances, Barbarian armies managed to establish kingdoms on the territory of Roman provinces as the Vandals did in Africa and the Goths in Italy, southern Gaul and later Spain. These successor states provided a good life for soldiers but did not destroy or even change basic economic or administrative Roman structures. On the contrary, the new military elite was highly interested in a working tax system as its supply with food and weapons, clothes and horses, eventually money and wealth was based on the professional provincial administration.

Migration, Maps and Arrows as a Historical Narrative

Has there been an age of migrations? What is implied by the term “migration period”? The time span between the late fourth and the sixth century or the whole period of a transformation from Late Antiquity to the Middle Ages? First it has to be stressed that

³⁷ Dick 2008.

³⁸ Wolfram 2009, 125–144; Heather 2015, 1995; Halsall 1999 criticises and ironises the assumed key role of the Huns.

³⁹ Börm 2013.

⁴⁰ Steinacher 2016, 16–18.

very different terminology is in use in European languages. In French, Italian and Spanish the metaphor is “Barbarian invasions” (*grandes invasions* or *invasions barbares*, *invasioni barbariche*, *invasiones bárbaras*). Since the 16th century, pejorative depictions dominated, accusing “German” invaders of destroying the Roman Empire. Since the early modern period, discourse focused on prenatal complaints implying that modern Germans were descendants of the ancient Germanic hordes when, at the same time, Italians, French and Spaniards these of the Romans.

English scholarly texts use “Migration period” as well as “Barbarian invasions” or “Barbarian migrations”. The German term *Völkerwanderung* dominates most other European languages, as we can see in Polish *Wielka wędrówka ludów* and Russian *Большое переселение народов*, the “great migrations of peoples”. The same applies for Romanian *Migrația popoarelor* and Danish/Swedish *Folkevandringstiden/Folkvandringstiden*.⁴¹ Recent historical overviews cover the period between 375, when the Huns arrived in the Hungarian plains (respectively the battle of Adrianopel in 378), and the Lombard conquest of Northern Italy following 568.⁴² Some books focus on Roman history, nearly all cover the history of the Alamanni, Anglo-Saxons, Burgundians, Franks, Ostro- and Visigoths, Vandals and Lombards.⁴³

In their movement, Barbarian associations had transformed the former Western provinces into a new political mandate. New military elites needed origin stories. According to the new narratives, Goths and Lombards derived from the North, Scandinavia to be exact. As Vegetius had put it: Successful soldiers had to come from the northern parts of the world where the weather was cool, human beings fertile, healthy and full of blood. At the same time, an ancient reader expected migration as the common explanation for historical change following the scheme Seneca and others had used.

When Cassiodorus, who served at Theodoric’s court in Italy, and some three decades later Jordanes, in sixth century Constantinople, wrote their versions of Gothic history, a migration narrative was the opening point. These authors used the ancient Gets to create an ancient and long lasting Gothic history. Several Thracian tribes appeared as Gets living to either side of the Lower Danube, in what is today northern Bulgaria and southern Romania. As these areas bordered Greek colonies on the Black Sea coast, Gets appear in Greek texts as early as the fifth century BCE. A similar name was enough to build a historical narration on. Thus, Gothic history started much earlier than it would have been possible with the actual appearance of Gothic groups in the third century CE. Jordanes labelled Scandinavia as an *officina gentium aut certe velut vagina nationum*, a workshop or womb of nations.⁴⁴ Paul the

⁴¹ Cf. Steinacher 2017a, 40–44; 2017b; Halsall 2005, 33–35; Wood 2013, 1–19, 154–160; Rosen 2009, 28–30.

⁴² Springer 2006, 510–512; Heather 2005, 145–190; Goffart 2006, 17.

⁴³ Halsall 2005, with the bibliography 527–584; Pohl 2005, further reading 225–254 and 260–261.

⁴⁴ Jordanes, *De origine actibusque Getarum/Getica* 25.

Deacon referred to a Longobardian origin in this “workshop of nations”, trying to compare his Longobards to the famous and ancient Goths. Paul knew that many other peoples live there: *Est insula qui dicitur Scadanan [. . .] in partibus aquilonis, ubi multae gentes habitant.*⁴⁵ Goths and Longobards received a Scandinavian origin from the Ostrogothic court in Ravenna in the middle of the sixth century as well as throughout the Carolingian era. These writings had an afterlife. The Geographus Ravennatus defined, around 700, Scandinavia as an *Antiqua Scythia* to explain the origin of the Scythic Goths, Gepids and Danes. Three centuries later, Adam of Bremen entitled the Baltic Sea *mare Scythicum*. Adam classified all the peoples on the Baltic coasts as Scyths, including the Slavic peoples. Later still, Helmold of Bosau as Otto of Freising adapted Adam’s categories.⁴⁶

Jordanes tells the following story: In the year 1490 before Christ was born, the Goths arrived at the mouth of the Vistula with three ships after having left Scandinavia. This happened when Mose led his people from Egypt to the Holy Land and before the Trojan War. Normally, the Trojan war was the known and accepted first major historical event in ancient literature. The newly arrived Goths had to fight Rugians and Vandals. After great victories, they remained in *Gothiscandza* throughout the reign of five kings before leaving for southern Russia. It seems obvious that these tales of migration are narrations and literature, not historical facts.⁴⁷

Yet, modern scholarship defined migration stories as the beginning of history. “Germanic” history started – following the point of view of many 19th century scholars – with the migration from the Proto-Indo-European Eurasian homeland (*Urheimat*) in the Pontic steppes to Scandinavia. From then on “Germanic” peoples moved constantly southwards. Within the past 150 years, the chronological frame of “Germanic” history narrowed. The majority of scholars in the late 19th century had it starting in the Neolithic Age, when only some decades later it was the early Bronze Age. The 1930s defined the Jastorf culture, an Iron Age material culture in what are now southern Scandinavia and northern Germany, as the cradle of the Germans.⁴⁸ Roughly around the year 1920, Gustaf Kossinna (1858–1931), a linguist and professor of German archaeology at the University of Berlin, created his *siedlungsarchäologische Methode* (settlement archaeology) pointing out that regionally delimited ethnicity can be defined by the material culture excavated from a site.⁴⁹

⁴⁵ Paulus Diaconus, *Historia Langobardorum* 1, 1; cf. Pohl, Germanenbegriff [fn. 21] 174.

⁴⁶ *Ravennatis Anonymi cosmographia et Guidonis Geographica* 1, 8; Adam von Bremen, *Gesta Hammaburgensis ecclesiae pontificum* 2, 18–19; cf. Göckenjan 1995; Staab 1998, 1976.

⁴⁷ Kulikowski 2007, 43–70.

⁴⁸ Steuer 2004.

⁴⁹ Brather 2004, 65–67; 2001.

Popular interpretations still tend to pledge for these simple pictures. Maps in historical atlases, textbooks of Western civilization and general histories of the Middle Ages depict the migration of peoples with serpentine lines and arrows, implying clearly a place of origin and an area to stay. Very often, Gothic history thus begins in southern Scandinavia. This is based on Jordanes' account only. Neither is there a convincing analytical concept behind these maps, nor do the sources support their implications. The Gothic migrations on the Balkans, in Italy, Gaul and Spain as well as those of the Vandals to Africa and from there to Italy and the Balearic islands had been military operations of Barbarian armies. Sometimes these missions followed the orders of a Roman government in Ravenna or Constantinople, while other times they did not. The Barbarian armies participated in Roman civil wars or operated at their own cost. They fought with and against Rome. Without the scholarly and heavily loaded background of historical interpretations, the usual maps could be accepted as a delineation of the wars throughout the fourth to the sixth century. Tales of origin of migrating "Germanic peoples" were and are simple and at the same time fetching patterns to explain historical change. It is easy to base a narrative on migrations, invasions and change. Whether we like it or not such explanations will stay present in the back of many people's mind.

References

Sources

- Adam von Bremen, *Hamburgische Kirchengeschichte*. In: *Quellen des 9. und 11. Jahrhunderts zur Geschichte der Hamburgischen Kirche und des Reiches*, ed. Werner Trillmich/Rudolf Buchner. *Ausgewählte Quellen zur deutschen Geschichte des Mittelalters. Freiherr-vom-Stein-Gedächtnisausgabe* 11 (Darmstadt 2000) 137–499.
- Ammianus, *History III*. Books 27–31. *Excerpta Valesiana*, ed. John Carew Rolfe. The Loeb Classical Library 331 (Cambridge Mass., London 1939).
- Caesar, *The Gallic War*, ed. Henry John Edwards. Loeb Classical Library 72 (Cambridge Mass., London 1917).
- Herodotus, *The Persian Wars, Volume II Books 3–4*, ed. Alfred Denis Godley. Loeb Classical Library 118 (Cambridge Mass., London 1921).
- Incerti Auctoris Comoedia una cum Indice Verborum*, ed. Gunnar Ranstrand (Göteborg 1951).
- Iordanis Romana et Getica*, ed. Theodor Mommsen. *Monumenta Germaniae Historica, Auctores Antiquissimi* 5/1 (Berlin 1882).
- Geographer of Ravenna. In: *Itineraria Romana* 2, ed. Joseph Schnetz (Leipzig 1940).
- Orosius, *Die antike Weltgeschichte in christlicher Sicht* 1–2, ed. Adolf Lippold (Stuttgart 1985–1986).
- Paolo Diacono, *Storia dei Longobardi*, ed. Lidia Capo (Milano 1998).
- Posidonius 1. *The Fragments*; 2. *The Commentary*; 3. *The Translation of the Fragments*, ed. Ludwig Edelstein/Ian G. Kidd (Cambridge 1972–1999).
- Seneca, L. Annaeus, *Minor Dialogs Together with the Dialog "On Clemency"*, transl. and ed. Aubrey Stewart (Cambridge 1889).

- Le discours sur la royauté de Synésios de Cyrène à l'empereur Arcadius. Traduction nouvelle avec introduction, notes et commentaire, ed. Christian Lacombrade (Paris 1951).
- Tacitus in Five Volumes I. Agricola. Germania. Dialogus, ed. Maurice Hutton/Eric Herbert Warmington. The Loeb Classical Library 35 (Cambridge Mass., London 1914).
- Vegetius Renuat, Publius Flavius. Abriß des Militärwesens lateinisch und deutsch mit Einleitung, Erläuterungen und Indices, ed. Friedhelm L. Müller (Stuttgart 1997).
- Vegetius, *Epitome of Military Science*. Translated with notes and introduction, ed. N. P. Milner. *Translated Texts for Historians* 16 (Liverpool 2011).

Literature

- Beck, Heinrich/Capelle, Torsten/Kroeschell, Karl/Maier, Bernhard/Müller, Rosemarie/Roth, Helmut/Seebold, Elmar/Steuer, Heiko/Timpe, Dieter, *Die Germanen*. Studienausgabe, ed. Heinrich Beck/Heiko Steuer/Dieter Timpe (Berlin, New York 1998).
- Börm, Henning, Westrom. Von Honorius bis Justinian. Kohlhammer Urban-Taschenbücher 735 (Stuttgart 2013).
- Brather, Sebastian, s. v. Gustaf Kossinna. In: *Reallexikon der Germanischen Altertumskunde* 17 (Berlin, New York 2001) 263–267.
- Brather, Sebastian, *Ethnische Interpretationen in der frühgeschichtlichen Archäologie*. Geschichte, Grundlagen und Alternativen. *Reallexikon der Germanischen Altertumskunde, Ergänzungsband* 42 (Berlin, New York 2004).
- von Bredow, Iris, s. v. Tanais. In: *Der Neue Pauly* 12/1 (Stuttgart 2002) 7.
- Buraselis, Kostas, *Theia Dorea*. Das Göttlich-Kaiserliche Geschenk. *Studien zur Politik der Severer und zur Constitutio Antoniniana*. Akten der Gesellschaft für griechische und hellenistische Rechtsgeschichte 18 (Wien 2007).
- Camps, Gabriel, *Massinissa ou les débuts de l'histoire*. Aux origines de la Berbérie. *Libyca. Bulletin du Service des Antiquités Archéologie-Epigraphie* 8, 1961, 17–23.
- Demandt, Alexander, *Die Spätantike*. Römische Geschichte von Diocletian bis Justinian 284–565 n. Chr. *Handbuch der Altertumswissenschaft* 3/6 (München 2007).
- Demandt, Alexander, *Untergang des Römischen Reichs*. Das Ende der alten Ordnung. *Frankfurter Allgemeine Zeitung* 22. 1. 2016a, URL: <http://www.faz.net/aktuell/politik/staat-und-recht/untergang-des-roemischen-reichs-das-ende-der-alten-ordnung-14024912.html> [4. 7. 2016].
- Demandt, Alexander, *Lernen vom Alten Rom: Zuwanderer brachten den Untergang*. *Neue Zürcher Zeitung* 31. 1. 2016b, URL: <https://nzz.at/geist/lernen-vom-alten-rom-zuwanderer-brachten-den-untergang> [26. 12. 2016].
- Demandt, Alexander, *Untergang des Römischen Reichs*. Das Ende der alten Ordnung, *Frankfurter Allgemeine Zeitung* 22. 1. 2016c, URL: <http://www.faz.net/aktuell/politik/staat-und-recht/untergang-des-roemischen-reichs-das-ende-der-alten-ordnung-14024912.html> [4. 7. 2016].
- Demandt, Alexander/Farrenkopf, John (eds.), *Der Fall Spengler*. Eine kritische Bilanz (Köln, Weimar, Wien 1994).
- Dick, Stefanie, *Der Mythos vom "germanischen" Königtum: Studien zur Herrschaftsorganisation bei den germanischsprachigen Barbaren bis zum Beginn der Völkerwanderungszeit*. *Reallexikon der Germanischen Altertumskunde, Ergänzungsband* 60 (Berlin, New York 2008).
- Dobesch, Gerhard, *Das europäische 'Barbaricum' und die Zone der Mediterrankultur*. Ihre historischen Wechselwirkungen und das Geschichtsbild des Poseidonios. *Tyche Supplementband* 2 (Wien 1995).

- Drinkwater, John F., *The Bacaudae of fifth-century Gaul*. In: *Fifth-Century Gaul. A Crisis of Identity?*, ed. John F. Drinkwater/Hugh Elton (Cambridge 1992) 208–218.
- Engels, David, *Auf dem Weg ins Imperium. Die Krise der Europäischen Union und der Untergang der Römischen Republik. Historische Parallelen* (Berlin, München 2014).
- Farrenkopf, John, *Prophet of Decline. Spengler on World History and Politics* (Baton Rouge 2001).
- Ferrari Zumbini, Massimo, *Untergänge und Morgenröten. Nietzsche – Spengler – Antisemitismus. Studien zur Literatur- und Kulturgeschichte 14* (Würzburg 1999).
- Marilyn Friedman/Jan Narveson (eds.), *Political correctness: for and against* (Lanham 1995).
- Geary, Patrick J., *The Myth of Nations. The Medieval Origins of Europe* (Princeton 2002).
- Geus, Klaus, *Eratosthenes von Kyrene. Studien zur hellenistischen Kultur- und Wissenschaftsgeschichte. Münchener Beiträge zur Papyrusforschung und antiken Rechtsgeschichte 92* (München 2002).
- Göckenjan, Hansgerd, s. v. Skythen. In: *Lexikon des Mittelalters 7* (Stuttgart 1995) 1999.
- Goffart, Walter A., *Barbarian Tides. The Migration Age and the Later Roman Empire. The Middle Ages series* (Philadelphia 2006).
- Gruen, Erich, *Did Ancient Identity Depend on Ethnicity? A Preliminary Probe*. *Phoenix* 67/1–2, 2013, 1–22.
- Grünewald, Thomas, s. v. Kelten § 2 Historisches. In: *Reallexikon der Germanischen Altertumskunde 17* (Berlin, New York 2000a) 372–388.
- Grünewald, Thomas, s. v. Kimbern. In: *Reallexikon der Germanischen Altertumskunde 17* (Berlin, New York 2000b) 493–500.
- Halsall, Guy, *Movers and Shakers. The barbarians and the Fall of Rome. Early Medieval Europe* 8, 1999, 131–145.
- Halsall, Guy, *The Barbarian invasions*. In: *The New Cambridge Medieval History 1, c. 500–c. 700*, ed. Paul Fouracre (Cambridge 2005) 35–55.
- Halsall, Guy, *Barbarian migrations and the Roman West, 376–568. Cambridge medieval textbooks* (Cambridge 2007).
- Hartmann, Udo, *Das palmyrenische Teilreich, Oriens et Occidens. Studien zu antiken Kulturkontakten und ihrem Nachleben 2* (Stuttgart 2001).
- Hartmann, Udo, *Rezension zu Heather 2005*. *H-Soz-u-Kult*, 9. 7. 2007a, URL <http://hsozkult.geschichte.hu-berlin.de/rezensionen/2007-3-022> [4. 7. 2016].
- Hartmann, Udo: *Rezension zu Ward-Perkins 2005*. *H-Soz-u-Kult*, 9. 7. 2007b, URL <http://hsozkult.geschichte.hu-berlin.de/rezensionen/2007-3-022> [4. 7. 2016].
- Hartog, François, *Le miroir d'Hérodote. Essai sur la représentation de l'autre* (Paris 1980).
- Heather, Peter J., *The Huns and the End of the Roman Empire in Western Europe*. *English Historical Review* 110, 1995, 4–41.
- Heather, Peter J., *The Fall of the Roman Empire. A New History* (London 2005).
- Heather, Peter J., *The Huns and Barbarian Europe*. In: *The Cambridge companion to the Age of Attila*, ed. Michael Maas (Cambridge 2015) 209–229.
- Huß, Werner, *Die Quellen des Nils. Chronique d'Égypte* 65, 1990, 334–343.
- Huß, Werner, s. v. Afrika § 1 Begriffsgeschichte § 3 Römische Provinz. In: *Der Neue Pauly* 1 (Stuttgart 1996) 217–223.
- Kaufmann, Wolfgang, *Wenn Imperien sterben. Hedonismus, Egalisierung, Überalterung: Die spätrömische Dekadenz und ihre heutige Rezeption*. *Junge Freiheit* 52, 2016, URL www.jungefreiheit.de: Archiv [22. 1. 2017].
- Knaack, Gustav, s. v. Eratosthenes. In: *Pauly/Wissowa, Realencyclopädie der classischen Altertumswissenschaft VI* (Stuttgart 1907) 358–388.
- König, Ingemar, *Die gallischen Usurpatoren von Postumus bis Tetricus*. *Vestigia* 31 (München 1981).
- Kubitschek, Wilhelm, s. v. Karten. In: *Pauly/Wissowa, Realencyclopädie der classischen Altertumswissenschaft X/2* (Stuttgart 1919) 2022–2149.

- Kulikowski, Michael, *Rome's Gothic Wars. From the third century to Alarich* (Cambridge, New York 2007).
- Lohse, Tillmann, *A Collapsing Migratory Regime? The Map of the Barbarian Migrations and its Iconology at the Beginning of the 21st Century* (forthcoming).
- Lund, Allan A., *Zum Germanenbild der Römer. Eine Einführung in die antike Ethnographie* (Heidelberg 1990).
- Luther, Andreas, *Das gallische Sonderreich*. In: *Die Zeit der Soldatenkaiser. Krise und Transformation des Römischen Reiches im 3. Jahrhundert n. Chr.* 1, ed. Klaus-Peter Johne (Berlin 2008) 325–342.
- Mathisen, Ralph W., *Peregrini, Barbari, and Cives Romani. Concepts of Citizenship and the Legal Identity of Barbarians in the Later Roman Empire*. *American Historical Review* 111/4, 2006, 1011–1040.
- Merelli, Annalisa, *1,700 years ago, the mismanagement of a migrant crisis cost Rome its empire*. *Quartz* 7. 5. 2016, URL https://qz.com/677380/1700-years-ago-the-mismanagement-of-a-migrant-crisis-cost-rome-its-empire/?utm_source=qzfbarchive [7. 5. 2016].
- Mitthof, Fritz, *Zur Neustiftung von Identität unter imperialer Herrschaft: Die Provinzen des Römischen Reiches als ethnische Entitäten*. In: *Visions of Community in the Post-Roman World. The West, Byzantium and the Islamic World, 300–1100*, ed. Walter Pohl/Clemens Gantner/Richard Payne (Farnham 2012) 61–72.
- Nye, Joseph S., *Is America Like Rome?* *The Huffington Post*, 21. 4. 2015; URL: http://www.huffingtonpost.com/joseph-s-nye/america-like-rome_b_7147216.html [22. 12. 2016].
- O'Donnell, James J., *Review of Peter Heather, The fall of the Roman empire. A new history* (London 2005), and *Bryan Ward-Perkins, The fall of Rome and the end of civilisation* (Oxford 2006). *Bryn Mawr Classical Review* 2005.07.69, URL <http://ccat.sas.upenn.edu/bmcr/2005/2005-07-69.html> [4. 7. 2016].
- Pilkington, Nathan, *Five myths about the decline and fall of Rome*. *The Washington Post* 2. 12. 2016, URL https://www.washingtonpost.com/opinions/five-myths-about-the-decline-and-fall-of-rome/2016/12/02/1c06ee5a-b682-11e6-a677-b608fbb3aaf6_story.html?utm_term=.1423705e31cb&wpisrc=nl_headlines&wpmm=1 [3. 1. 2017].
- Pohl, Walter, *Der Germanenbegriff vom 3. bis 8. Jahrhundert. Identifikationen und Abgrenzungen*. In: *Zur Geschichte der Gleichung "germanisch – deutsch"*, ed. Heinrich Beck/Dieter Geuenich/Heiko Steuer/Dietrich Hakelberg. *Reallexikon der Germanischen Altertumskunde, Ergänzungsband 34* (Berlin, New York 2004a) 163–183.
- Pohl, Walter, *Vom Nutzen des Germanenbegriffes zwischen Antike und Mittelalter: eine forschungsgeschichtliche Perspektive*. In: *Akkulturation. Probleme einer germanisch-romanischen Kultursynthese in Spätantike und frühem Mittelalter*, ed. Dieter Hägermann/Wolfgang Haubrichs/Jörg Jarnut. *Reallexikon der Germanischen Altertumskunde, Ergänzungsband 41* (Berlin, New York 2004b) 18–34.
- Pohl, Walter, *Die Völkerwanderung. Eroberung und Integration* (Stuttgart 2005).
- Pohl, Walter, *Romanness. A multiple identity and its changes*. *Early Medieval Europe* 22/4, 2014, 406–418.
- Rohrbacher, David, *The Historians of Late Antiquity* (London, New York 2002).
- Rosen, Klaus, *Die Völkerwanderung* (München 2009).
- Spengler, Oswald, *Der Untergang des Abendlandes. Umriss einer Morphologie der Weltgeschichte* 1–2 (Wien 1918, München 1922).
- Springer, Matthias, s. v. *Völkerwanderung*. In: *Reallexikon der Germanischen Altertumskunde* 32 (Berlin, New York 2006) 509–517.
- Staab, Franz, *Ostrogothic geographers at the court of Theoderic the Great. A study of some sources of the anonymous cosmographer of Ravenna*. *Viator* 7, 1976, 27–58.
- Staab, Franz, s. v. *Geograph von Ravenna*. In: *Reallexikon der Germanischen Altertumskunde* 11 (Berlin, New York 1998) 102–109.

- Steinacher, Roland, Zwischen Rom und den „Barbaren“. Anmerkungen zu militärischen Organisationsformen der Spätantike. In: Krieg und Wirtschaft. Von der Antike bis ins 21. Jahrhundert, ed. Johannes Giessauf/Walter Iber/Wolfram Dornik (Innsbruck, Wien, Bozen 2010) 161–180.
- Steinacher, Roland, Wiener Anmerkungen zu ethnischen Bezeichnungen als Kategorien der römischen und europäischen Geschichte. In: Fluchtpunkt Geschichte. Archäologie und Geschichtswissenschaft im Dialog, ed. Stefan Burmeister/Nils Müller-Schaeßel. Tübinger archäologische Taschenbücher 9 (Münster 2011) 183–206.
- Steinacher, Roland, Von Rätien und Noricum zu Tirol. Geschichtsbilder und Meistererzählungen für das erste Jahrtausend unserer Zeit. In: Berg und Leute. Tirol als Landschaft und Identität, ed. Ulrich Leitner (Innsbruck 2014) 132–162.
- Steinacher, Roland, Die Vandalen. Aufstieg und Fall eines Barbarenreichs (Stuttgart 2016).
- Steinacher, Roland, Rom und die Barbaren. Völker im Alpen- und Donauraum 300–600. Urban-Taschenbücher 777 (Stuttgart 2017a).
- Steinacher, Roland, Wanderung der Barbaren? Zur Entstehung und Bedeutung des Epochenbegriffs „Völkerwanderung“ bis ins 19. Jahrhundert. In: Vom Wandern der „Völker“. Zur Verknüpfung von Raum und Identität in Migrationserzählungen, ed. Hans-Joachim Gehrke/Kerstin P. Hoffmann/Felix Wiedemann. Berlin Studies of the Ancient World 41 (Berlin 2017b) 65–93.
- Steuer, Heiko, Das „völkisch“ Germanische in der deutschen Ur- und Frühgeschichtsforschung. Zeitgeist und Kontinuitäten. In: Zur Geschichte der Gleichung „germanisch – deutsch“, ed. Heinrich Beck/Dieter Geuenich/Heiko Steuer/Dietrich Hakelberg. Reallexikon der Germanischen Altertumskunde, Ergänzungsband 34 (Berlin, New York 2004) 357–502.
- Strobel, Karl, Das Imperium Romanum im „3. Jahrhundert“: Modell einer historischen Krise? Zur Frage mentaler Strukturen breiterer Bevölkerungsschichten in der Zeit von Marc Aurel bis zum Ausgang des 3. Jh. n. Chr. Historia-Einzelschriften 75 (Stuttgart 1993).
- Timpe, Dieter, s. v. Entdeckungsgeschichte des Nordens in der Antike § 1. In: Reallexikon der Germanischen Altertumskunde 7 (Berlin, New York 1989) 337–347.
- Timpe, Dieter, Kimberntadition und Kimberntmythos. In: Germani in Italia, ed. Piergiuseppe Scardigli/Barbara Scardigli, Monografie scientifiche. Consiglio Nazionale delle Ricerche. Serie scienze umane e sociali (Rom 1994) 23–60.
- Ward-Perkins, Bryan, The Fall of Rome and the End of Civilization (Oxford 2005).
- Witschel, Christian, Krise – Rezession – Stagnation? Der Westen des römischen Reiches im 3. Jahrhundert n. Chr. Frankfurter althistorische Beiträge 4 (Frankfurt/Main 1998).
- Wolfram, Herwig, Das Reich und die Germanen. Zwischen Antike und Mittelalter. Siedler deutsche Geschichte (Berlin 1998).
- Wolfram, Herwig, Die Goten. Von den Anfängen bis zur Mitte des sechsten Jahrhunderts. Entwurf einer historischen Ethnographie (München 2009).
- Wood, Ian N., The modern origins of the early Middle Ages (Oxford 2013).
- Woolf, Greg, s. v. Romanisation/Romanisierung. In: Der Neue Pauly 10 (Stuttgart, Weimar 2001) 1122–1127.
- Woolf, Greg, Tales of the Barbarians. Ethnography and Empire in the Roman West. Blackwell-Bristol lectures on Greece, Rome and the classical tradition (Malden 2011) 44–51.
- Zimmermann, Klaus, s. v. Libyes, Libye. In: Der Neue Pauly 7 (Stuttgart 1999) 151–152.

Frans Theuws

Burial Archaeology and the Transformation of the Roman World in Northern Gaul (4th to 6th Centuries)

Scientific analysis is becoming increasingly important in research on the remains of humans, animals and plants and the material culture of early medieval Europe.¹ We do not know where this will lead us but we all sense that major changes in the field lie ahead. Isotope analyses, however, do not seem to corroborate traditional interpretations of the movement of people and material culture.² Scientific research on objects shows that they were exchanged on an almost global scale.³ We need to be optimistic about integrating scientific input into analyses of early medieval societies and about knowing what the limits are. However, in any interdisciplinary research effort it is crucial to ask proper research questions. What will we subject to scientific analysis and to what end? We could ask a multitude of questions. However, scholars in different fields must realise that all fields are changing, and that each field contains schools of thought that often hotly debate the interpretations of data. This is certainly the case in early medieval archaeology, where one scholar may feel it is a waste of money to answer questions asked by another. Early medieval archaeology, and more specifically burial archaeology, has seen a series of intellectual transformations since the 19th century in response to societal developments ranging from nationalism to post-modernism.⁴ New intellectual ways of thinking have not replaced older ones; today there is not a paradigm shift, but a growing diversity of interpretation. In today's truly post-modern environment, one interpretation is no longer seen as better than another, although some no longer seem to fit the ideologies of modern society and others have a growing problem with the ever-increasing body of data.

One interesting development could be the fact that scientific research not only provides new types of data but also influences the intellectual condition within early medieval archaeology because it affects modern scholarly perceptions of the relationship between human beings and material culture.

It is therefore imperative that we archaeologists reflect on our interpretative models before engaging in scientific research and that we communicate these reflections to scientists so that they can understand the ongoing debate in our field. I see

1 I would like to thank Susanne Brather-Walter for inviting me to the Freiburg conference and for her patience. I also thank Dieter Quast for the inspiring and exciting discussion on Childeric's grave.

2 Schuh and Makarewicz (2016) present an interesting example of how isotope analyses complicate the traditional interpretation of the origin of migrants on the basis of material culture.

3 Calligaro et al. 2006–2007; Pion/Gratuze 2016.

4 Fehr 2010; Effros 2012.

this paper as a contribution to the debate on the interpretations of the archaeological correlates of the burial ritual in late Roman and early medieval times in northern Gaul. I believe that such reflections should play an important role in deciding how to engage with scientific research into the human remains and material culture recovered from early medieval burials.

Late Roman Northern Gaul

Imagine Clovis riding up to the town of Reims where he will be baptised by bishop Remigius.⁵ What would he have seen on his way to the town gates? He probably used Roman roads but he must have passed many a ruined villa. Despite its devastation, the landscape around Reims could still be characterised as a Roman landscape. Following Pierre Bourdieu's suggestion that moving through space is the equivalent of moving through a system of related values, norms and ideas, we can imagine that Clovis internalised some, if not many, of the values relating to a ruined Roman landscape.⁶ There is currently a debate as to just how desolate this landscape was. There were important regional differences in the extent to which the Roman material inheritance had disappeared, or survived in a transformed fashion. I believe that northern Gaul was hard hit. A world of ruins lay between the few shrunken towns with their inhabited surroundings. On the other hand, life in the region continued. Many roads and quite a number of fortresses and bridges were still in use. The other focal points of continuity were the late Roman churches, especially the episcopal churches and martyr shrines of the major centres, although there were few of these in the northern part of Gaul where there are discontinuities in the reconstructed bishops' lists of many sees (Fig. 8.1).⁷

Although the Roman state collapsed and gradually ceased to have any direct involvement in the daily life of the inhabitants of northern Gaul, it is likely that most people inhabiting this world in the fifth century felt that they were still living in a Roman landscape, if not the Roman world itself, although the political situation had changed quite drastically. Of course, the ruined landscape may have brought about new perceptions of Roman-ness, since the thoughts evoked by ruins are different from those prompted by an intact and functioning infrastructure. To contemporaries, it must also have been clear that the once flourishing empire had come to an end, but different agents will have developed different perceptions of the past and present. What thoughts were uppermost in Clovis' mind as he passed through the gates of Reims?

A crucial aspect of late Roman northern Gaul was its changing population. By the end of the third century a significant portion of the original population had disappeared,

⁵ Dierkens 1996.

⁶ Bourdieu 2008 [1977], 90.

⁷ Weideman 1990.



Fig. 8.1: Northern Gaul in early Merovingian times. 1 tidal flats; 2 land above 300 m (middle range mountains); 3 moors; 4 bishoprics with continuous bishops' lists; 5 episcopal seat; 6 episcopal seat terminated; 7 vicus; 8 late Roman fortress in use.

leaving *villae*, villages and fields abandoned. New inhabitants appeared, however. In the past this colonisation was considered a one-way series of events, with immigrants from outside the empire settling in northern Gaul as conquerors, supposedly leading to the Germanisation of society. In my view, this model – based on the academic dichotomy of Roman-Germanic and the concept of cultural homogenisation – is not very helpful when it comes to clarifying the complicated process of societal change and changing identities in this part of the Roman empire.⁸ If we accept the traditional model, we acknowledge that these immigrants were immune to what the surrounding landscape offered. Moreover, migration – or rather mobility – went back and forth in many directions.

⁸ Theuvs 2000.

The empty lands of northern Gaul may have attracted people from all over. The academic dichotomy and archaeological research on this period have their roots in the rhetoric of late Roman authors.⁹ We have to ask ourselves to what extent we should still hold on to them. Roman concepts of the other are not necessarily the best tools for analysing societal developments in northern Gaul.

I would like to discuss two topics that I have dealt with separately earlier but which I feel would be interesting to present as parts of a single perspective on changing burial rites in the late Roman and early medieval world. They are: 1. the development of new claims on the land and their ritual formation, and 2. Childeric's grave. This will give me an opportunity to present alternative perspectives on early medieval continental burial rites.¹⁰

Late Roman Burial Rites and Claims on Land

The collapse of the Roman state had serious consequences for the social organisation of production in northern Gaul. The majority of Roman *villae* no longer functioned as they had in the second and early third centuries.¹¹ Northern Gaul must have contained vast stretches of *agri deserti* in the fourth and fifth centuries. There will have been regional variation in rural living conditions, with those around Trier probably differing from those around Tournai, Paris or Cologne. Nevertheless, they seem to have shared one characteristic. The archaeological record has a surprising lack of aristocratic habitation sites from the fifth to seventh centuries.¹² An important question that has yet to be answered satisfactorily is the extent to which aristocratic groups controlled the countryside in this region during the fifth and sixth centuries.¹³ Moreover, it is unlikely that the Roman tax system survived intact in northern Gaul.¹⁴ From a Roman institutional point of view, these may have been seen as negative developments but were they regarded as such by those seeking to create a living in this landscape?

The analysis of burial rituals has played an important role in the study of the transformation of this society in the fourth to seventh centuries. In the past, archaeologists linked important changes in burial rites to historiographical models, often based on discourses in Roman and early medieval narrative sources. The opposition between Romans and barbarians took centre stage in this ancient literature because migration

⁹ I will deal with the relationship to written texts in a section below.

¹⁰ See Theuws 2000, 2009; Theuws/Alkemade 2000 for early reflections on this topic. Unfortunately, I have not published my 1999 Kalamazoo paper 'Sacred fictions and Childeric's grave'. However, I now interpret the grave somewhat differently from my views expressed in Theuws 2009, 314, note 153.

¹¹ Van Ossel/Ouzoulias 2001.

¹² Peytremann 2003; Loveluck 2013.

¹³ Theuws in press.

¹⁴ Wickham 2005, 102–115.

and ethnicity had become important political issues, as they subsequently have done for modern historiography and archaeological research.¹⁵ However, it took archaeologists quite some time to realise that historiography was re-evaluating the ancient texts in the context of what is now known as the linguistic turn.¹⁶ Historiography now provides alternative, and probably better, insights into the backgrounds and meanings of early medieval texts by looking at the context of their production and unravelling the deeper meaning, discourses and (at times concealed) messages or intentions of the narratives. Archaeologists who browse through recent historiography with the intention of finding out *‘Wie es eigentlich gewesen ist’*, to quote the famous adage of German historian Leopold von Ranke, are likely to be disappointed. They will find a lot of history of mentalities, of political ideas and analyses on discourses on the other instead of certainties about social conditions and people’s identities and self-identities.

Archaeologists have to live with the fact that historiography is no longer a supplier of ready-made models that can be applied to the archaeological evidence. Moreover, there might not be a simple relationship between perceptions of the other – more specifically the Germanic people – in texts by Roman authors, the nature of identities of larger social aggregates (ethnic formations) as described in early medieval narratives and the meanings of burial rites. However, in the past and to this day, especially in continental archaeology, this relationship is still considered a close one by scholars who accept the perceptions of past authors as factual evidence that can be likened to the factual evidence from cemetery excavations. Later, I will explain that the relationship between past perceptions and present archaeological data could not be more complicated because, like texts, archaeological data – such as the remains of burial rites – might also be the result of discourses on, say, the position of women and men in society, the nature of the body, or the nature of leadership. In that case the comparison between historiographical models and archaeological models based on burial evidence would be on the level of discourses rather than social practices.

Burial rites in northern Gaul were already changing in Roman times. Inhumation replaced cremation, a process that had already started in urban contexts in the late second century. In the fourth century new elements appeared in the sets of objects deposited in graves. Axes, lances, and bows and arrows appeared as grave goods in the graves of a fairly small number of men and indeed some boys.¹⁷ Other ‘real weapons’ such as swords and shields are extremely rare. In past research, archaeologists regarded these objects as weapons, although some of the axes look rather like carpenters’ tools or are so small as to appear impractical. Depositing weapons in graves was not supposed to be a Roman practice. Consequently, archaeologists considered these graves to be those of non-Romans or, more precisely, Germanic people, and because the objects were

¹⁵ Halsall 2014.

¹⁶ Spiegel 1997. See for instance Goffart 1988.

¹⁷ Böhme 1974.

viewed as weapons the graves were identified as belonging to Germanic warriors. By mapping these graves, you could illustrate the Germanic settlement or conquest of Gaul and the process of barbarisation or Germanisation.¹⁸

An alternative interpretation is possible if we consider the symbolic meanings of these objects.¹⁹ The axe can be related first and foremost to chopping wood or, in other words, to land clearing or reclamation. The lance was a symbol of authority and power in both the 'barbarian' and Roman world but, like bows and arrows, it was also widely used to hunt or rather to represent the hunt. The hunt combines many symbolic meanings of the axe, lance, and bow and arrows. After all, it was during the hunt that *virtus* and leadership were displayed, that power relations were made visible and thus reproduced, but also, as I have suggested, that claims on land were represented. You hunt where you are the master. I have suggested that all three new types of objects in the graves of some men (axes, lances, bows and arrows) referred to the clearing and control of land and not to the Germanic ethnic identity of the deceased. Moreover, the symbolic meanings of the objects did not necessarily refer to the role of warrior. I have interpreted this late Roman burial rite as a possible way to substantiate a new method of claiming land and a ritual practice to embed groups in the landscape.²⁰

If we redraw the old map, we see that these graves are relatively rare in the most militarised zones of northern Gaul, the Rhine limes and coastal areas.²¹ It is also remarkable that no such graves have been found as yet in the regions where the Franks were supposed to have settled in the fourth and fifth centuries. Instead, they were found in between the habitation cores of northern Gaul in areas marked in green on the map (Fig. 8.2). The sites marked 'P' are the towns with a *prefectus laetorum*.

18 See for instance Böhme 1974; 1999; 2002; for a somewhat later period: Périn 1998; Dierkens/Périn 2003.

19 For a more extensive discussion of the method of looking at symbolic meanings, see Theuws 2009. Recent years have seen a nuanced debate on the interpretation of 'Germanic' graves. For a lively discussion of almost all important positions, perspectives and subtleties of different authors' interpretations, including my reading of the graves with 'weapons', see Halsall 2010, 131–167. A number of Guy Halsall's papers have been collected and reprinted in Halsall 2010. I will use that edition, but refer between brackets to the date of the original publication as follows: Halsall 2010 [2000] as the dates show that he can be considered one of the forerunners of the revisionist debate on late Roman 'Germanic' graves. If no date is given between square brackets, the reference is to one of his comments in the 2010 book.

20 Halsall (2010, 157–158) commented that this interpretation places too little emphasis on the element of power, and that I would be foolish not to accept that power play was important in late Roman times. However, I am interpreting a burial rite in which power play may not be the most important element. I am not describing the workings of late Roman society in the northern Gaulish countryside, which may not be possible on the basis of burial evidence, as will be made clear later. Like a saint's Life, burial evidence could be a discourse on certain positions in society rather than actually reflecting power practices. It is on the dominant role of power in burial rites that our opinions differ.

21 New discoveries can be added to this map but they do not essentially change the distribution pattern. It would be worthwhile to make a new inventory.

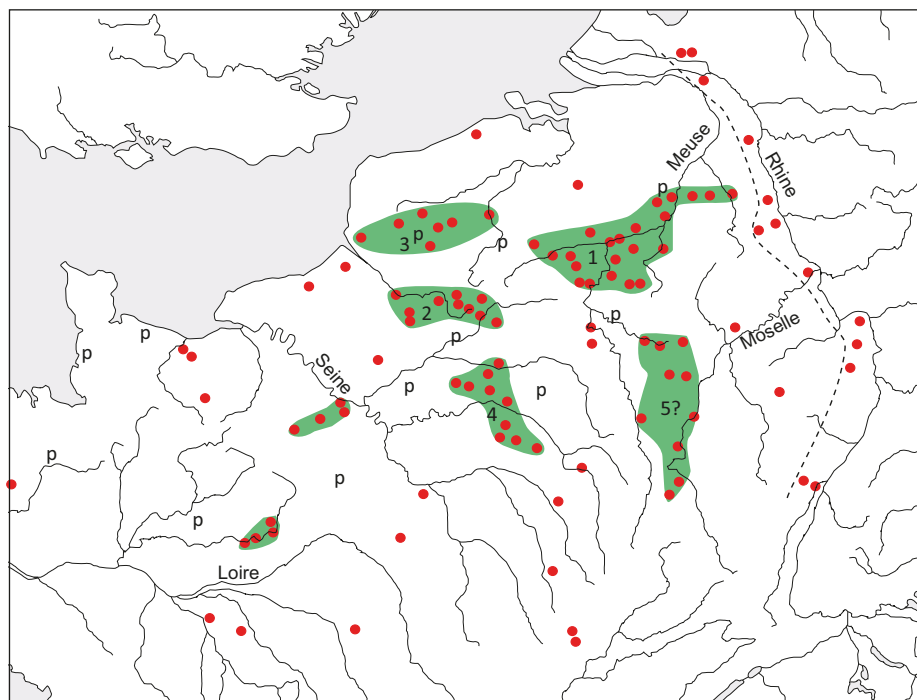


Fig. 8.2: Northern Gaul. Late Roman graves with axes, lances, bow and arrows. Places marked with a P have a *prefectus laetorum*. The green areas indicate concentrations of such graves (after Theuvs 2009).

These *prefecti* were in towns in the white inhabited areas in between. What I have suggested is that the people who deposited axes, lances, and bows and arrows in graves were occupying and claiming *agri deserti* in peripheral zones but they did so independently of the patron-client relationships of the Roman social organisation of production. In the eyes of those who saw themselves as Romans, these people may have placed themselves outside the socio-political sphere considered to be Roman. But this does not necessarily mean that they were ‘Germanic’ settlers or that they came from across the Rhine. Those who saw themselves as ‘Romans’ might have viewed them as ‘barbarians’ even if they did not come from across the Rhine where the barbarians lived, but from other parts of the Roman empire. It is interesting that the symbolism used by these people, who I suspect were backing away from Roman aristocratic control, was not necessarily non-Roman.

Halsall has already pointed out that a similar burial rite barely existed in the barbarian regions across the Rhine.²² References to the hunt in the context of

²² Halsall 2010[1992; 2000].

burial relates to values of the Roman aristocracy, although we need not accept that the values copied were exactly the same. Indeed, we could be dealing with a situation in which a group attempting to escape Roman aristocratic control was using that same aristocracy's symbols of power to achieve its goal. I do not suggest that the men whose graves contained axes, lances, and bows and arrows were aristocrats. Rather, they were locals for whom a burial rhetoric was used that incorporated elements borrowed from Roman aristocrats in order to voice their kind of claims on the land, away from the control of those very aristocrats. Instead of asking whether this burial rite was Roman or Germanic, and making suggestions about the region of origin of the deceased, we should consider the changing ritual repertoires of the fourth to sixth centuries as the result of a process of reflection, interpretation and appropriation of various cultural sources by a variety of people and groups.²³

The burial rites were changing because new identities and relations of production were being created in northern Gaul, and because burial rites played an important part in the creation of these identities and relations (see below). The Roman discourse with its Roman/barbarian dichotomy, which developed into a modern theorem and analytical construct, is therefore not very helpful when it comes to analysing the changing burial rituals. I prefer to opt for a concept of culture inspired by Frederic Barth, in which agents reflect on cultural sources at their disposal and develop new ritual repertoires instead of being passive receivers of culture imposed on them in some mysterious and inconceivable way.²⁴

Fifth-Century Burial Rites

Ritual repertoires kept changing in the course of the fifth century. New elements appeared in the burial rites, such as the deposition of real weapons (swords and shields) in a limited number of graves. This addition of real weapons in the fifth century could indicate that the position of those who made claims on land was gradually changing now that the power of the Roman state had disappeared. These men may have been buried with swords and shields in order yet again to construct new identities, relating not only to claims on land but also to the ability to protect. Later in the Middle Ages a *vir potens* was a man who could provide protection, using

²³ Theuws 2000.

²⁴ Barth 1992.



Fig. 8.3: Northern Gaul. The distribution of graves with swords of different types in the second half of the fifth and early sixth century (after Theuvs/Alkemade 2000).

violence if necessary.²⁵ These fifth and early sixth-century graves with swords were found in various parts of northern Gaul but are conspicuously absent in some regions, such as northwestern France, the Moselle/Upper Meuse region and central Gaul with the Loire River basin (Fig. 8.3).²⁶

There is one important element missing from the graves of the men buried with these swords: crossbow brooches of the late Roman empire. It is generally accepted that these brooches referred to positions, primarily military ones, in the Roman

²⁵ Leupen 1985.

²⁶ Theuvs/Alkemade 2000. The absence of the swords in northwestern France seems to me to be at odds with the conquest model advocated by Périn 1998).

state system.²⁷ Ellen Swift analysed the distribution of those brooches and concluded that their meaning must have changed over time because they also came to refer to civil positions. Moreover, the later types are mainly found in the interior of the empire away from the defended frontiers. It is therefore surprising that there were no crossbow brooches in the weapon burials of the second half of the fifth and early sixth century, although the emperor's entourage still wore them as can be seen on the famous mosaic depicting Justinian in San Vitale in Ravenna.²⁸ I consider their absence an important symbolic statement. These burials were part of the construction of new identities independent of the rhetoric and symbols of the Roman state.

However, it is too easy to interpret the graves as belonging to men in the service of the king of the Franks.²⁹ In particular, the graves containing Krefeld-type swords, the majority of which date to the second half of the fifth century, were found in areas where Childeric's power would have been negligible (Baden-Württemberg in Germany, southern England). On the other hand, we already observed that they are conspicuously absent in some areas such as northwestern France (with the exception of Childeric's grave), the Moselle valley and the area south of the River Seine, where Childeric is supposed to have been very active.³⁰ In fact, I believe we have no proper understanding of what fifth-century Frankish 'kingship' meant in terms of territorial control. I consider the new burial rites of the second half of the fifth century to be a rhetorical strategy in the creation, yet again, of new types of local – or at best regional – identities whose relationship with the exercise of power we do not know about at a high level of aggregation, and in which independence of the Roman state seems to have been an important element. There is one notable exception, however – Childeric's grave, in which a splendid crossbow brooch was found. I'll come back to this grave later.

Sixth-Century Lavish Burials

This trend continued in the sixth century. The lavish burials of men, such as the two at Saint-Dizier in France, whose graves – together with that of a woman and a horse – formed a small, isolated burial ground, are usually considered those of warriors and followers of Clovis' sons.³¹ French archaeologists call them '*tombes*

²⁷ Swift 2000.

²⁸ [https://it.wikipedia.org/wiki/Basilica_di_San_Vitale_\(Ravenna\)#Mosaici](https://it.wikipedia.org/wiki/Basilica_di_San_Vitale_(Ravenna)#Mosaici) [8. 10. 2016]; <http://whc.unesco.org/en/list/788/video> [8. 10. 2016].

²⁹ See also Brather 2014.

³⁰ Does this mean that the king's followers who died during the Loire campaigns were not buried according to this custom?

³¹ Truc 2012.

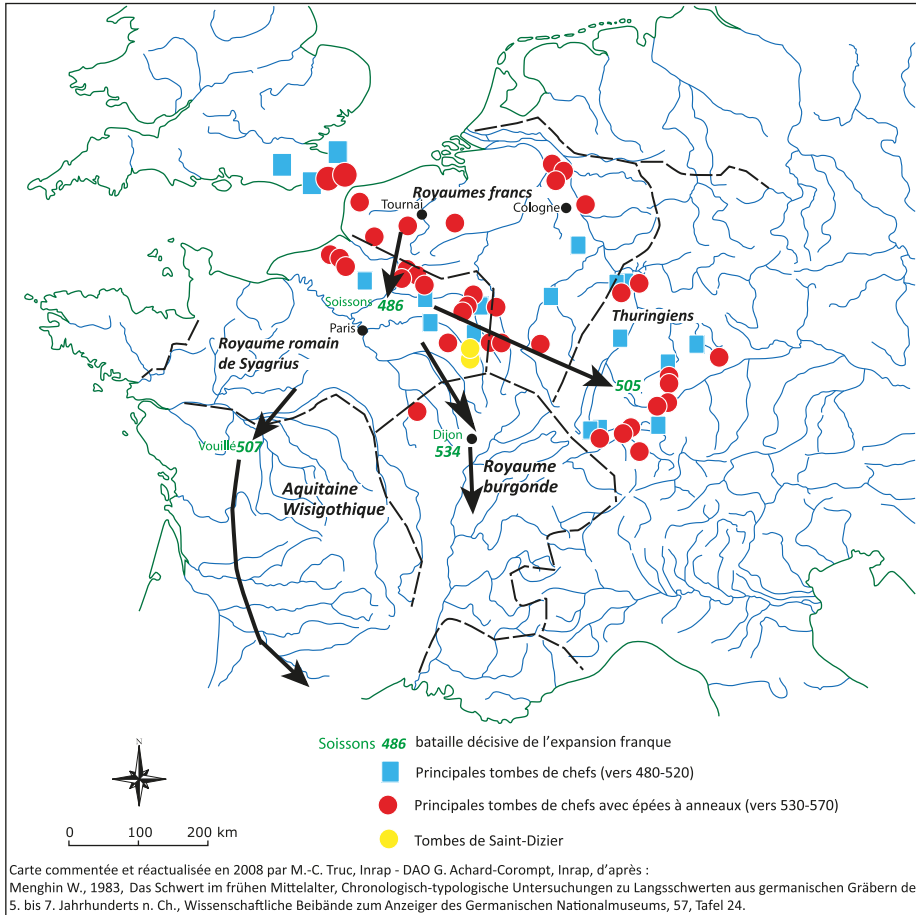


Fig. 8.4: A comparison of the distribution of graves with ring swords and older sword types (Taken with permission from Truc 2012).

de chef of Germanic origin – in other words, the graves of men who were strategically positioned to control the newly conquered areas.³² This institutional interpretation, which takes as its point of departure a close relationship between changing burial rites and evenemential history and what Guy Halsall has termed the ‘moving front model of Frankish conquest’,³³ is not necessarily the only possible explanation. The distribution of ring swords, as presented by Cécile Truc for instance, more or less matches that of the older swords (Fig. 8.4).³⁴

³² Périn 1998.

³³ Halsall 2010, 188.

³⁴ In her interpretation of the graves of Saint-Dizier, Truc herself adopts a more nuanced position.

Burials with ring swords did not extend into new areas except for northwestern France, which is to the north rather than the south. The graves do not seem to relate to expansion but to represent a further development in more or less the same area.

An alternative interpretation can be suggested for these graves, one in which the king may have played a role but which explains the location of the graves. We could also ask why they were not found further south. The ring-sword burials could represent an ideology centred on Merovingian kings in a way suggested by Bazelmans based on his analysis of the relationship between kings and warriors in *Beowulf*.³⁵ Such an ideology may have developed in the course of the sixth century and may not be behind the graves of local powerbrokers of the fifth and early sixth century.

Yet another alternative interpretation of lavishly furnished male and female graves is that they do not represent a single historical person (a specific follower of the king, whose name we unfortunately do not know) but are the result of a communal effort to create ancestors with protective capacities (men with weapons) or reproductive capacities (lavishly buried women).³⁶ This alternative interpretation calls into question the modern concept of personhood based on individualism, which is implicitly present in the traditional interpretations of those wealthy graves.³⁷ I will not dwell any longer on these richly furnished sixth-century graves because they are the subject of research by my group of Research Master's students and myself; I hope to come back to them in the near future.

I will try to answer another question: where does Childeric's burial fit in this development? The answer depends entirely on how you perceive the nature of the burial ritual. I will therefore interrupt the 'historical' narrative once again in order to reflect on the intellectual development of burial archaeology. I will suggest alternative ways of looking at burials in the early Middle Ages and interpret Childeric's burial from that point of view.

Interpreting Early Medieval Burials

Until recently, continental Merovingian burial archaeology was dominated by a single paradigm based on the assumption that the image of the dead represented that of the living. Other elements of that paradigm were a close relationship to a historiographical discourse on power, politics and conquest, ethnic ascriptions of finds and a strong interest in vertical social relationships. Because of this close link to the historiographical debate, all efforts at interpretation were geared towards

³⁵ Bazelmans 1999.

³⁶ Theuws 2009; 2013.

³⁷ Theuws 2013.

understanding what happened at the upper echelons of society and large social aggregates such as tribes, kingdoms and ethnic groups. Archaeology sought to contribute to what was essentially an evenemential history in a Braudelian sense.³⁸ In order to contribute to this historiographical debate we had to develop our chronologies in as much detail as possible. A huge effort was invested, and is still being invested, in creating highly detailed tyochronologies that tend to neglect various important cultural phenomena.³⁹ But burial rites were performed by local groups and families whose cosmology, norms, values and ideas may not have been identical to those at the top. What do we actually know of village life and the culture of the rural population in the northern Gaulish countryside? What do we know, for instance, about ritual repertoires and life-cycle rites? There may have been interesting rural cultures, elements of which were distributed over large areas through the mobility of the rural population or marriage exchanges and the like, and which played an important role in burial rites.

Although the 'historiographical' paradigm has since been criticised, mainly in an Anglophone research context⁴⁰, and to a lesser degree in Germany⁴¹, it is still very strong. New interpretations refer to social strategies in relation to local competitions for power.⁴² But inspired by anthropological and ethnographic research, these interpretations also include the world of values, ideas and world views within a society. Aspects such as martiality, gender positions, personhood, memory, an ancestral world, emotions and the sensory experience of burial and cremation are discussed, although mainly in the Anglophone world. However, the burial ritual can also be considered a discourse on various societal aspects and world views.

This means that, as in texts, a number of both conscious and unconscious rhetorical strategies may be employed in the burial ritual.⁴³ It is an arena where structural aspects of society articulate with the agency of those performing the rite. This articulation could be the cause of much of the variation observed in aspects of the burial rituals, such as inhumation, gender representation, grave orientation and cemetery location, despite the fact that the rituals were also clearly governed by many conventions. This perception of the burial rite as a rhetorical strategy differs considerably from the old paradigm, which holds that persons/agents unquestioningly followed blueprints for acts meant to express ethnic identity, gender roles and vertical social positions.⁴⁴ As I have said, interpretations relating to society as a

38 Braudel 1972/1973.

39 Kars 2011, 2012, 2013.

40 E.g. Härke 1991, 1992, 2000; Halsall 2010 [1992, 1998, 2000]; Theuws/Alkemade 2000; Theuws 2009, 2013; other scholars could be cited.

41 Fehr 2002; von Rummel 2002; Brather 2004; Fehr 2010.

42 This point is especially advocated in the writings of Guy Halsall; see Halsall 2010.

43 Theuws 2009.

44 Theuws 2000.

whole predominated in the old paradigm, whereas today the agency of small groups (families, local groups) is given a more prominent place.⁴⁵

If we browse through the anthropological literature and ethnographic examples of burial rites, it is clear that a ‘blueprint-for-acts’ interpretation must be too simple an explanation of the early medieval burial ritual. It ignores the complexities of practices and meanings of burial rites in general, as well as the fact that the archaeological correlates – the graves and cemeteries – are the product of ritual activities rather than historical events. To reiterate, burial rites can be considered performative acts in which social conditions are created, perhaps unconsciously in relation to norms, values and ideas and the cosmological order. Moreover, the burial ritual is also a time period and the cemetery a place in the landscape where various actors negotiate important aspects of society and world views. It is a ritual in which there is a constant back and forth between traditions, values, norms and ideas and the reflections on them by various agents or groups of agents. It is truly an arena for a structure-agency debate. This is also the reason why there is so much variability – ambiguous meanings are part and parcel of strategies employed by families – and why we have so much fuzzy data.⁴⁶ We have to acknowledge that ambiguity is part of the rhetoric of the burial rite and that studying variability rather than homogeneity needs to be developed in the coming years.

An important element that should be considered when interpreting the early medieval burial remains is the relationship between the living person and the dead person we find in the grave. There is one certainty: the deceased was once alive. Traditional continental interpretations barely consider the transformations a person may go through during the burial rite and consider the dead person a reflection of the living. Doubts have recently been voiced on the Continent too, suggesting that the dead might be ideal types, or stereotypes of social positions. However, if that were the case we have no instrument for understanding variability in burial rites; we would like to know who created which stereotypes, and with what intentions or effects.⁴⁷ On the other hand, it is clear that there were some relationships between the living and the dead. Burial rites seem to have been geared to the sex and age at death, translated into gender positions and age categories.⁴⁸ Women and men were buried differently, as were young and old. But again, there were no rules for all of Gaul as there appear to have been regional differences.

An analysis of the relationship between the living and the dead person could start by considering the burial rite as a life-cycle ritual that is usually a rite of passage. In a rite of passage a person is transformed from an old to a new status via an

45 Lucy 2002.

46 Halsall 2010 [2003], 219.

47 Bertens 2014 [2001], 94–95.

48 Halsall 1996; Hadley/Moore 1999; Stauch 2008.

intermediate one.⁴⁹ This is accomplished through rites of separation and rites of incorporation, which suggests that a person is transferred from one status to another after a series of burial rites. This model thus predicts that the dead person is not identical to the living one, although he or she might have the same gender, as in rites relating to marriage.

An analysis of the relationship between the living and the dead person should also include conceptions of personhood.⁵⁰ Most traditional interpretations take as their point of departure our modern conceptualisation of personhood, determined by individualism. With post-modern ideology, which has resulted in attention to the agency of individuals in today's archaeology, our modern conceptions of the person have often crept into many analyses, although in historiographical research our modern conceptions of the individual are not traced back to the early Middle Ages.⁵¹ This unconscious presence of modern concepts when analysing the early medieval dead is visualised time and again by the representations we are all familiar with of dead people as if they were alive in museums, exhibition catalogues and re-enactments. Incidentally, I suspect that most visualisations of women are probably male constructs because they are often represented as young, slim Claudia-Schiffer-type women, independent of the age of the deceased.

Alternative concepts of personhood should be considered, such as fractal personhood, whereby single people and collective wholes merge into a single phenomenon.⁵² From the perspective of fractal personhood, lavish burials can be considered as representing a community or group rather than an individual historical person.⁵³ My conceptualisation of the dead person approximates what Coon coined as 'sacred fictions'.⁵⁴ The Lives of saints (the texts) are not usually accurate and meticulous biographical descriptions of the lives of the people concerned but are texts with a certain agenda. Rhetorical strategies, such as a specific description of clothing, are used to achieve the author's goals.⁵⁵ The living person is transformed into a saint and the production of the text is an important contribution to this rite of passage.

In my view the burial rite has the same function as the Life of a saint: it is an important element in the transformation of a living historical person into a dead person. Some of these individuals may have had important ancestral functions. Archaeologists interested in real-life social relations and practices may thus believe that the burial rite 'distorts' our image of the living person, just as a saint's Life distorts

49 Van Gennep 1960 [1908].

50 Fowler 2004; Theuvs 2013.

51 Goetz 1999, 291–293.

52 Fowler 2004.

53 Theuvs 2013.

54 Coon 1997.

55 See also von Rummel 2007.

that image. Like the saint's Life, the function of the burial ritual may not be to accurately inform us about the living historical person. We may join Bertens in asking: 'Into what position does a text, a film, a rock video, or a commercial try to manoeuvre us through specific strategies of narration, specific shots, images and other forms of representation?'⁵⁶ I would add 'specific aspects of the burial rite'. Indeed, what matters is how, in addition to representing something bigger than the single individual, the lavish burials of some men and women were staged and by whom.

Childeric's Burial

Let's look at Childeric's grave from this perspective. Lavish grave goods were found in 1653 in the Belgian town of Tournai. They are generally believed to originate from the grave of an important individual, identified as the Merovingian Childeric I on the basis of a ring with the inscription 'Childerici regis' in reverse.⁵⁷ By now it seems generally accepted that Childeric's burial was probably staged by Clovis and/or his entourage, and I agree with Guy Halsall that Clovis was the author of the ritual.⁵⁸ We differ, however, on the exact meaning of the burial rite, as we shall see. The complicated symbolism of Childeric's burial seems to suggest that it was directed at a diverse audience that included the high-ranking clergy of northern Gaul, Roman aristocrats and Frankish followers.⁵⁹ This interpretation relates to my perception of the burial as a narrative, a discourse, a rhetorical strategy aimed at achieving specific goals.⁶⁰ I might be accused of adopting an instrumentalist position on this but exceptional burials like Childeric's do not at present seem to be the result of an unconscious adherence to tradition.

The burial was exceptional, an event whose authors had particular goals in mind. In my perception of such burial rites, those goals went beyond Guy Halsall's model, which views burials as a political instrument in times of crisis. The lavish burial of a predecessor could help to establish a new power position in times of crisis when succession was insecure – especially hereditary succession, which was introduced as a new element.⁶¹ A similar position has later been adopted in the German literature, indicated by the term '*Herrschaftsansprache*', which the lavish burial rite was designed to secure.⁶² In the case of Childeric's burial, Clovis' *Herrschaftsansprache* were supposedly uncertain and had to

⁵⁶ Bertens 2014 [2001], 88–89.

⁵⁷ There is an extensive literature on this grave, but see Quast 2015a.

⁵⁸ Theuws 2000; Halsall 2010 [2001]; Theuws 2009; see Quast 2015b for a review of the debate.

⁵⁹ The horse burials might indicate that Thuringian warriors were also 'targeted' (Quast 2015b, 242–244).

⁶⁰ Theuws 2000, 2009.

⁶¹ Halsall 2010, 190–191.

⁶² For an overview, see Quast 2015a, 239.

be obtained in a competition with Syagrius, the son of Childeric's contemporary Arbogastus who also claimed authority in northern Gaul.⁶³ I can imagine that the burial rite may have had this effect, but the burial rite performed in Tournai seems to me to be more sophisticated than currently suggested in the scholarly literature.

There is a lively debate as to the origin and symbolism of various objects in the grave.⁶⁴ There are clear references to the Roman past in which Childeric operated, according to the sparse written evidence, primarily as a military commander.⁶⁵ He was dressed as a Roman general, although Philip von Rummel suggests that by that time such garb already had barbarian connotations in the eyes of Roman civilian traditionalists, since the Roman army in the West had mainly been taken over by barbarians.⁶⁶ Thus an interesting aspect of this way of dressing a dead leader is that it may have had different meanings for different members of the audience. This is no different from a narrative text that can be interpreted differently by different readers. Can we gain some idea of what the author(s) of the ritual had in mind? I think we can catch a glimpse.

If we agree with von Rummel that Childeric was buried in the attire of a Roman general with 'barbarian' connotations at a time when 'Rome' had disappeared in the West, we can ask what mattered most to the author of the burial rite.⁶⁷ The presence of a beautiful crossbow brooch is especially significant. As explained above, this sign of military leadership had already disappeared from sword graves in the West by the mid-fifth century and can be considered an old-fashioned element of the dress. We can be fairly certain that Roman civilian traditionalists, who would have looked at this attire with disgust, did not stage the burial. I suggest that by burying Childeric in this way Clovis and his advisors intended to bury him as a Roman general, and that the barbarian connotations, important to the traditionalists, were in the back of their minds.⁶⁸ In my view, Childeric was explicitly buried as a general of the Empire, rather than a barbarian leader, which is in itself not a new insight.

But why? An answer may be found in the old-fashioned elements of his dress. I believe that Childeric was not only buried as a general of the Empire but was presented as a man of the past, a man who belonged to a world that had vanished, a true member of the Imperium. The choice of gold coins of legitimate emperors is also consistent with this image.⁶⁹ My suggestion is that Clovis buried his father as a man of the past not only to secure his political position in a competition for power but especially to accentuate, by creating a contrast, his perception of his

63 For a detailed analysis, see Halsall 2010 [2001], and the comments in Halsall 2010, 188–201.

64 See Quast 2015b.

65 Halsall 2001, 2007, 269–271.

66 Von Rummel, 2007, 368–375; 2015, 216.

67 The dating of Childeric's burial is subject to debate (Halsall 2010 [2001]).

68 See also the discussion on this topic in Halsall 2010, 189–190.

69 Fisher/Lind 2015 with a somewhat different interpretation of the essence of the burial rite.

own (future) position. I suggest that the rhetoric of the burial was not so much about Childeric (who was of course buried), but about Clovis, by creating a contrast (a rhetorical strategy), that expressed his own position – a position outside the empire. Clovis was no longer to be seen as a Roman army general like his father, but as the king of the Franks, a title that featured on Childeric's seal ring (since when?), but which in Clovis' eyes might have to be 'liberated' from its imperial military connotations. This type of position was explicitly buried with Childeric. Thus in my view the exceptional burial was an element not so much in the practices of political competition, which could play a role,⁷⁰ but above all in the discourse of what Frankish kingship was to be. It was the world of ideas and ideology rather than of practices that determined the burial rite performed in Tournai.⁷¹

We must return to Tournai to understand another surprising aspect of Childeric's burial – the fact that it was located in Tournai, which is rather odd. From an archaeological perspective Tournai seems to be towards the northern periphery of the late Roman and early medieval world (Figs. 8.1, 8.3, and 8.5).⁷² Excavations in Tournai directed by Raymond Brulet have shown that the town was inhabited in the fifth century and that buildings were constructed in *opus africanum*.⁷³ The oldest church on the site of the present cathedral dates to the second half of the fifth or the later fifth century; its exact date is uncertain.⁷⁴ Written sources make no reference to bishops before the middle of the sixth century but the earliest church was probably an episcopal church.⁷⁵ This church could be contemporary with Childeric's burial or it was under construction at the same time, but it could equally have been later. The church of Saint Brice near Childeric's tomb did not exist at the time of the burial, nor were there any martyrs' shrines outside the late Roman walls.⁷⁶

Indeed, compared with other towns in northern Gaul, at the time of Childeric's burial Tournai was a town in the very earliest stages of development. We have to consider the possibility that Tournai lacked a Christian infrastructure at the time of the burial. It has already been observed by other scholars that Tournai occupied a

70 If so, why don't we have more of these lavish burials in Gaul, since there was a whole series of such competitors, or do we still have to await their discovery?

71 Theuws 2000.

72 It is interesting to note in Fig. 8.5 that the distribution areas for glass and ceramic vessels with Christian symbols and gravestones seem to be mutually exclusive to some extent. Note also the concentration of vessels with Christian symbols in the middle Meuse valley, which seems to have been home to a vibrant community in the later fifth and early sixth century (Theuws 2014).

73 Brulet 2012; 2015.

74 Brulet 2015, 87–88.

75 Brulet 2015, 87.

76 Brulet 2015, 91.

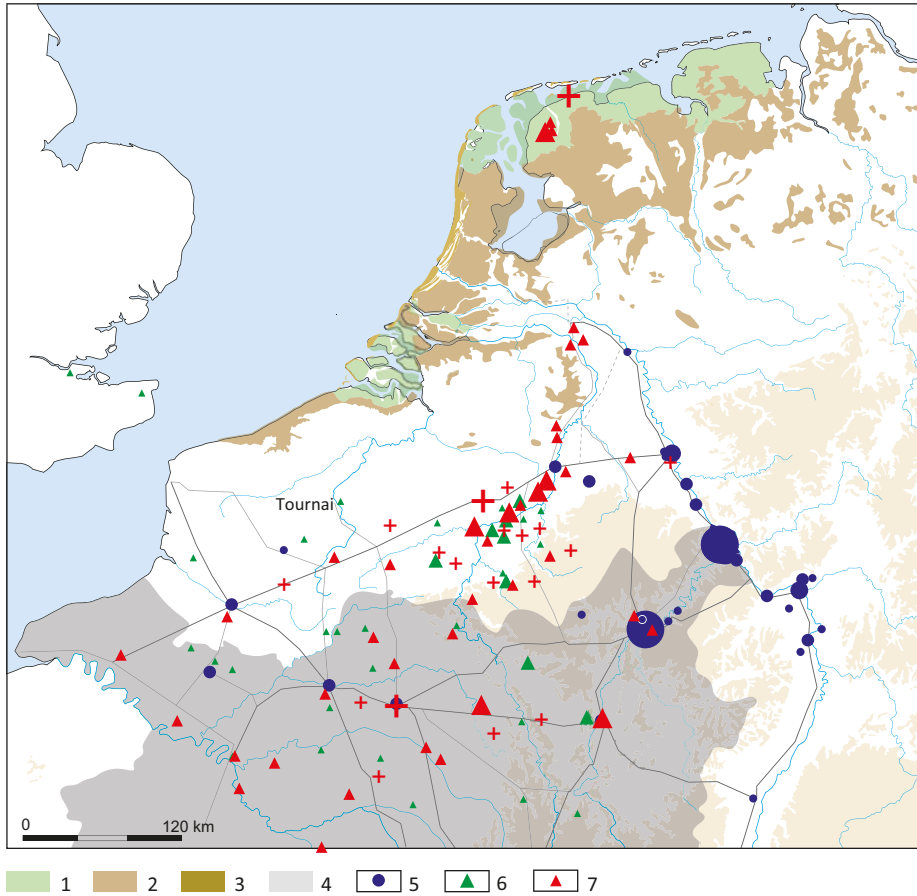


Fig. 8.5: Northern Gaul. The distribution of a number of artefacts with Christian symbols. 1 tidal flats; 2 land above 300 m (middle range mountains); 3 moors; 4 bishoprics with continuous bishops' lists; 5 Christian gravestones (after Boppert 1986 and Gauthier 1975); 6 Glass bowls with Christian motifs (after Van Wersch et al. 2010); 7 Argonne ware decorated with Christian motifs (after Dijkman 1992). Triangles are settlement finds, crosses are grave finds. The size of the symbols indicates the relative numbers found (after Theuvs 2014).

peripheral position at that time.⁷⁷ In older research Tournai was considered Childeric's 'capital', but this seems unlikely given that central Gaul was his main theatre of operations.⁷⁸ At present the choice of location is explained in the context of the competition for power in northern Gaul. It is suggested that Clovis, like his father at one time, had to retreat 'home' to the northern periphery in order to survive.⁷⁹

⁷⁷ Halsall 2010 [2001].

⁷⁸ Halsall 2001; 2007, 269–271.

⁷⁹ Halsall 2010, 194; Hardt 2015, 219.

However, this reconstruction has been created to fit the somewhat off-site location of Childeric's grave in the 'competition-for-power' model. Other reconstructions are possible. There is a general consensus that Childeric seems to have operated mainly in the Loire region and possibly Paris and that he may at some point have spent several years in exile in the far north of Gaul, if we accept Gregory of Tours' account as fact.⁸⁰ To what extent he controlled the whole of northern and central Gaul is difficult to establish on the basis of the present evidence. It is also difficult to establish what this control meant.⁸¹ The evidence seems to indicate that he was the commander of an army, a military leader, perhaps a warlord,⁸² a manager of warriors, thus of people rather than a territory (or a kingdom in a territorial sense). So why was Childeric buried in Tournai, a town that seems to have lain outside his theatre of operations in central Gaul and Paris? Was he there by accident?⁸³

If Clovis and his advisors staged Childeric's burial and if every detail of his funeral, right down to the choice of coins, was strategic and deliberate, would the choice of location be accidental? Or was it a deliberate choice to bury this 'Roman army general' in a peripheral town, possibly with no Christian infrastructure and outside his theatre of operations, and probably outside Clovis' theatre of operations and power base, namely Paris?⁸⁴ Why was Childeric not buried in Paris, near a cult place relating to Genoveva for instance? Because Paris was controlled by his adversaries and he had no power there? Who, then, was in power in Paris at that time? Was he not buried near a Paris cult place because he was not a Christian? The power base of Clovis' strongest adversary Syagrius seems to have been located further north. I would suggest that Childeric was intentionally buried in peripheral Tournai to keep this 'man of the past' away from Clovis' centre of power – in other words, in a centre relating to the past rather than the future.

Another striking aspect of Childeric's burial is the total lack of reference to Christianity. He certainly was not buried near a Christian cult place in Tournai but in a traditional Roman cemetery. Childeric's grave has been interpreted in the past as a pagan burial and the burial has been seen as an indication that Childeric was a pagan, not a Christian. New arguments for Childeric's paganism became available following excavations in the area around Childeric's grave and the discovery of the pits with slaughtered

80 Halsall 2001. There is a lively debate about Childeric's whereabouts during his exile because it is not clear where the 'Thoringia' to which Childeric fled was located (Halsall 2010, 195–197; Hardt 2015, 220).

81 There is a debate, mainly among German scholars, about whether he was a leader with a limited power base (*Kleinkönig*) or a man with a large powerbase (*Großkönig*); see Hardt 2015, 222. It is difficult to decide on the basis of the present evidence.

82 I am not confident that this qualification is apt. He might have been more officially in the service of the Roman army than the term 'warlord' suggests.

83 See Halsall's analyses of the accidental thesis (Halsall 2010, 193).

84 Halsall also suggests that Clovis brought his father north, but for different reasons (Halsall 2010, 193).

horses, which were probably killed on the occasion of the burial, and the possible presence of a large hill that might have covered his grave.⁸⁵ Clovis may already have intended becoming a Christian at the time of his accession to power, but we will never know. We know for certain, however, that at the time of his accession he was in fairly close contact with the high-ranking clergy of Gaul, as was Childeric too.⁸⁶

Past research has established that the archaeological correlates of early medieval burial rites are not good indicators of the religious position of the deceased.⁸⁷ I will not reverse the argument by trying to suggest that Childeric was already a Christian and that we simply cannot tell on the basis of his grave. We cannot establish this on the basis of his grave contents and location.⁸⁸ Seeking an answer to the question of whether or not Childeric was a Christian is a good example of research aimed at understanding Childeric as an historical person or understanding observable social or religious practices. As explained above, we might have to look at such burials in another way. What I suggest is that the total absence of Christian symbolism and his burial in a remote town at a traditional cemetery without a Christian cult place might have been a deliberate choice on Clovis' part, perhaps even in the presence of high-ranking clergy. The absence of any reference to Christianity might be a well-chosen element in a rhetorical strategy.

This implies that when it comes to interpreting the burial, it does not matter whether Childeric was a pagan or a Christian. Clovis decided to bury him without any reference to Christianity, perhaps even in a town without a Christian infrastructure. My point is that if this were the case, it will have been part of a rhetorical strategy in which he highlighted the contrast between his father and himself, so that his own position was sharply delineated for the audience present. The high-ranking clergy might have understood Clovis' pro-Christian message, and Remigius acted promptly by writing him the famous letter. We could even consider the possibility that Tournai was turned into a Christian centre after Childeric's burial to accentuate and accelerate the transformation that Clovis had set in motion.

If creating contrasts is indeed the rhetoric of the burial, Clovis was stating that he was not a Roman army general, but the king of the Franks; he was not a pagan but he cherished Christianity, or at least the Church. In my view Childeric's burial tells us little about Childeric, although as with the narratives of texts there will have been a 'social logic of the text',⁸⁹ or in this case the 'social logic of the burial rite'. Neither texts nor burial rites can be completely disassociated from the social and cultural

85 Brulet 1990, 2015; Quast 2015a; 2015b.

86 Halsall 2010 [2001]; Hardt 2015, 219.

87 Young 1977; Effros 2002.

88 Incidentally, this location is on the right bank of the Scheldt river opposite the town of Tournai – in other words, not in the diocese of Tournai, but in that of Cambrai, if diocese boundaries were already that clear in the later fifth century and if Tournai already had a bishop by then.

89 Spiegel 1997.

context of their production. The audience must understand the message. But we will never know exactly who Childeric was on the basis of his burial, just as we will never know exact details about the saints whose Lives we read. In my view, the rhetoric of Childeric's burial is not about Childeric as an historical person. The burial and the grave are 'sacred fictions', to use Linda Coon's qualification of saints' Lives⁹⁰; its agenda was set by Clovis and the form of the burial was geared in detail to that agenda.

The rhetoric of the burial is about Clovis but, more importantly, about the nature of future Frankish kingship. While the symbolism of the burial may relate to acute political problems, I believe it extends far beyond them. The burial can be interpreted as a performative act relating to the creation of nothing less than the values of Merovingian kingship in northern Gaul. This is my answer to the question posed by the linguist I quoted above: 'Into what position does a text, a film, a rock video, or a commercial [or a burial rite, my addition] try to manoeuvre us through specific strategies of narration, specific shots, images and other forms of representation?' I suggest that we use this perspective to look at other lavish burials in northwestern Europe.

What does all this have to do with the theme of the conference – the use of scientific research in early medieval (burial) archaeology? Everything. If we take the position that burial rites were determined by ethnic identities, mass migration and settlement, territorial conquest and vertical social differentiation, that the human and material remains in graves can be linked directly to these topics and that they inform us about the political practices of the time for which texts provide us with models, we will ask specific questions to be answered by scientific research. New scientific research might confirm the existing models, or transform or reject them. However, there are initial signs that disappointments and many rejections lie ahead.⁹¹

If, on the other hand, we start viewing the burial ritual first and foremost as a ritual, as a *fait social total*,⁹² aimed at dealing with important ideas, norms and values in society, such as gender positions, the cultural construction of the body, the nature of leadership, the meaning of age groups, personhood and the role of ancestors, we have to reconsider the questions asked and the use of scientific research into both human remains and material culture. We have to ask the fundamental question: what questions are we hoping to answer through scientific research? I hope that this paper contributes to an understanding of the need to consider alternative perspectives from which to study burial rites and their archaeological correlates. Without well-

⁹⁰ Coon 1997.

⁹¹ See for instance how isotope research on early burials at the Dirmstein cemetery (Germany) has shattered models of the early social structure of the burial community based on a traditional interpretation of the relationship between material culture and people (Schuh/Makarewicz 2016).

⁹² Mauss 1932 [1923/1924]; Godelier 1984, 65–66.

considered research questions, originating from a clear understanding of the premises from which we consider the burial rites of the early Middle Ages, any scientific research will start off on the wrong foot.

References

- Barth, Fredrik, Towards greater naturalism in conceptualizing societies. In: *Conceptualizing society*, ed. Adam Kuper (London, New York 1992) 17–33.
- Bazelmans, Jos, *By weapons made worthy. Lords, retainers and their relationship in Beowulf.* Amsterdam archaeological studies 5 (Amsterdam 1999).
- Bertens, Hans, *Literary theory. The basics* (Abingdon 2014 [2001]).
- Böhme, Horst Wolfgang, Germanische Grabfunde des 4. bis 5. Jahrhunderts zwischen unterer Elbe und Loire. *Studien zur Chronologie und Bevölkerungsgeschichte 1–2. Münchner Beiträge zur Vor- und Frühgeschichte 19* (München 1974).
- Böhme, Horst Wolfgang, Sächsische Söldner im römischen Heer. Das Land zwischen Ems und Niederelbe während des 4. und 5. Jahrhunderts. In: *Über allen Fronten. Nordwestdeutschland zwischen Augustus und Karl dem Großen*, ed. Frank Both/Heide Aouni. *Archäologische Mitteilungen aus Nordwestdeutschland, Beiheft 26* (Oldenburg 1999) 49–73.
- Böhme, Horst Wolfgang, Germanen im Römischen Reich. Die Spätantike als Epoche des Übergangs. In: *Menschen, Zeiten, Räume. Archäologie in Deutschland*, ed. Wilfried Menghin/Dieter Planck (Stuttgart 2002) 295–305.
- Bourdieu, Pierre, *Outline of a theory of practice* (Cambridge 2008 [1977]) [translation of: *Esquisse d'une théorie de la pratique, précédé de trois études d'ethnologie kabyle* (Paris 1972)].
- Boppert, Walburg, Die frühchristlichen Grabinschriften aus der Servatiuskirche in Maastricht. In: *Sint-Servatius, bisschop van Tongeren-Maastricht. Het vroegste Christendom in het Maasland. Handelingen van het colloquium te Alden Biesen (Bilzen), Tongeren en Maastricht 1984*, ed. Clemens Guido de Dijn. *Kunst en oudheden in Limburg 28* (Borgloon 1986) 65–96.
- Brather, Sebastian, *Ethnische Interpretationen in der frühgeschichtlichen Archäologie. Geschichte, Grundlagen und Alternativen.* *Reallexikon der Germanischen Altertumskunde, Ergänzungsband 42* (Berlin, New York 2004).
- Brather, Sebastian, Lokale Herren um 500. Rang und Macht im Spiegel der Bestattungen. In: *Chlodwigs Welt. Organisation von Herrschaft um 500*, ed. Mischa Meier/Steffen Patzold. *Roma aterna 3* (Stuttgart 2014) 567–607.
- Braudel, Fernand, *The Mediterranean and the Mediterranean world in the Age of Philip II* (London 1972/1973).
- Brulet, Raymond, La cathédrale Notre-Dame de Tournai. *L'archéologie du site et des monuments anciens 1–3. Études et documents, Archéologie 27–29* (Namur 2012).
- Brulet, Raymond, Die Stadt Tournai in der Spätantike. In: *Das Grab des fränkischen Königs Childerich in Tournai und die Anastasis Childerici von Jean-Jacques Chifflet aus dem Jahre 1655*, ed. Dieter Quast. *Römisch-Germanisches Zentralmuseum Mainz, Monographien 129* (Mainz 2015) 77–96.
- Calligaro, Thomas et al., Contribution à l'étude des granats mérovingiens (Basilique de Saint-Denis et autres collections du musée d'Archéologie nationale, diverse collections publiques et objets de fouilles récentes). *Antiquités Nationales 38*, 2006–2007, 111–144.
- Coon, Lynda L., *Sacred Fictions. Holy women and hagiography in Late Antiquity* (Philadelphia 1997).

- Dierkens, Alain, Die Taufe Chlodwichts. In: Die Franken. Wegbereiter Europas. Vor 1500 Jahren. König Chlodwig und seine Erben 1–2 (Mainz 1996) 183–191.
- Dierkens, Alain/Périn, Patrick, The 5th-century advance of the Franks in Belgica II. History and archaeology. In: Essays on the early Franks, ed. Ernst Taayke/Janine Helena Looijenga/Otto H. Harsema/Hendrik Reinder Reinders. Groningen Archaeological Studies 1 (Groningen 2003) 165–193.
- Dijkman, Wim, La terre sigillée décorée à la molette à motifs chrétiens dans la stratigraphie maastrichtoise (Pays-Bas) et dans le nord-ouest de l'Europe. *Gallia* 49, 1992, 129–172.
- Effros, Bonnie, *Caring for body and soul. Burial and the afterlife in the Merovingian World* (University Park, Pennsylvania 2002).
- Effros, Bonnie, *Uncovering the Germanic Past. Merovingian Archaeology in France 1830–1914* (Oxford 2012).
- Fehr, Hubert, Volkstum as paradigm. Germanic people and Gallo-Romans in early medieval archaeology since the 1930's. In: *On barbarian identity. Critical approaches to ethnicity in the Early Middle Ages*, ed. Andrew Gillet. *Studies in the early middle ages* 4 (Turnhout 2002) 1777–1200.
- Fehr, Hubert, Germanen und Romanen im Merowingerreich. Frühgeschichtliche Archäologie zwischen Wissenschaft und Zeitgeschehen. *Reallexikon der Germanischen Altertumskunde, Ergänzungsband 68* (Berlin, New York 2010).
- Fischer, Svante/Lind, Lennart, The coins in the grave of king Childeric, *Journal of Archaeology and Ancient History* 14, 2015, 2–36.
- Fowler, Chris, *The archaeology of personhood. An anthropological approach* (London, New York 2004).
- Gauthier, Nancy, *Recueil des Inscriptions Chrésiennes de la Gaule antérieures à la Renaissance Carolingienne 1. Première Belgique* (Paris 1975).
- Godelier, Maurice, *L'idéal et le matériel. Pensée, économies, sociétés* (Paris 1984).
- Goetz, Hans-Werner, *Moderne Mediävistik. Stand und Perspektiven der Mittelalterforschung* (Darmstadt 1999).
- Goffart, Walter, *The narrators of barbarian history (A. D. 550–800). Jordanes, Gregory of Tours, Bede and Paul the Deacon* (Princeton 1988).
- Hadley, Dawn M./Moore, Jenny M., 'Death Makes the Man'? Burial rite and the construction of masculinities in the Early Middle Ages. In: *Masculinity in Medieval Europe*, ed. Dawn M. Hadley (London, New York 1999) 21–38.
- Halsall, Guy, The origins of Reihengräberzivilisation: forty years on. In: *Fifth-century Gaul. A crisis of identity?*, ed. John Drinkwater/Hugh Elton (Cambridge 1992) 196–207.
- Halsall, Guy, Female status and power in early Merovingian central Austrasia. The burial evidence. *Early Medieval Europe* 5, 1996, 1–24.
- Halsall, Guy, *Cemeteries and society in Merovingian Gaul. Selected studies in history and archaeology 1992–2009. Brill's series on the early middle ages 18* (Leiden 2010).
- Halsall, Guy, Two worlds become one. A 'counter-intuitive' view of the Roman Empire and 'Germanic' migration. *Germanic History* 32, 2014, 515–532.
- Härke, Heinrich, All quiet on the Western Front? Paradigms, methods and approaches in West-German archaeology. In: *Archaeological theory in Europe. The last three decades*, ed. Ian Hodder (London 1991) 187–222.
- Härke, Heinrich, Angelsächsische Waffengräber des 5. bis 7. Jahrhunderts. *Zeitschrift für Archäologie des Mittelalters, Beiheft 6* (Köln, Bonn 1992).
- Härke, Heinrich, Social analysis of mortuary evidence in German protohistoric archaeology. *Journal of Anthropological Archaeology* 19, 2000, 369–384.
- Hardt, Matthias, Childeric I. in den historischen Quellen. In: *Das Grab des fränkischen Königs Childeric in Tournai und die Anastasis Childerici von Jean-Jacques Chifflet aus dem Jahre 1655*,

- ed. Dieter Quast. Römisch-Germanisches Zentralmuseum Mainz, Monographien 129 (Mainz 2015) 217–224.
- Kars, Mirjam, A cultural perspective on Merovingian Burial Chronology and the grave goods from the Vrijthof and Pandhof cemeteries in Maastricht, PhD Thesis (Amsterdam 2011).
- Kars, Mirjam, (Re)considering the Pre-Burial Life of Grave Goods. Towards a Renewed Debate on Early medieval Burial Chronology on the Continent. *Medieval and Modern Matters* 3, 2012 (2014), 107–134.
- Kars, Mirjam, The early medieval burial evidence and concepts of possession: questioning individual identities. In: *Individual and individuality? Approaches towards an Archaeology of Personhood in the First Millennium AD*, ed. Babette Ludowici. *Neue Studien zur Sachsenforschung* 4 (Hannover 2013) 95–106.
- Leupen, Piet Henri Dé, *De bisschoppen en de moraal. Gezag en macht in de vroege en volle middeleeuwen* (Hilversum 1985).
- Loveluck, Christopher, *Northwest Europe in the Early Middle Ages, c. AD 600–1150. A comparative archaeology* (Cambridge 2013).
- Lucy, Sam J., Burial practice in early medieval eastern Britain. Constructing local identities, deconstructing Ethnicity. In: *Burial in early medieval England and Wales*, ed. Sam J. Lucy/Andrew Reynolds. *Society for medieval archaeology, Monograph Series* 17 (London 2002) 72–87.
- Mauss, Marcel, *The gift. The form and reason for exchange in archaic societies* (London 1932 [1923/1924]).
- Périn, Patrick, La progression des Francs en Gaule du Nord au V^e siècle. *Histoire et Archéologie*. In: *Die Franken und die Alemannen bis zur ‘Schlacht bei Zülpich’ (496/97)*, ed. Dieter Geuenich. *Reallexikon der Germanischen Altertumskunde, Ergänzungsband* 19 (Berlin, New York 1998) 59–81.
- Peytremann, Édith, *Archéologie de l’habitat rural dans le nord de la France du IV^e au XII^e siècle I–II*. *Association Française d’Archéologie Mérovingienne, Mémoires* 13 (Saint-Germain-en Laye 2003).
- Pion, Constantin/Gratuze, Bernard, Indo-Pacific glass beads from the Indian subcontinent in Early Merovingian graves (5th–6th century AD). *Archaeological Research in Asia* 6, 2016, 51–64.
- Quast, Dieter (ed.), *Das Grab des fränkischen Königs Childerich in Tournai und die Anastasis Childerici von Jean-Jacques Chifflet aus dem Jahre 1655*. Römisch-Germanisches Zentralmuseum Mainz, Monographien 129 (Mainz 2015).
- Quast, Dieter, Chlodwig. Die Codes der Macht. In: *Das Grab des fränkischen Königs Childerich in Tournai und die Anastasis Childerici von Jean-Jacques Chifflet aus dem Jahre 1655*, ed. Dieter Quast. Römisch-Germanisches Zentralmuseum Mainz, Monographien 129 (Mainz 2015a) 237–255.
- Quast, Dieter, Der Grabbau. In: *Das Grab des fränkischen Königs Childerich in Tournai und die Anastasis Childerici von Jean-Jacques Chifflet aus dem Jahre 1655*, ed. Dieter Quast. Römisch-Germanisches Zentralmuseum Mainz, Monographien 129 (Mainz 2015b) 157–164.
- Rummel, Philipp von, *Habitus Vandalorum? Zur Frage nach einer gruppenspezifischen Kleidung der Vandalen in Nordafrika. Antiquité tardive* 10, 2002, 131–141.
- Rummel, Philipp von, *Habitus barbarus. Kleidung und Repräsentation spätantiker Eliten im 4. und 5. Jahrhundert n. Chr.* *Reallexikon der Germanischen Altertumskunde, Ergänzungsband* 55 (Berlin, New York 2007).
- Schuh, Christine/Makarewicz, Cheryl A., Tracing residential mobility during the Merovingian period. An isotopic analysis of human remains from the Upper Rhine Valley, Germany. *American Journal of Physical Anthropology* 161, 2016, 155–169.
- Spiegel, Gabrielle M., *The past as text. The Theory and practice of medieval Historiography* (Baltimore, London 1997).

- Stauch, Eva, *Alter ist Silber, Jugend is Gold! Zur altersdifferenzierten Analyse frühgeschichtlicher Bestattungen*. In: *Zwischen Spätantike und Frühmittelalter. Archäologie des 4. bis 7. Jahrhunderts im Westen*, ed. Sebastian Brather. *Reallexikon der Germanischen Altertumskunde, Ergänzungsband 57* (Berlin, New York 2008).
- Swift, Ellen, *Regionality in dress accessories in the Late Roman West*. *Monographies instrumentum 11* (Montagnac 2000).
- Theuws, Frans, *Introduction. Rituals in transforming societies*. In: *Rituals of Power. From Late antiquity to the Early Middle Ages*, ed. Frans Theuws/Janet L. Nelson. *The Transformation of the Roman world 8* (Leiden, Boston, Köln 2000) 1–13.
- Theuws, Frans, *Grave goods, ethnicity, and the rhetoric of burial rites in Late Antique Northern Gaul*. In: *Ethnic Constructs in Antiquity. The role of power and tradition*, ed. Ton Derks/Nico Roymans. *Amsterdam Archaeological Studies 13* (Amsterdam 2009) 283–319.
- Theuws, Frans, *Do all the burials we excavate allow an archaeology of individuality and individualism? An introduction to the Sachsensymposium 2011*. In: *Individual and individuality? Approaches towards an Archaeology of Personhood in the First Millenium AD*, ed. Babette Ludowici. *Neue Studien zur Sachsenforschung 4* (Hannover 2013) 9–15.
- Theuws, Frans, *Das mittlere Maastal. Wie es zu einem Kerngebiet des Karolingerreichs wurde*. In: *Karl der Grosse, Charlemagne. Orte der Macht*, ed. Frank Pohle (Aachen 2014) 188–197.
- Theuws, Frans, *Long distance trade and the rural population of northern Gaul*. In: *The Oxford history of the Merovingian World* (Oxford, in press).
- Theuws, Frans/Alkemade, Monica, *A kind of mirror for men. Sword depositions in Late Antique northern Gaul*. In: *Rituals of power from late Antiquity to the Early Middle Ages*, ed. Frans Theuws/Janet L. Nelson. *The Transformation of the Roman world 8* (Leiden, Boston, Köln 2000) 401–476.
- Truc, Marie-Cécile, *Probable Frankish burials of the sixth century AD at Saint-Dizier (Haute-Marne, Champagne-Ardenne, France)*. In: *The very beginning of Europe? Cultural and social dimensions of early-medieval Migration and Colonisation (5th–8th century)*. *Archaeology in Contemporary Europe. Conference Brussels, May 17–19 2011*, ed. Rica Annaert/Tinne Jacobs/Ingrid In 't Ven/Steffi Coppens (Brussels 2012) 51–66.
- Van Gennep, Arnold, *The rites of passage* (Chicago 1960 [1908]).
- Van Ossel, Paul/Ouzoulias, Pierre, *La mutation des campagnes de la Gaule du nord entre le milieu du III^e siècle et le milieu du V^e siècle. Où en est-on?* In: *Belgian Archaeology in a European setting II*, ed. Marc Lodewijckx. *Acta Archaeologica Lovaniensia, Monographiae 13* (Leuven 2001) 231–245.
- Van Wersch, Line et al., *Les coupes en verre à décor chrétien découvertes en Belgique (fin V^e–début VI^e siècle)*. *Archéologie Médiévale 49*, 2010, 115–147.
- Weidemann, Margarethe, *Die kirchliche Organisation der Provinzen Belgica und Germania vom 4. bis 7. Jahrhundert*. In: *Willibrord, zijn wereld en zijn werk. Voordrachten gehouden tijdens het Willibrordcongres Nijmegen, 28–30 september 1989*, ed. Petty Bange/Anton G. Weiler. *Middeleeuwse studies 6* (Nijmegen 1990) 285–316.
- Wickham, Chris, *Framing the Early Middle Ages: Europe and the Mediterranean, 400–800* (Oxford 2005).
- Young, Bailey, *Paganisme, christianisation et rites funéraires mérovingiens*. *Archéologie Médiévale 7*, 1997, 5–81.

Clémence Hollard and Christine Keyser

Funerary Recruitment and Ancient DNA

Making DNA Speak

Thirty years ago, the possibility to access genetic information stored in archaeological material, gave rise to a new scientific field: palaeogenetics or ancient DNA (aDNA) studies. What are the characteristics of this aDNA? What are the difficulties encountered in its processing? What new elements can be revealed through its analysis? The article will discuss those points in detail, giving elements that help to better understand ancient DNA studies.

Ancient DNA, a Fragile Molecule

In a living cell, damage to the DNA molecule can be repaired by the cell machinery that maintains the integrity of the genome. During cell death, these repair mechanisms stop, exposing the genome to many factors that can cause damage. Postmortem, DNA is subject to a variety of damaging processes, in most cases leading to fragmented, chemically modified and diminished quantities of DNA molecules. The occurrence of these degradation mechanisms depends on many factors, namely environmental ones such as humidity, temperature, salinity or pH that can affect DNA preservation within organisms. Thus, for better DNA preservation, the body is ideally kept in an environment with low temperatures without much variation (e.g. permafrost), dry, anaerobic and safe from UV radiation to limit enzymatic and chemical reactions.

The preservation of DNA also varies depending on its source. Potentially, DNA can be found in any biological sample, but not all suffer in the same way from time's damage. Soft tissue will in most cases rapidly degrade and only hard tissue such as bones and teeth will persist over time, making them the substrates most frequently found on excavation sites and consequently the most studied by palaeogeneticists. The preservation of DNA in hard tissue may be due to the adsorption of DNA on the mineral matrix mainly composed of calcium hydroxyapatite.¹ However special conditions like permafrost or mummification will conserve more biological substrates and potential sources of DNA (e.g. hairs and nails). Recently, a new anatomical part has gained attention as a source for DNA molecules: the petrous bone, more precisely

¹ Campos et al. 2012; Lindahl 1993.

<https://doi.org/10.1515/9783110616651-009>

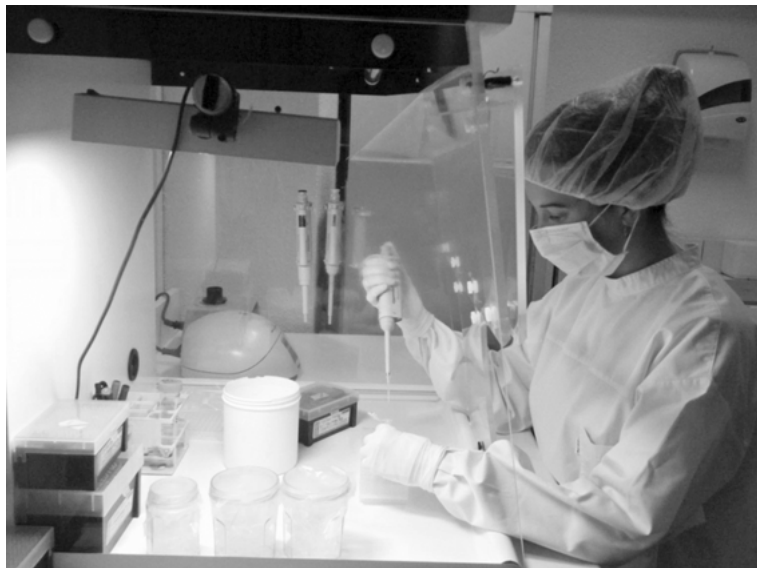


Fig. 9.1: Experiments carried out in a cleanroom with an equipment dedicated to the analysis of ancient DNA (Photo: IML Strasbourg).

the inner ear. This part is very dense and therefore contains a high percentage of endogenous DNA. Moreover, compared to other biological substrates, it has little exposure to postmortem degradation and contamination.²

Contamination, an Unseen Enemy

The analysis of ancient DNA molecules is made more difficult by their state of degradation (Figs. 9.1–9.2). One of the challenges is to avoid contamination by exogenous DNA molecules throughout sample processing (from excavations to laboratory analyses). Intact DNA molecules from modern organisms, even in very small amounts, will be preferred templates of the polymerase for DNA amplification, at the expense of much degraded ancient DNA molecules. Thus, it is necessary to adopt efficient strategies and methods to ensure the authenticity of the result. Consequently several measures are adopted by laboratories. Analyses are generally carried out in a clean room, where the staff in contact with samples is reduced. Wearing a lab coat, a mask, a mob cap, gloves and over-shoes is mandatory. In order to ensure the authenticity of results, strict criteria were established by the scientific community, evolving and fortifying over time.³

² Gamba et al. 2014; Pinhasi et al. 2015.

³ Cooper/Poinar 2000; Pääbo 1989.

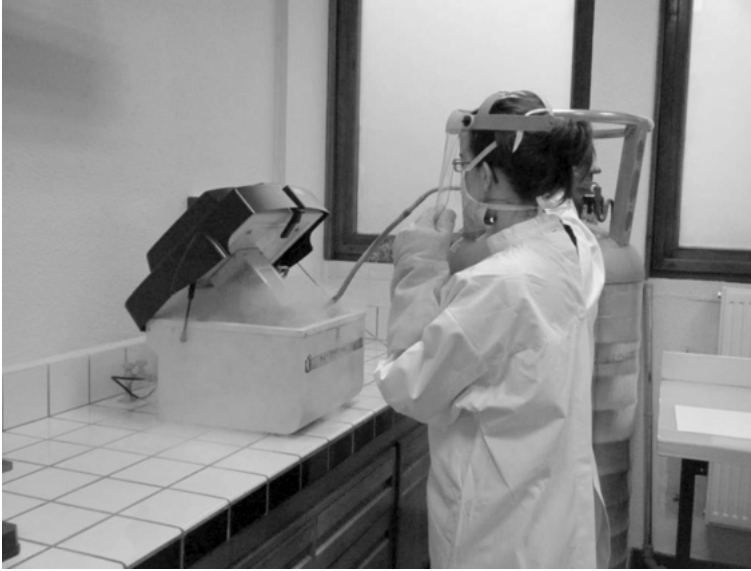


Fig. 9.2: Cryogenic grinding of bone fragments and teeth to avoid overheating and DNA degradation (Photo: IML Strasbourg).

Among these criteria, the use of negative controls at every step of the process, the repetition of DNA extraction and amplification (if possible on several substrates and at different times) needs to be mentioned. The consistency of the results is also observed. An inverse correlation between the efficiency of the PCR (Polymerase Chain Reaction) and the size of amplified DNA fragments should be visible. The sequences obtained, particularly when considering mitochondrial DNA, must have a phylogenetic sense. However, simple compliance with all these criteria is not an absolute guarantee for the authenticity of results. A thoughtful approach to the work done and results obtained is preferred to ensure maximum reliability of results.⁴ The technologies used today, such as NGS (Next Generation Sequencing) permit direct observation of degradation patterns specific to ancient DNA molecules (e.g. cytosine deamination, depurination, and fragmentation).⁵

In Each Genome, a History

The human genome is composed of the nuclear genome, comprising 22 pairs of autosomal chromosomes, one pair of sex chromosomes (XX or XY), and the

⁴ Gilbert et al. 2005.

⁵ Overballe-Petersen et al. 2012.

mitochondrial genome, a small circular genome, present in multiple copies and located in the mitochondria. Depending on the genome parts studied, the information obtained will be different.

Polymorphisms located on mitochondrial DNA and Y-chromosome are called uniparental markers. Mitochondrial DNA is passed from mother to child (girl and boy) and a Y-chromosome is passed from father to son only. Thus, the analysis of these markers allows the study of paternal and maternal lineages of individuals. The study of these parental lineages is done through the determination of Y and mitochondrial haplotypes and haplogroups, two concepts frequently used in palaeogenetic studies. A haplotype is a combination of mutations in the same region of interest. Haplotypes can be gathered in large groups called haplogroups. Thus, haplogroups contain haplotypes derived from the same common ancestor. Haplotypes belonging to the same haplogroup often share common mutations. Haplogroups often have specific geographical distribution, so their study enables the determination of the biogeographical origin of individuals.

Biparental markers, localized on the nuclear DNA, are inherited in equal part from the mother and the father. Thus, they provide data on the molecular sex of individuals, parental relationships and on the physical characteristics or biogeographical origins of the individuals.

Examples of Ancient DNA Studies

Ancient DNA studies carry several areas of interest. The first is to determine putative kinships between individuals buried in the same grave or in the same necropolis. In order to do this, one strategy is to establish the genetic profile of each individual, as is done in forensics, from the study of a combination of specific autosomal STR (Short Tandem Repeats). Kinships have been determined in funerary sites like the Egyin Gol necropolis in Mongolia, dating to the Xiongnu period,⁶ or in collective burials.⁷ Since DNA degradation leads to partial genetic profiles, analysis of mitochondrial DNA and Y-chromosome DNA (for men), as performed by our team, strengthens the validity of kinship results.

At the population level, it is possible to study the dynamics and migrations of populations and thus contribute to the understanding of the peopling of some regions. Some research teams, for example, have worked on America,⁸ Europe,⁹ Eurasian steppes¹⁰ or Oceania.¹¹

6 Keyser-Tracqui et al. 2003.

7 Deguilloux et al. 2014; Keyser et al. 2015.

8 Llamas et al. 2016.

9 Lacan et al. 2011; Lazaridis et al. 2014; Malmstrom et al. 2009.

10 Allentoft et al. 2015; Keyser et al. 2009.

11 Adcock et al. 2001; Skoglund et al. 2016.

On an individual level, it is possible to focus on functional adaptations such as the ability to digest fresh milk.¹² Some phenotypic characteristics of ancient individuals can be predicted, e.g. pigmentary characteristics (eye, hair or skin color).¹³ Nevertheless, the study of certain characters remains linked to the progress of contemporary genomes studies.

Finally, when it comes to ancient human remains, it is also possible to extract DNA from the micro-organisms they host. Palaeopathology has provided crucial data about the sanitary status of past populations and the evolution of infectious diseases. Thus, genomes of causative agents of plague,¹⁴ tuberculosis,¹⁵ whooping-cough¹⁶ or smallpox¹⁷ have been studied.

From Small DNA Fragments to Full Genomes

Initially, palaeogenetic studies focused on small DNA fragments located on the mitochondrial genome, being present in numerous copies within a cell, unlike the nuclear genome. The field of ancient DNA research has closely followed the evolution of technologies. In the mid-2000's, the development of high throughput sequencing technologies, or NGS, revolutionized the discipline. The term "NGS" corresponds to several technologies launched by different companies, all permitting the processing of several thousand DNA sequences in parallel. Although they all have unique characteristics and therefore their advantages and disadvantages, in general these methods are quite similar. Using these technologies, the first ancient mitochondrial genome was published in 2008,¹⁸ soon followed by the first ancient human genome in 2010.¹⁹ Since then, the number of published ancient genomes is increasing, constantly pushing the limits of palaeogenomic studies. Among these technological advancements, the publication of a horse genome found in permafrost dated to approximately 560–780 thousand years before present²⁰ has pushed further the limit of DNA preservation within organisms. Nevertheless, these technological advancements and the quantity of generated data require palaeogeneticists to develop new skills and competencies in bioinformatics and biostatistics.

12 Burger et al. 2007.

13 Bouakaze et al. 2009; Draus-Barini et al. 2013.

14 Rasmussen et al. 2015.

15 Dabernat et al. 2014.

16 Theves et al. 2011.

17 Biagini et al. 2012.

18 Gilbert et al. 2008.

19 Rasmussen et al. 2010.

20 Orlando et al. 2013.

Conclusion

In the last thirty years, vast perspectives opened by the study of ancient genomes in the search for ancient kinships, the study of peopling or genomic evolution. The comparison of data from ancient populations with present-day populations also provides insight into the genetic structure of populations of the past (e.g. Yakuts).²¹ Collaboration with archaeologists is crucial to ensure optimum quality of the samples (i.e. to minimize contamination and DNA degradation). This requires the establishment of good practices for sampling and sample storage, and wherever possible, the use of freshly excavated material. Finally, the analysis of palaeogenetic data must rigorously be combined with data from other fields (archaeological data, anthropological data, historical data or the results of isotopic analyses). The analysis of these results will always be vastly more productive if a discussion between all the actors implied in the project is established, as it is the case in the multidisciplinary project “Nied’Arc 5”. These discussions allow each participant to understand the possibilities and the limits of each discipline.

References

- Adcock, Gregory J./Dennis, Elisabeth S./Easteal, Simon/Huttley, Gavin A./Jermin, Lars S./Peacock, W. James/Thorne, Alan, Mitochondrial DNA sequences in ancient Australians. Implications for modern human origins. *Proceedings of the National Academy of Sciences of the United States of America* 98, 2001, 537–542.
- Allentoft, Morten E./Sikora, Martin/Sjögren, Karl-Göran/Rasmussen, Simon/Rasmussen, Morten/Stenderup, Jasper/Damgaard, Peter B./Schroeder, Hannes/Ahlström, Torbjörn/Vinner, Lasse/Malaspina, Anna-Sapfo/Margaryan, Ashot/Higham, Tom/Chivall, David/Lynnerup, Niels/Harvig, Lise/Baron, Justyna/Della Casa, Philippe/Dąbrowski, Paweł/Duffy, Paul R./Ebel, Alexander V./Epimakhov, Andrey/Frei, Karin/Furmanek, Mirosław/Galak, Tomasz/Gromov, Andrey/Gronkiewicz, Stanisław/Grupe, Gisela/Hajdu, Tamás/Jarysz, Radosław/Khartanovich, Valeri/Khokhlov, Alexandr/Kiss, Viktória/Kolář, Jan/Kriiska, Aivar/Lasak, Irena/Longhi, Cristina/McGlynn, George/Merkevicius, Algimantas/Merkyte, Inga/Metspalu, Mait/Mkrtychyan, Ruzan/Moiseyev, Vyacheslav/Paja, László/Pálfi, György/Pokutta, Dalia/Pospieszny, Łukasz/Price, T. Douglas/Saag, Lehti/Sablin, Mikhail/Shishlina, Natalia/Smrčka, Václav/Soenov, Vasilii I./Szeverényi, Vajk/Tóth, Gusztáv/Trifanova, Synaru V./Varul, Liivi/Vicze, Magdolna/Yepiskoposyan, Levon/Zhitenev, Vladislav/Orlando, Ludovic/Sicheritz-Pontén, Thomas/Brunak, Søren/Nielsen, Rasmus/Kristiansen, Kristian/Willerslev, Eske, Population genomics of Bronze Age Eurasia. *Nature* 522, 2015, 167–172.
- Biagini, Philippe/Theves, Cathérine/Balaresque, Patricia/Géraut, Annie/Cannet, Cathérine/Keyser, Christine/Nikolaeva, Dariya/Gérard, Patrice/Duchesne, Sylvie/Orlando, Ludovic/Willerslev, Eske/Alekseev, Anatoly N./Micco, Philippe de/Ludes, Bertrand/Crubézy, Éric, Variola virus in a 300-year-old Siberian mummy. *The New England journal of medicine* 367, 2012, 2057–2059.

²¹ Crubezy et al. 2010; Keyser et al. 2015.

- Bouakaze, Caroline/Keyser, Christine/Crubézy, Éric/Montagnon, Daniel/Ludes, Bertrand, Pigment phenotype and biogeographical ancestry from ancient skeletal remains: inferences from multiplexed autosomal SNP analysis. *International journal of legal medicine* 123, 2009, 315–325.
- Burger, Joachim/Kirchner, M./Bramanti, Barbara/Haak, Wolfgang/Thomas, Mark G., Absence of the lactase-persistence-associated allele in early Neolithic Europeans. *Proceedings of the National Academy of Sciences of the United States of America* 104, 2007, 3736–3741.
- Campos, Paula F./Craig, Oliver E./Turner-Walker, Gordon/Peacock, Elizabeth/Willerslev, Eske/Gilbert, M. Thomas P., DNA in ancient bone. Where is it located and how should we extract it? *Annals of anatomy = Anatomischer Anzeiger. Official organ of the Anatomische Gesellschaft* 194, 2012, 7–16.
- Cooper, Alan/Poinar, Hendrik N., Ancient DNA. Do it right or not at all. *Science* 289, 2000, 1139.
- Crubézy, Éric/Amory, Sylvain/Keyser, Christine/Bouakaze, Caroline/Bodner, Martin/Gibert, Morgane/Rock, Alexander/Parson, Walther/Alexeev, Anatoly/Ludes, Bertrand, Human evolution in Siberia. From frozen bodies to ancient DNA. *BMC evolutionary biology* 10, 2010, 25.
- Dabernat, Henri/Thèves, Cathérine/Bouakaze, Caroline/Nikolaeva, Dariya/Keyser, Christine/Mokrousov, Igor/Géraut, Annie/Duchesne, Sylvie/Gérard, Patrice/Alexeev, Anatoly N./Crubézy, Éric/Ludes, Bertrand, Tuberculosis epidemiology and selection in an autochthonous Siberian population from the 16th–19th century. *PloS one* 9, e89877 (2014).
- Deguilloux, Marie-France/Pemonge, M. H./Mendisco, Fanny/Thibon, D./Cartron, I./Castex, Dominique, Ancient DNA and kinship analysis of human remains deposited in Merovingian necropolis sarcophagi (Jau Dignac et Loirac, France, 7th–8th century AD). *Journal of Archaeological Science* 41, 2014, 399–405.
- Draus-Barini, Jolanta/Walsh, Susan/Pośpiech, Ewelina/Kupiec, Tomasz/Gląb, Henryk/Branicki, Wojciech/Kayser, Manfred, Bona fide colour. DNA prediction of human eye and hair colour from ancient and contemporary skeletal remains. *Investigative genetics* 4/3, 2013.
- Gamba, Cristina/Jones, Eppie R./Teasdale, Matthew D./McLaughlin, Russell L./Gonzalez-Fortes, Gloria/Mattiangeli, Valeria/Domboróczy, László/Kövári, Ivett/Pap, Ildikó/Anders, Alexandra/Whittle, Alasdair/Dani, János/Raczky, Pál/Higham, Thomas F. G./Hofreiter, Michael/Bradley, Daniel G./Pinhasi, Ron, Genome flux and stasis in a five millennium transect of European prehistory. *Nature communications* 5, 2014, 5257.
- Gilbert, M.Thomas P./Bandelt, Hans/Hofreiter, Michael/Barnes, Ian, Assessing ancient DNA studies. *Trends in ecology & evolution* 20 (2005) 541–544.
- Gilbert, M. Thomas P./Kivisild, Toomas/Grønnow, Bjarne/Andersen, Pernille K./Metspalu, Ene/Reidla, Maere/Tamm, Erika/Axelsson, Erik/Götherström, Anders/Campos, Paula F./Rasmussen, Morten/Metspalu, Mait/Higham, Thomas F. G./Schwenninger, Jean-Luc./Nathan, Rubi/De Hoog, Jan de/Koch, Anders/Møller, Lone Nukaaraq/Andreasen, Claus/Meldgaard, Morten/Villems, Richard/Bendixen, Christian/Willerslev, Eske, Paleo-Eskimo mtDNA genome reveals matrilineal discontinuity in Greenland. *Science* 320, 2008, 1787–1789.
- Keyser-Tracqui, Christine/Crubézy, Éric/Ludes, Bertrand, Nuclear and mitochondrial DNA analysis of a 2,000-year-old necropolis in the Egiin Gol Valley of Mongolia. *American journal of human genetics* 73, 2003, 247–260.
- Keyser, Christine/Bouakaze, Caroline/Crubézy, Éric/Nikolaev, Valery G./Montagnon, Daniel/Reis, Tatiana/Ludes, Bertrand, Ancient DNA provides new insights into the history of south Siberian Kurgan people. *Human genetics* 126, 2009, 395–410.
- Keyser, Christine/Hollard, Clémence/Gonzalez, Angela/Fausser, Jean-Luc/Rivals, Éric/Alexeev, Anatoly Nikolayevich/Riberon, Alexandre/Crubézy, Éric/Ludes, Bertrand, The ancient Yakuts. A population genetic enigma. *Philosophical transactions of the Royal Society of London. Series B, Biological sciences* 370, 2015, 20130385.

- Lacan, Marie/Keyser, Christine/Ricaut, François-Xavier/Brucato, Nicolas/Tarrus, Josep/Bosch, Angel/Guilaine, Jean/Crubézy, Éric/Ludes, Bertrand, Ancient DNA suggests the leading role played by men in the Neolithic dissemination. *Proceedings of the National Academy of Sciences of the United States of America* 108, 2011, 18255–18259.
- Lazaridis, Iosif/Patterson, Nick/Mitnick, Alissa/Renaud, Gabriel/Mallick, Swapan/Kirsanow, Karola/Sudmant, Peter H./Schraiber, Joshua G./Castellano, Sergi/Lipson, Mark/Berger, Bonnie/Economou, Christos/Bollongino, Ruth/Fu, Qiaomei/Bos, Kirsten I./Nordenfelt, Susanne/Li, Heng/Filippo, Cesare de/Prüfer, Kay/Sawyer, Susanna/Posth, Cosimo/Haak, Wolfgang/Hallgren, Fredrik/Fornander, Elin/Rohland, Nadin/Delsate, Dominique/Francken, Michael/Guinet, Jean-Michel/Wahl, Joachim/Ayodo, George/Babiker, Hamza A./Bailliet, Graciela/Balanovska, Elena/Balanovsky, Oleg/Barrantes, Ramiro/Bedoya, Gabriel/Ben-Ami, Haim/Bene, Judit/Berrada, Fouad/Bravi, Claudio M./Brisighelli, Francesca/Busby, George B.J./Cali, Francesco/Churnosov, Mikhail/Cole, David E. C./Corach, Daniel/Damba, Larissa/Driem, George van/Dryomov, Stanislav/Dugoujon, Jean-Michel/Fedorova, Sardana A./Gallego Romero, Irene/Gubina, Marina/Hammer, Michael/Henn, Brenna M./Hervig, Tor/Hodoglugil, Ugur/Jha, Aashish R./Karachanak-Yankova, Sena/Khusainova, Rita/Khusnutdinova, Elza/Kittles, Rick/Kivisild, Toomas/Klitz, William/Kučinskas, Vaidutis/Kushniarevich, Alena/Laredj, Leila/Litvinov, Sergey/Loukidis, Theologos/Mahley, Robert W./Melegh, Béla/Metspalu, Ene/Molina, Julio/Mountain, Joanna/Näkkäljärvi, Klemetti/Nesheva, Desislava/Nyambo, Thomas/Osipova, Ludmila/Parik, Jüri/Platonov, Fedor/Posukh, Oolga/Romano, Valentino/Rothhammer, Francisco/Rudan, Igor/Ruizbakiev, Ruslan/Sahakyan, Hovhannes/Sajantila, Antti/Salas, Antonio/Starikovskaya, Elena B./Tarekegn, Ayele/Toncheva, Draga/Turdikulova, Shahlo/Uktveryte, Ingrid/Utevska, Olga/Vasquez, René/Villena, Mercedes/Voevoda, Mikhail/Winkler, Cheryl A./Yepiskoposyan, Levon/Zalloua, Pierre/Zemunik, Tatijana/Cooper, Alan/Capelli, Cristian/Thomas, Mark G./Ruiz-Linares, Andres/Tishkoff, Sarah A./Singh, Lalji/Thangaraj, Kumarasami/Villems, Richard/Comas, David/Sukernik, Rem/Metspalu, Mait/Meyer, Matthias/Eichler, Evan E./Burger, Joachim/Slatkin, Montgomery/Pääbo, Svante/Kelso, Janet/Reich, David/Krause, Johannes, Ancient human genomes suggest three ancestral populations for present-day Europeans. *Nature* 513, 2014, 409–413.
- Lindahl, Tomas, Instability and decay of the primary structure of DNA. *Nature* 362, 1993, 709–715.
- Llamas, Bastien/Fehren-Schmitz, Lars/Valverde, Guido/Soubrier, Julien/Mallick, Swapan/Rohland, Nadin/Nordenfelt, Susanne/Valdiosera, Cristina/Richards, Stephen M./Rohrlach, Adam/Barreto Romero, Maria Inés/Espinoza, Isabel Flores/Cagigao, Elsa Tomasto/Jimenez, Lucia Watson/Makowski, Krzysztof./Leborero Reyna, Ilán Santiago/Lory, Josefina Mansilla./Ballivián Torrez, Julio Alejandro/Rivera, Mario A./Burger, Richard L./Ceruti, Maria Constanza/Reinhard, Johan/Wells, R. Spencer/Politis, Gustavo/Santoró, Calogero M./Standen, Vivien G./Smith, Colin/Reich, David/Ho, Simon Y. W./Cooper, Alan/Haak, Wolfgang, Ancient mitochondrial DNA provides high-resolution time scale of the peopling of the Americas. *Science advances* 2, 2016, e1501385.
- Malmstrom, Helena/Gilbert, M. Thomas P./Thomas, Mark G./Brandstrom, Mikael/Storå, Jan/Molnar, Petra/Andersen, Pernille K./Bendixen, Christian/Holmlund, Gunilla/Götherström, Anders/Willerslev, Eske, Ancient DNA reveals lack of continuity between neolithic hunter-gatherers and contemporary Scandinavians. *Current biology* 19, 2009, 1758–1762.
- Orlando, Ludovic/Ginolhac, Aurélien/Zhang, Guojie/Froese, Duane G./Albrechtsen, Anders/Stiller, Mathias/Schubert, Mikkel/Cappellini, Enrico/Petersen, Bent/Moltke, Ida/Johnson, Philip L./Fumagalli, Matteo/Vilstrup, Julia T./Raghavan, Maanasa/Korneliusson, Thorfinn/Malaspina, Anna-Sapfo/Vogt, Josef/Szklarczyk, Damian/Kelstrup, Christian D./Vinther, Jakob/Dolocan, Andrei/Stenderup, Jesper/Velazquez, Amhed Missael Vargas/Cahill, James/Rasmussen, Morten/Wang, Xiaoli/Min, Jiumeng/Zazula, Grant D./Seguin-Orlando, Andaine/Mortensen,

- Cecilie/Magnussen, Kim/Thompson, John F./Weinstock, Jaco/Gregersen, Kristian/Røed, Knut H./Eisenmann, Véra/Rubin, Carl-Johan/Miller, Donald/Antczak, Doug/Bertelsen, Mads F./Brunak, Søren/Al-Rasheid, Khaled A./Ryder, Oliver A./Andersson, Leif/Mundy, John/Krogh, Anders/Gilbert, M. Thomas P./Kjaer, Kurt H./Sicheritz-Ponten, Thomas/Jensen, Lars Juhl/Olsen, Jesper V./Hofreiter, Michael/Nielsen, Rasmus/Shapiro, Beth/Wang, Jun/Willerslev, Eske, Recalibrating Equus evolution using the genome sequence of an early Middle Pleistocene horse. *Nature* 499, 2013, 74–78.
- Overballe-Petersen, Søren/Orlando, Ludovic/Willerslev, Eske, Next-generation sequencing offers new insights into DNA degradation. *Trends in biotechnology* 30, 2012, 364–368.
- Pääbo, Svante, Ancient DNA. Extraction, characterization, molecular cloning, and enzymatic amplification. *Proceedings of the National Academy of Sciences of the United States of America* 86, 1989, 1939–1943.
- Pinhasi, Ron/Fernandes, Daniel/Sirak, Kendra/Novak, Mario/Connell, Sarah/Alpaslan-Roodenberg, Söngül/Gerritsen, Fokke/Moiseyev, Vyacheslav/Gromov, Andrey/Raczky, Pál/Anders, Alexandra/Pietrusewsky, Michael/Rollefson, Gary/Jovanovic, Marija/Trinhhoang, Hiep/Bar-Oz, Guy/Oxenham, Marc/Matsumura, Hirofumi/Hofreiter, Michael, Optimal Ancient DNA Yields from the Inner Ear Part of the Human Petrous Bone. *PLoS one* 10, 2015, e0129102.
- Rasmussen, Morten/Li, Yingrui/Lindgreen, Stinus/Pedersen, Jakob Skou/Albrechtsen, Anders/Moltke, Ida/Metspalu, Mait/Metspalu, Ene/Kivisild, Toomas/Gupta, Ramneek/Bertalan, Marcelo/Nielsen, Kasper/Gilbert, M. Thomas P./Wang, Yong/Raghavan, Maanasa/Campos, Paula F./Kamp, Hanne Munkholm/Wilson, Andrew S./Gledhill, Andrew/Tridico, Silvana/Bunce, Michael/Lorenzen, Eline D./Binladen, Jonas/Guo, Xiaosen/Zhao, Jing/Zhang, Xiuqing/Zhang, Hao/Li, Zhuo/Chen, Minfeng/Orlando, Ludovic/Kristiansen, Kristian/Bak, Mads/Tommerup, Niels/Bendixen, Christian/Pierre, Tracey L./Grønnow, Bjarne/Meldgaard, Morten/Andreasen, Claus/Fedorova, Sardana A./Osipova, Ludmila P./Higham, Thomas F. G./Ramsey, Christopher Bronk/Hansen, Thomas V. O./Nielsen, Finn C./Crawford, Michael H./Brunak, Søren/Sicheritz-Ponten, Thomas/Villems, Richard/Nielsen, Rasmus/Krogh, Anders/Wang, Jun/Willerslev, Eske, Ancient human genome sequence of an extinct Palaeo-Eskimo. *Nature* 463, 2010, 757–762.
- Rasmussen, Simon/Allentoft, Morten Erik/Nielsen, Kasper/Orlando, Ludovic/Sikora, Martin/Sjögren, Karl-Göran/Pedersen, Anders Gorm/Schubert, Mikkel/Van Dam, Alex/Kapel, Christian Moliin/Nielsen, Henrik Bjørn/Brunak, Søren/Avetisyan, Pavel/Epimakhov, Andrey/Khalyapin, Mikhail Viktorovich/Gnuni, Artak/Kriiska, Aivar/Lasak, Irena/Metspalu, Mait/Moiseyev, Vyacheslav/Gromov, Andrei/Pokutta, Dalia/Saag, Lehti/Varul, Liivi/Yepiskoposyan, Levon/Sicheritz-Ponten, Thomas/Foley, Robert A./Lahr, Marta Mirazón/Nielsen, Rasmus/Kristiansen, Kristian/Willerslev, Eske, Early divergent strains of *Yersinia pestis* in Eurasia 5,000 years ago. *Cell* 163, 2015, 571–582.
- Skoglund, Pontus/Posth, Cosimo/Sirak, Kendra/Spriggs, Matthew/Valentin, Frédérique/Bedford, Stuart/Clark, Geoffrey R./Reepmeyer, Christian/Petchey, Fiona/Fernandes, Daniel/Fu, Qiaomei/Harney, Eadaoin/Lipson, Mark/Mallick, Swapan/Novak, Mario/Rohland, Nadin/Stewardson, Kristin/Abdullah, Syafiq/Cox, Murray P./Friedlaender, Françoise R./Friedlaender, Jonathan S./Kivisild, Toomas/Koki, George/Kusuma, Pradiptajati/Merriwether, D. Andrew/Ricaud, François-X./Wee, Joseph T./Patterson, Nick/Krause, Johannes/Pinhasi, Ron/Reich, David, Genomic insights into the peopling of the Southwest Pacific. *Nature* 538, 2016, 510–513.
- Thèves, Cathérine/Senescau, Alice/Vanin, Stefano/Keyser, Christine/Ricaud, François Xavier/Alekseev, Anatoly N./Dabernat, Henri/Ludes, Bertrand/Fabre, Richard/Crubézy, Éric, Molecular identification of bacteria by total sequence screening: determining the cause of death in ancient human subjects. *PLoS one* 6, 2011, e21733.

IV Social Structures: Conditions of Life and Social Order

Magali Coumert

Archaeology vs Written Sources

The Case of Gothic Women

Since the publication of *On Barbarian Identity: Critical Approaches to Ethnicity in the Early Middle Ages*, edited by A. Gillett,¹ the discussions around the links between ethnic identity, archaeology and power in the early Middle Ages have been polemic. Initially, the debates were between representatives of the Vienna School and North American researchers. However, P. Heather, as a British researcher, occupied a space outside of this debate, which allowed him to produce a balanced picture of the arguments.² He put forward an original position. On the one hand, the theory of ethnogenesis presents the formation of ethnic groups as a constant flow, where each ethnic identity can be narrowed down to one small group that brings with it prestigious traditions, which then spread as they come to be accepted by a large number of people in response to changing circumstances. On the other, sceptics like W. Goffart reject this idea that continuity can be reduced to traditions and question the level of importance that should be accorded to ethnic identities.³

Once again, Heather put forward the idea of genetic continuity between barbarian groups both within and outside of the Roman Empire: “What all this tells us, in other words, is that there were powerful structural reasons why groups would not have extracted similar levels of loyalty from all their members. And to the extent that the prime – though certainly not the only – method of acquiring one’s status, and hence one’s differentiated degree of loyalty to a group, like one’s property, was clearly by birth through one’s parents, then I do indeed plead guilty to having a partly biological approach to identity.”⁴

He has since systematically stressed the importance, which is denied by both camps, of mass migrations in the evolution of the Roman Empire from the 5th century onwards.⁵ For him, this concept has been rejected as diabolical: “From a position of overwhelming dominance before the 1960s, migration has become the great Satan of archaeological explanation.”⁶

His subsequent studies have explored this research avenue, systematically placing the Huns and their empire at the centre of an account that explains the end of the Roman Empire through a succession of migrations. Asserting his independent

1 Gillett 2002.

2 Heather 2008.

3 Goffart 2006.

4 Heather 2008, 46.

5 Heather 2005; 2009; 2013.

6 Heather 2009, 20.

position, his eminent academic standing as a professor at King's College London and Goth specialist⁷ guarantees an audience for his latest publications. However, his target audience, which is students and the general public,⁸ does not in any way constitute a specialist audience ready to receive his ideas.⁹

An increasing amount of space is given over in these works to drawing a quite unexpected parallel between the Great Trek of the Boers in the 1830s and the barbarian groups of the Early Middle Ages, as this extract in 2009 shows: "In the 1830s Boer farmers, complete with families, possessions and animals, moved north from the Cape to escape British imperial control. When they encountered opposition, they reorganised themselves into groups large enough to destroy resistance, illustrating a form of predatory migration flow that is highly applicable to the first millennium A.D."¹⁰

This comparison is revisited in his most recent work in 2013: "Rather than an early modern army going off to war with its baggage train, to my mind the Pannonian Goths would have looked much more like one of the Boer wagon trains rumbling off on the great trek north away from British imperial rule: a collection of farmer-fighters and their families, together with all their accoutrements. In this model, the group would consist of higher numbers of non-combatants, with a more 'normal' age distribution among them, and faced a much greater need to take with them everything associated with farming as well as weaponry and substantial food supplies."¹¹

His comparison of the barbarian groups with the Boers overlooks many elements, which renders it unsuitable. The Boers' Great Trek (Fig. 10.1) was based on two elements that would not have been accessible to the Goths¹²:

- superior weaponry, which allowed fewer than one hundred marksmen to stand up to several thousand warriors. Such superiority, which relied on gunpowder and firearms, could only be maintained through their links with the colonists and the Europeans. Studies on the Roman military equipment of Late Antiquity show a dynamic evolution that resulted from different neighbouring warrior traditions. The armies serving the Roman emperor and those serving the barbarian kings relied on the same combat system, and superiority was dependent on their general strategies and the mobilisation of their troops.¹³

⁷ See his personal presentation, <https://kclpure.kcl.ac.uk/portal/peter.heather.html> [15.10.2015].

⁸ Evidences of this target audience in Heather 2013: parallels between gothic successions and the movie *The Godfather*, 18 and 41; inquisition of the 13th century compared to informing system in communist Europe before 1989, 413.

⁹ James 2011; Kulikowski 2011.

¹⁰ Heather 2009, illustration 9. These illustrations are not printed in Heather 2010, the American edition of the book.

¹¹ Heather 2013, 28.

¹² Binckes 2013, 218–253; Venayre 2015.

¹³ Coulston 2013. Kazanski 2013.

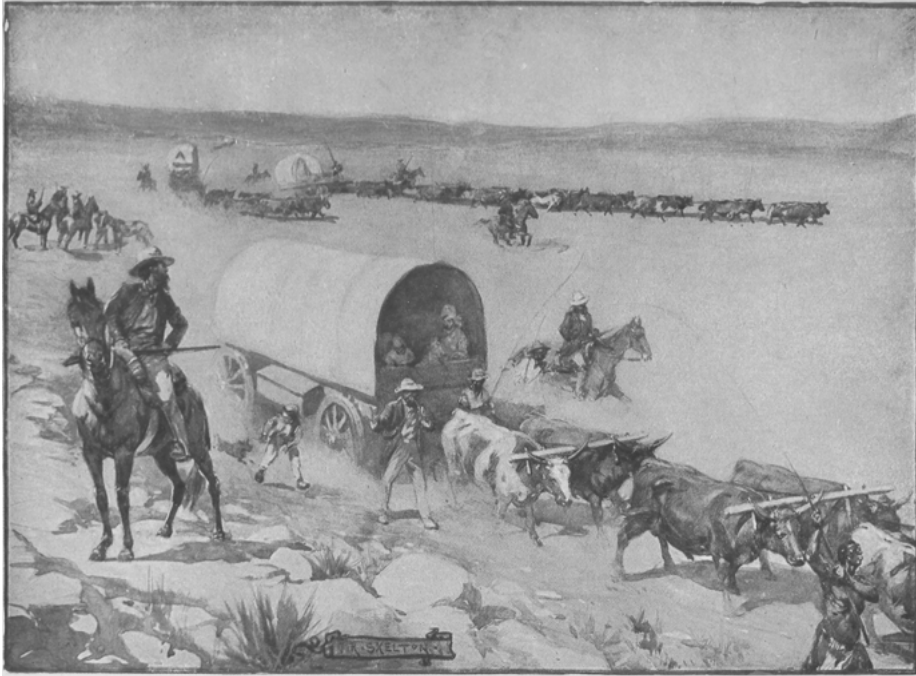


Fig. 10.1: “The Voor-Trekkers” of the 1830’s by George Salisbary Smithard (1873–1919) and Joseph Ratcliffe Skelton (1865–1927) (from [https://en.wikipedia.org/wiki/Voortrekkers#/media/File:G.S._Smithard;_J.S._Skelton_\(1909\)_-_The_Voortrekkers.jpg](https://en.wikipedia.org/wiki/Voortrekkers#/media/File:G.S._Smithard;_J.S._Skelton_(1909)_-_The_Voortrekkers.jpg)).

- a pastoral practice. Thanks to their livestock, the Boers could move around from place to place and feed themselves when there was no agrarian harvest. This was certainly not the case for the barbarians on their entry into Roman territory.

However, the barbarian groups’ military specialisation did not necessarily stop them from maintaining a family life. This has already been shown for soldiers within the Roman garrisons, or at least for the officers.¹⁴ It is possible to envisage such a family life continuing on the fringes of military operations for the Goths. This would explain Procopius’ comments on the flight of women and children during a Goth defeat.¹⁵

Heather’s comparison of the Boers’ Great Trek and the roaming barbarian armies of the 4th and 5th centuries is inadequate. It allows us to highlight a singularly obsolete vision of the relations between the Romans and the barbarians in Late Antiquity. The relationship between the Boers and the indigenous peoples was based on an acute awareness of the differences between the South African and

¹⁴ See references in Whately 2013, 232. Example of Vindolanda: Greene 2013.

¹⁵ For example, Procopius, *Gothic Wars* I, 8, 8 and 13, 13.

northern European populations after millennia of separate evolution before the European invention of long sea crossings. Links with Europe were by no means severed in the 19th century, however, as we can see in the intense political correspondence between the Boer chiefs and the British governors and Parliament. The Boers presented themselves as European colonists, radically different from the natives with whom they shared no language or religion and with whom they did not mix.

None of the barbarian groups of the early Middle Ages was able to rely on any such powerful metropolis, nor could they imagine one coming to their rescue. As M. Kulikowski observed, choosing the Boers among all other possible comparisons implies the rejection of many other more appropriate positions: “Historical comparanda are certainly a legitimate tool of analysis, and Heather picks some apt ones that support his mass-migration hypothesis, not least an extended analogy between what he regards as a mass Gothic migration from the Baltic and conquest of the Black Sea littoral and the Afrikaner migration to, and conquest of, the Transvaal and Natal. It must be said, however, that a great many historical comparanda would support a model that he ignores that the Goths were formed from a large number of indigenes and a small number of migrants under the pressure of Roman imperialism, and in the shadow of the Empire. From 17th-century Spanish Florida to the whole history of European involvement in India and Russian involvement in its “near abroad,” the formation of polities and identities at the frontiers of imperial powers is a dramatically more powerful explanatory model of the Roman frontier than the mass migrations on which Heather insists.”¹⁶

It would seem that the comparison proposed by Heather is completely reactionary. He contradicts all those who put forward a variety of ways of classifying individuals – according to gender, family, kinship network, age, friendships, religious affiliation, professional specialisation, social position, and so on¹⁷ – with his insistence on genetic heritage and on an insurmountable difference between different ethnic groups, such as that between the Boers and the Zulus in the 19th century.

In this paper, I would like to explain Heather’s intellectual approach in detail based on the case of the Goths (which he is an expert on), focusing in particular on the role of Goth wives in Italy in the 5th and 6th centuries, in order to show how his approach was constructed on a rejection of the challenges of traditional interpretation.

¹⁶ Kulikowski 2011.

¹⁷ More distinctions exposed in Brather 2010.

A Group of Migrants?

In the 1960s, archaeologists were the first to break away from a unanimous consensus on the historic model, which postulates that there were mass migrations from Scandinavia up until the mid-20th century. They rejected the idea of a large population movement from the Scandinavian peninsula, although the migration of small groups leaving no traces is nevertheless still possible.¹⁸ Hence H. Wolfram's hypothesis of a Scandinavian ancestry that came from just one single Amal clan, which brought with it the core of ethnic traditions.¹⁹ I have attempted to show, in response to this, that the Scandinavian and Scythian ancestries proposed by Jordanes can be perfectly integrated into the ancient ethnographic framework and that the name of the island of Gotland appeared not as a corroboration but as a consequence of the success of Jordanes' account of Gothic ancestries.²⁰

Heather integrates the work of archaeologists, who have abandoned any talk of migration from Scandinavia to the south of the Baltic Sea but affirms that: "Archaeological investigation has provided some properly Gothic material to supplement the literary evidence. Gothic material culture can be followed from the first centuries AD, when the Goths seem to have occupied lands in what is now Poland, to the time that they entered the Roman Empire".²¹

However, as the author reminds us, "broad cultural areas cannot be equated with particular tribal groups".²² Heather draws on the studies of archaeologists like V. Bierbauer, who highlight the existence of an independent material culture, known as the Wielbark culture, in the south of the Baltic from the second quarter of the 1st century CE onwards. Nevertheless, only Roman sources from the beginning of the Empire allow us to match this material culture to certain ethnic groups located in the same regions, namely the Goths, the Rugii, the Lemovii and the Gepidae.

The Wielbark culture spread to nearby neighbouring regions to the south and west up until the 3rd century CE. Traces of this material culture disappeared from regions situated to the east of the Middle Vistula only to appear further south between 160 and 230 CE. In the mid-3rd century CE, the Wielbark culture was therefore present in Ukraine and Volhynia, where it was in contact, albeit – according to Bierbauer – with no mixing, with the cultures of other populations identified as the Sarmatians and the late Scythians.²³ This is where the culture known as Chernyakhov developed. It is thought to have derived from the Wielbark culture without any major

18 Kazanski 1991, 22 sustains Scandinavian influence on the Wielbark culture. Bierbauer 1994, 51–171 and 1998 underlines the continental genesis of this material culture.

19 Wolfram 2003, 180.

20 Coumert 2007, 477–8.

21 Heather 1991, 4.

22 *Ibid.*

23 Bierbauer 1998, 412–415.

cultural disruption and to have been clearly distinguishable from the material cultures of the indigenous populations, which are named in Roman sources as the Geto-Dacians, the Dacians, the Carpi and the Sarmatians.

This traditional interpretation gives rise to a number of questions. First among them is the issue of the relations between these two material cultures. The new name corresponds to a new formulation in which the elements from different material cultures are mixed with borrowings from cultures other than the Wielbark culture as well as with innovations. Among the elements of continuity highlighted by archaeologists like Kazanski, the interpretation of female costume plays a surprisingly determining role (Fig. 10.2).²⁴

These continuity elements, which included the importance of women, enabled Heather in 1991 to affirm a genetic continuity from one material culture group to the next. Ignoring a conception of ethnogenesis that minimises the importance of all continuities other than cultural continuity, he supported a genetic continuity through the core of traditions (at least for a substantial number of Goths), which he believed participated fully in the political life of the people. Astonishingly, this led him to pen his affirmation of the Gothic race: “Not all of the followers of Alaric or Theodoric the Amal shared a common, Gothic, ethnic origin, but the likelihood is surely that the majority of them did. It is worth stressing from the outset that the presence of some non-Gothic elements does not make the Ostrogoths and Visigoths fundamentally multiracial”.²⁵

This affirmation was based on two main points:

- The number of chiefs taking part in Gothic political decisions. This is thought to have been too important to have been handled by a recent Amal dynasty, whose strength came only from the intermediary chiefs who had joined forces with it.
- The ethnic identity of the Goths is thought to be deep-rooted and ancient, existing a long time before their submission to the Huns. The sources allegedly show its importance by specifically referring to Gothic groups in contrast to their descriptions of multiracial groups, such as those that followed Odoacer or the Vandals and the Alans who settled in North Africa.

His reference to the concept of race, which was an extremely ideologically awkward subject at the end of the 20th century, was pointed out by P. Amory²⁶ and consequently never appeared again in any of his subsequent works. Nevertheless, his argument has not changed: the 4th- and 5th-century Goths were mainly descended genetically from the 3rd-century migrants. This supposedly shared past was not based on any political unity or dominant clan but on their own mythical memories of the migration and of the

24 Bachrach 1993. The importance of the female gothic costume is also stressed in Périn 1993; Kazanski/Périn 2008, 196–198, and 2011, 315–322. On these works, see Halsall 2011.

25 Heather 1991, 323–4.

26 Amory 1997, 15 note 2.

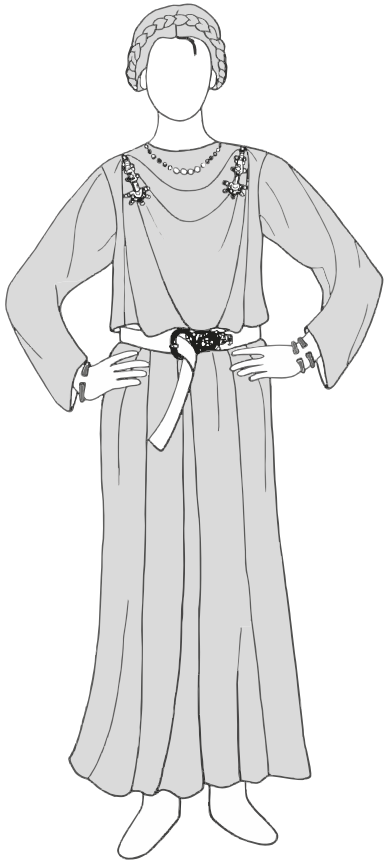


Fig. 10.2: An “Ostrogothic” female costume, Kerch grave 7 in vault 1801/1904 (adopted and changed from Damm 1999, 83 fig. 64).

arrival of the Huns.²⁷ Wolfram has compared his position with “19th-century Germanist romanticism”,²⁸ while Goffart has highlighted the traditional aspect of his portrayal, which only undergoes a slight shift by proposing that the Huns and not the Germanic language populations were the gravediggers of the Roman Empire.²⁹

The fact that the Goths are described as such is only a superficial indication of their composition. This is also the case for the Franks for whom neither a long history nor a migration is envisaged before their appearance in *Germania* in the second half of the 3rd century CE. The participation of intermediary chiefs can be assumed for all barbarian groups because, before Clovis, no royal family had managed to impose its domination over the whole of an ethnic group for more than three generations.

²⁷ Heather 2003, 104–5.

²⁸ Wolfram 1993. See also quotations of M. Kulikowski in Heather 2008, 36.

²⁹ Goffart 2006, 17.

Over and above the inappropriate wording (in the opinion, at least, of this French researcher who is living in a democracy that is haunted by the spectre of the French National Front party) that Heather erased from his later publications, what we are essentially interested in is why he pushed forward the idea of genetic continuity. Even if it did exist, it should be remembered that it did not in itself imply any continuity and that it had inevitably been constructed. In a way, whether or not the 5th-century Goths were the genetic descendants of the 4th-century Goths changes little in terms of the continuity of the feeling of belonging. As Amory pointed out: “We must constantly remind ourselves that whatever ethnic groups believe about their own ancestry, that ancestry does not determine cultural characteristics”.³⁰

Even if the Goths were the sons of Goths, it does not provide us with a better understanding of what makes transforming this biological data into a cultural element possible. It is likely that the biological filiation hypothesis serves to support the particularly important role given here to the Goth wives, implicitly presented as the guarantors of genetic and cultural filiation.

The Material Culture of the Goths and Their Wives

On this subject, Heather appears to be especially dependent on the traditional interpretation of archaeological excavations. Admittedly, he raises the possibility that a material culture can spread in the absence of population movement and that it does not correspond to a specific ethnic identity, but the written sources seem sufficient to him to counter these arguments.³¹ When contemporary authors mention population movements, they are usually writing about incursions into Roman territory, such as the accounts of the Thervingi in 376.³² Other migrations referred to relate to a mythical past, such as those alluded to by Jordanes,³³ in an ethnographic vision that views the Mediterranean Basin as the centre of civilisation, which populations can only reach after completing the initiatory stages that allow the gradual eradication of initial savagery. The theoretical aspect of such a portrayal is demonstrated, in my view, by the abstract nature of the stages of migration, such as changing continents, the Riphean mountains and crossing from Scandia into Scythia.³⁴ The traditional interpretation of excavations relies not only on accounts of origins that have appeared at a much later date but also on their distortion – the

³⁰ Amory 1997, 15.

³¹ Heather 1996, 23.

³² Ammianus Marcellinus, *History* 31.4.

³³ Jordanes, *Getica*, § 39–40.

³⁴ Amory 1997, 18–25; Coumert 2007, 503–517.

proximity, which is embarrassing in relation to the reality of northern and eastern Europe, of Scandia and Scythia is thus prudently overlooked.

Linguistics has also long been a guide in the reasoning of archaeologists, because the language of the Gothic tradition of the Bible, attributed to Ulfilas, is linked to the languages spoken today in Scandinavia and to the south of the North Sea. However, it has been suggested for a long time that such a geographic distribution is in no way indicative of the spread of a language³⁵ and that a language can spread for reasons of power, bearing no relation whatsoever to any population movement, as seems to have been the case for the Brythonic language of Wales, for example.

Having accepted the criticism based on the linguistic argument and having himself challenged the exaggerated level of trust placed in the *Getica*, Heather nevertheless defends the idea of population movement in groups organised over long distances, as in his example of the Boers leaving the Cape in the 1830s.³⁶ He constructs an explanatory model of this, which he extends to the whole of Europe in the first millennium, in his work *Empires and Barbarians*, published in 2009. Instead of a billiard-ball model, which sees people as fixed entities that ricochet off one another, he suggests a snowball model whereby the movement of small entities gives way to large upheavals. Even though archaeologists seem to systematically reject interpretations involving external migratory contributions, their doubts do not seem justified in Heather's eyes:

- On the one hand, because migratory contribution always remains a possibility for interpretation based on excavations.
- On the other, because the written sources seem to him to be too numerous and convergent to merely be reflecting a *topos*.³⁷

Such an explanation contradicts the majority of recent studies because of its many problematic elements.³⁸ According to Heather, the migration of the Goths, with a high level of genetic continuity between the different groups referred to as such, is based on the continuity from one material culture to another (between the Wielbark and the Chernyakhov material cultures), on the link between the diffusion of elements from a material culture and the Goths' political power and, finally, on the continuity in the costume of the Gothic wives.

The assimilation of the Goths to first the Wielbark and then the Chernyakhov culture populations has been the subject of extreme criticism, particularly on account of its dependence on written sources. Heather sees the congruence between the movement of the Wielbark culture from the north to the south and the portrayals

35 Coumert 2008, 53–54.

36 Heather 2009, illustration 9.

37 Heather 2009, 27–28.

38 Gasparri 2010; Coumert/Dumézil 2010; Pohl 2010.

presented in the work of Ammianus Marcellinus and Jordanes as well as in the *Historia Augusta* as strengthening his theory.³⁹ He does not see the way in which these works have determined the traditional interpretation of excavations, which only minimally correspond to the accounts he gives since the same material culture must be attributed to other populations, such as the Heruli, the Gepidae and the Rugii.⁴⁰ The “Gothic material culture” that he refers to so imprudently thus remains a fantasy.⁴¹

Moreover, a material culture is a collection of objects whose association has been judged to be meaningful. However, the ideal combination of these objects is, needless to say, never found in its entirety in an excavation, while some objects from other collections defined as material cultures will be found there. Brather has studied the historiography of interpreting excavations and has shown, in case after case, how much the apriority of archaeologists counts in the determination of material cultures and in the attribution of the excavations to certain ethnic identities.⁴² The borders of the current European states are thus illustrated in the interpretation of excavations of sites from the early Middle Ages because these shape the training of archaeologists and thus the way in which they interpret a site. Furthermore, the movement of a material culture can correspond to both the movement of those inhabiting it and its adoption by a new population.

Fibulas have played a key role in attributing grave goods to a specific ethnic group. However, there is nothing in any texts from Antiquity or the early Middle Ages to infer anyone should see any signs of ethnic identity in these items, and there are other possible interpretations. Brather proposed analysing the diffusion of the different models of fibulas according to the existence of regional markets for objects of this type.⁴³ For example, I. Barbiera has shown how the movements of similar objects have been interpreted as trade exchanges if they took place in Roman times and as traces of migration if they occurred in the 5th century.⁴⁴ This type of analysis, of course, partly overlooks the symbolic value an object may have, depending not only on the wearer but also on the giver of the fibula, and their far-off origins could also give a person a particular status during funeral ceremonies.⁴⁵

The interpretation of excavations taken up by Heather corresponds to these general criticisms. When elements from one material culture, such as those of Wielbark, are found in another, such as Przeworsk, is it a result of pressure exerted by one culture on the other or more fundamentally because it is pointless trying to

³⁹ Heather 1996, 35, 49 and 51.

⁴⁰ Heather 1996, 43.

⁴¹ Heather 1991, 4 quoted *supra*.

⁴² Brather 2004.

⁴³ Brather 2010.

⁴⁴ Barbiera 2010, 126.

⁴⁵ Barbiera 2010, 127; Halsall 2011, 24.

define distinct collections that make up a material culture within a human population that was unavoidably open to trading? According to Heather, the interpretation of these borrowings within this context is inevitably a sign of confrontation between the different populations: “At least in certain areas, therefore, Wielbark expansion would seem to have placed direct pressure on its Przeworsk neighbours. And even the former Przeworsk populations who adopted Wielbark habits would hardly have done so had they not been coming under some kind of pressure: political and cultural, at least, if not demographic.”⁴⁶

However, when it comes to describing the formation of the new material culture known as Chernyakhov, the historian stresses the importance of trading between different populations (which developed as a result of Germanic newcomers and inhabitants from the Roman provinces⁴⁷), but he also underlines the decisive contribution made by the Wielbark culture populations on account of the continuity of the female costume: “It is hard to believe that such a striking continuity in female dress could have occurred without substantial numbers of women – and therefore, in all probability, children too – having trodden the road south.”⁴⁸

The female costume meant that the appearance of a new material culture on a territory with borrowings from another culture was no longer a sign of confrontation or population movement in this case, as it was for the spread of the Wielbark culture, but simply profitable borrowings from neighbouring cultures.

Gothic women are ultimately a key element of Heather’s account. Their presence ensures the continuity between the different material culture groups and proves his genetic continuity theory despite evidence of archaeological and political discontinuity between the 3rd and 4th centuries.

Gender and Ethnic Identity in Grave Goods

The importance of the female costume in arguing for the continuity of the material cultures that have been attributed to Gothic groups can also be found in M. Kazanski’s work on the Goths. Heather’s position is that the female costume is not only the mark of continuity from one material culture to another but also the basis of his argument for a strong genetic continuity, despite the absence of any political unity, between the Gothic groups of the 3rd, 4th and 5th centuries. It is extremely surprising that such a place has been accorded to the interpretation of women’s tombs, which become fundamental in identifying an ethnic identity, albeit characterised in written sources by its warring activity.

⁴⁶ Heather 1996, 38.

⁴⁷ Heather 1996, 86.

⁴⁸ Heather 1996, 48.

The significance of female costume in the ethnic interpretation of tombs has been highlighted by B. Effros.⁴⁹ She writes that it seems to have arisen from a reconsideration of the association of an object with a particular ethnic identity in relation to men, whom researchers have focused on as the engines of group ethnic identity formation and the future existence of that identity. Rather than the ethnic interpretation of objects, other elements of social identity, such as status, profession and age, can be put forward in line with the complex interweaving of the different elements of identity.⁵⁰ Such criticisms have had a lesser impact in relation to women, who, according to Effros, have remained the passive icons of group ethnic identity in the eyes of archaeologists. Objects of female costume, such as fibulas, have thus not been associated with displays of status or social role but have been systematically linked to ethnic identity because it was still possible to see women only as members of a united group rather than as individuals and social actors in their own right. La Rocca has shown how the association of objects attributed to various ethnic identities in female tombs has emerged either as a reflection of the stages in geographic population movements, as the preservation of a conservative ethnic identity or as a change of ethnic identity, for example following a marriage.⁵¹

The importance that those who support an ethnic identity interpretation of grave goods accord to female tombs actually serves to offset the difficulty of identifying male tombs. Out of a group of around 176 tombs from the 5th century in Italy, which were presumed to be Gothic, Barbiera calculated that 9% of them contained typically male goods and 34 % contained typically female goods.⁵² These proportions are similar, however, to those found for the Lombardic period, which shows that the low number of tombs (particularly male tombs) containing goods was not a specifically Gothic practice. Moreover, during recent excavations, elements of male goods have been identified much more frequently than in previous centuries because the research is no longer restricted to just weapons and fibulas. The small number of male tombs inventoried thus partly reflects the influence that pre-established models had on excavators, who only retained the presence of certain types of objects.

Nevertheless, tombs containing markers of masculinity remain less frequent. The Goths are thought not to have expressed their ethnic membership in their funeral practices, but did their wives? One way of interpreting this masculine invisibility would be to reconsider the contrast between the Romans and the barbarians that emerges from fixed Roman discourse. Ph. von Rummel's study shows the discrepancy, in relation to 4th- and 5th-century costumes, between the

⁴⁹ Effros 2004, cites as examples works by Siegmund, Pilet, Bierbauer and Kazanski.

⁵⁰ Brather 2004. See the commentaries in Curta 2007 and the response of Brather, in Brather 2011 (2012).

⁵¹ La Rocca 2011, 68–71.

⁵² Barbiera 2010.

Roman discourse, which compares certain elements of clothing to those of the barbarians, and the reality, which seems to contrast civilians and the military a lot more, or rather the traditional representation of civilians and the reality of the military's political domination, regardless of their origins.⁵³ The traditional interpretations of excavations in ethnic terms contrast the new funeral practices of the 5th century, which are considered to be barbarian, with an evanescent Roman model. It was possible for the Roman male tombs to include weapons,⁵⁴ and the practices that can be attributed to the Romans are characterised by their heterogeneity and their remoteness from traditional Roman representations.⁵⁵ According to von Rummel, any dichotomous Roman/Barbarian approach has to be rejected immediately because it does not reflect the importance of local traditions.

According to Barbiera's study, the tombs attributed to barbarians in Italy from the 5th to the mid-6th centuries show certain continuity with earlier funeral practices through their location in necropolises that were used for several generations or through certain customs.⁵⁶ For example, fibulas had the same decorative garment-fastener function prior to the 5th century and were just as likely to have been deposited in tombs. The novelty lay in the appearance of new forms of fibulas and in the fact that funeral deposits were becoming increasingly frequent in female tombs. This polarity of grave goods according to gender increased over the course of the 6th century, reaching a peak in the 7th century. The formation of this gendered identity does not therefore correspond to the chronology of the migrations and the acculturation of different barbarian elites in Italy.

Moreover, the allocation of tombs comprising goods assumed to be barbarian appears to be extremely complex. It points most notably to the zones of change and the zones of increased social tension as the frontiers, but it does not seem to illustrate any mass migration. The sudden change came in the mid-6th century with the use of new burial sites, both Christian and pagan, as well as an intensification of gender-specific deposits and the appearance of some very rich male tombs with weapons and decorative belts. Barbiera writes that the change she observes, in terms of the new types of fibulas deposited with increasing frequency in female tombs, seems to correspond above all to a new role for women in the transmission of family prestige and in the organisation of funerals. Likewise, La Rocca has highlighted variations in female grave goods depending on life stage.⁵⁷ Hence, the tombs of women who died during their childbearing years, between the ages of 15 and 30, seem to be better-

⁵³ Von Rummel 2007.

⁵⁴ Barbiera 2013.

⁵⁵ Von Rummel 2013.

⁵⁶ Barbiera 2013.

⁵⁷ La Rocca 2011.

stocked, which suggests we should view this much more as a reflection of their social roles than of their ethnic memberships.

In the case of the Goths, just as with other aristocracies from the barbarian kingdoms in the West, it is thus no obstacle to interpreting either the female or the male tombs according to different social roles rather than as the passive reflection of a traditional barbarian costume, which would have been preserved during quite different circumstances. These new ways of interpreting female tombs from the Gothic period in Italy offer a vision that is consistent with accounts written during the same period.

Contemporary written sources principally describe the royal family, highlighting Theodoric's bold matrimonial policy, which allied him through his sister and daughters to various kings and princes in Western Europe.⁵⁸ At the mercy of particularly unstable political alliances, these women revealed their ability to use the differences and complementarities between their birth families and their families through marriage. The political role of Goth wives thus extended well beyond that of passive icons of ethnic identity.

Furthermore, outside of the royal family, it appeared no woman was referred to as Gothic. The prosopography provided by Amory systematically transcribes all the accounts written in the kingdom of Italy between 489 and 554. His research on the Goths was based on Germanic names as well as on military position and Arianism, or membership of the Arian priesthood. This explains the small number of women – 37 out of a total 379 individuals – in his survey. Not one woman outside of the royal family declared herself to be Gothic, so men and women both have the same customs in our sources.⁵⁹ However, all the individuals declared as Goths by others (only 13 %) were men. No woman linked to the Goths was ever referred to as a Goth. The female relatives of Goths were however keen to quote their social status: 10 out of the 23 women named in the chronological period gave their social rank.⁶⁰ It seems therefore that, in the kingdom of Theodoric and his successors, there was no advantage to be gained by a woman claiming to be Gothic unless she belonged to the royal family and that no-one envisaged describing any woman as such.

Such information is admittedly belated, partial and dependent on the arbitrary preservation of certain papyruses and inscriptions.⁶¹ The survey of 379 individuals seems very small given the number of soldiers that Theodoric led,⁶² but this rightly encourages us to place a low estimate on the number of warriors – even though, as

⁵⁸ Becker/Piriou 2008; La Rocca 2011, 73 sqq.

⁵⁹ In the 7th century, Wililiwa, could be an exception, but Tjäder, 1954–1982, vol. I, 478 n.3 et III, plate 97 fills a hole in Pap. Ital. 28, B5 with an ethnic adjective, as noticed by Amory 1997, 439.

⁶⁰ Amory 1997.

⁶¹ Critical remarks on Amory's prosopography in Heather 2003, 110–133. See De Rubbeis 2013 for a general reflection on inscriptions.

⁶² Heather 2008, 43–44.

soldiers, they are referred to as Goths – that individually chose to define themselves as such. These results show that the written recollections of women, just like the grave goods in their tombs, sought to highlight a social role far more than any ethnic membership.

Conclusion

The model of ethnogenesis seems to be profoundly challenged in its demonstration of the continuity of traditions in certain cases, such as that of the Goths. However, it remains dominant in the notion of the formation and reformation of ethnic groups in response to changing circumstances. Supporters of the migratory model, which harks back to genetic foundations, must henceforth trust in the existence of Gothic women, established as the guarantors of a group's genetic continuity and ethnic traditions, according to a model that is fragile, as I have attempted to demonstrate.

Some elements of distinctive female costume certainly appear in tombs from the 5th and 6th centuries, but this practice was an innovation both in relation to Italy and to the suspected points of departure for potential migrants. This new significance accorded to women, depending on their age, may also correspond to a change in their social role. The importance of marriage in terms of diplomatic strategies shows, at the same time, their role strengthened by such an alliance within a system that was no longer patrilineal but bilateral. Moreover, this investment in female tombs seems to increase in societies undergoing change, showing the emergence of new strategies (particularly through funereal ostentation) more than the impact of new populations.

Women do not therefore appear as the passive reflections of Gothic traditions handed down for centuries but as the actors in a social game transformed in Italy, where their role as the vehicle of prestige appears to have grown during the Gothic domination in Italy, before the Byzantine reconquest and the Lombardian conquest brought complete change once again to social relations and funeral practices.

Heather's recent studies, therefore, seem to present a genuine response to the collapse of the traditional view of barbarian invasions that has been produced in recent years as a result of interpreting texts in the same way as excavations. It is important to respond to it, however, with a more complex development of the counter model proposed for Late Antiquity, that of a complex world, where the genetic heritage of an individual is only the starting point for the construction of their social identity, as can be seen in the case of the Goth wives in Italy. However, this also presents us with a particular challenge, which concerns the diffusion of these updated interpretations among the general public.

References

Sources

- Ammianus Marcellinus, *History*, ed. and transl. Guy Sabbah. Collection des universités de France (Paris 1999).
- Jordanes, *De origine actibusque Getarum (Getica)*, ed. Theodor Mommsen. *Monumenta Germaniae Historica, Auctores Antiquissimi V,1* (Berlin 1882) 53–138.
- Procopius, *Gothic wars*, ed. and transl. Denis Roques (Paris 2015).

Literature

- Amory, Patrick, *People and Identity in Ostrogothic Italy 489–554*. Cambridge studies in medieval life and thought 4,33 (Cambridge 1997).
- Bachrach, Bernard S., *Compte-rendu de M. Kazanski. Les Goths (I^{er}–VII^e siècle après J.-C.)*. *Francia* 20, 1993, 256.
- Barbiera, Irene, *Le donne barbare e i loro invisibili mariti. Le trasformazioni dell'identità di genere nel V secolo*. In: *Le trasformazioni del V secolo. L'Italia, i barbari e l'Occidente romano*. Atti del Seminario di Poggibonsi, 18–20 ottobre 2007, ed. Paolo Delogu/Stefano Gasparri. *Seminari Internazionali del Centro Interuniversitario per la Storia e l'Archeologia dell'Alto Medioevo 2* (Turnhout 2010) 123–156.
- Barbiera, Irene, *Remembering the Warriors. Weapon Burials and Tombstones between Antiquity and Early Middle Ages in Northern Italy*. In: *Post-Roman Transitions. Christian and Barbarian Identities in the Early Medieval West*, ed. Walter Pohl/Gerda Heydemann. *Cultural encounters in late antiquity and the middle ages 14* (Turnhout 2013) 407–435.
- Becker-Piriou, Audrey, *De Galla Placidia à Amalasonthe. Des femmes dans la diplomatie romano-barbare en Occident?* *Revue historique* 647, 3, 2008, 507–543.
- Bierbauer, Volker, *Archäologie und Geschichte der Goten vom 1.–7. Jahrhundert*. *Frühmittelalterliche Studien* 28 (1994), 51–171.
- Bierbauer, Volker, s. v. *Goten*. In: *Reallexikon der Germanischen Altertumskunde* 12 (Berlin, New York 1998), 407–427.
- Binckes, Robin, *The great trek uncut. Escape from British Rule. The Boer Exodus from the Cape Colony*, 1836 (Solihull 2013).
- Brather, Sebastian, *Ethnische Interpretationen in der Frühgeschichtlichen Archäologie. Geschichte, Grundlagen und Alternativen*. *Reallexikon der Germanischen Altertumskunde, Ergänzungsband 42* (Berlin, New York 2004).
- Brather, Sebastian, *Bestattungen und Identitäten. Gruppierung innerhalb frühmittelalterlicher Gesellschaften*. In: *Archaeology of identity. Archäologie der Identität*, ed. Walter Pohl/Mathias Mehofer. *Forschungen zur Geschichte des Mittelalters 17 = Österreichische Akademie der Wissenschaften, phil.-hist. Klasse, Denkschriften 406* (Wien 2010) 25–49.
- Brather, Sebastian, *Ethnizität und Mittelalterarchäologie. Eine Antwort auf Florin Curta*. *Zeitschrift für Archäologie des Mittelalters* 39, 2011 (2012), 161–172.
- Coulston, Jon C. N., *Late roman military equipment culture*. In: *War and warfare in late Antiquity*, ed. Alexander Sarantis/Neil Christie. *Late antique archaeology* 8,2 (Leiden, Boston 2013) 463–492.
- Coumert, Magali, *Origines des peuples. Les récits du haut Moyen Age occidental*. Collection des études augustiennes, *Série Moyen âge et temps modernes* 42 (Paris 2007).

- Coumert, Magali, L'identité ethnique dans les récits d'origine. L'exemple des Goths. In: *Identité et Ethnicité. Concepts, débats historiographiques, exemples, III^e–XII^e siècle*, ed. Pierre Baudin/Véronique Gazeau/Yves Modéran. *Tables rondes du Centre de recherches archéologiques et historiques médiévale 3* (Caen 2008) 49–73.
- Coumert, Magali/Dumézil, Bruno, Grandes migrations et la construction des identités (IV^e–VI^e siècles). *Problèmes d'Histoire ou d'historiographie?* In: *Des sociétés en mouvement. Migrations et mobilité au Moyen Âge, XI^e congrès de la Société des Historiens Médiévistes de l'Enseignement Supérieur Public* (Nice, 4–7 juin 2009). Publications de la Sorbonne, *Histoire ancienne et médiévale 104* (Paris 2010) 33–44.
- Curta, Florin, Some remarks on ethnicity in medieval archaeology. *Early medieval Europe 15*, 2007, 159–185.
- Damm, Inciser Gürçay, Völkerwanderungszeitliche Frauentracht. In: *Unbekannte Krim. Archäologische Schätze aus drei Jahrtausenden* (Heidelberg 1999) 76–83.
- Effros, Bonnie, Dressing conservatively. Women's brooches as markers of ethnic identity? In: *Gender in the early medieval World. East-West 300–900*, ed. Leslie Brubaker/Julia M. H. Smith (Cambridge, 2004) 165–184.
- Gasparri, Stefano, Rapport introductif. Mouvements de peuples, ethnogenèse et transformation du monde ancien. In: *Des sociétés en mouvement. Migrations et mobilité au Moyen Âge, XI^e congrès de la Société des Historiens Médiévistes de l'Enseignement Supérieur Public* (Nice, 4–7 juin 2009). Publications de la Sorbonne, *Histoire ancienne et médiévale 104* (Paris 2010) 17–31.
- Gillett, Andrew (ed.), *On Barbarian Identity. Critical Approaches to Ethnicity in the Early Middle Ages. Studies in the early middle ages 4* (Turnhout 2002).
- Goffart, Walter, *Barbarian Tides. The Migration Age and the Later Roman Empire* (Philadelphia 2006).
- Greene, Elizabeth M., Female Networks in Military Communities in the Roman West. A View from the Vindolanda Tablets. In: *Women and the Roman City in the Latin West*, ed. Emily Hemelrijk/Greg Woolf. *Mnemosyne Supplementum 360* (Leiden, Boston 2013) 369–390.
- Halsall, Guy, Ethnicity and early medieval cemeteries. *Arqueologia y Territorio Medieval 18*, 2011, 15–27.
- Heather, Peter J., *Goths and Romans 332–489* (Oxford 1991).
- Heather, Peter J., *The Goths* (Oxford 1996).
- Heather, Peter J., Gens and Regnum among the Ostrogoths. In: *Regna and Gentes. The Relationship between Late Antique and Early Medieval Peoples and Kingdoms in the Transformation of the Roman World*, ed. Hans Werner Goetz/Jörg Jarnut/Walter Pohl. *The transformation of the Roman world 13* (Leiden, Boston, Köln 2003) 85–133.
- Heather, Peter J., *The Fall of the Roman Empire. A New History of Rome and the Barbarians* (Oxford 2005).
- Heather, Peter J., Ethnicity, Group Identity, and Social Status in the Migration Period. In: *Franks, Northmen, and Slavs. Identities and State Formation in Early Medieval Europe*, ed. Ildar H. Garipzanov/Patrick Geary/Premysław Urbańczyk. *Cursor mundi 5* (Turnhout 2008) 17–49.
- Heather, Peter J., *Empires and Barbarians. Migration, Development and the Birth of Europe* (London 2009).
- Heather, Peter J., *Empires and Barbarians. The Fall of Rome and the Birth of Europe* (New York 2010).
- Heather, Peter J., *The Restoration of Rome. Barbarian Popes and Imperial Pretenders* (London 2013).
- James, Edward, Review of Peter Heather. *Empires and Barbarians. The Fall of Rome and the Birth of Europe*. *American Historical Review 116*, 2011, 401–403.
- Kazanski, Michel, Military equipment and its evolution in the late roman and great migration periods. In: *War and warfare in late Antiquity*, ed. Alexander Sarantis/Neil Christie. *Late antique archaeology 8,2* (Leiden, Boston 2013) 493–521.
- Kazanski, Michel, *Les Goths (I^{er}–VII^e siècles ap. J. C.)* (Paris 1991).
- Kazanski, Michel/Périn, Patrick, Identité ethnique en Gaule à l'époque des Grandes Migrations et des Royaumes barbares. *Étude de cas archéologiques. Antiquités nationales 39*, 2008, 181–216.

- Kazanski, Michel/Périn, Patrick, Identity and Ethnicity during the Era of Migrations and Barbarian Kingdoms in the Light of archaeology in Gaul. In: *Romans, Barbarians and the Transformation of the Roman World. Cultural Interaction and the Creation of Identity in Late Antiquity*, ed. Ralph Mathisen/Danuta Shanzer (Ashgate 2011) 299–329.
- Kulikowski, Michael, Review of Peter Heather. *Empires and Barbarians. The Fall of Rome and the Birth of Europe*. *Journal of Interdisciplinary History* 42, 2011, 277–279.
- Périn, Patrick, L'armée de Vidimer et la question des dépôts funéraires chez les Wisigoths en Gaule et en Espagne (V^e–VI^e siècles). In: *L'armée romaine et les Barbares du III^e au VII^e siècle*, ed. Françoise Vallet/Michel Kazanski. *Association Française d'Archéologie Mérovingienne, Mémoire 5 (Saint-Germain-en-Laye 1993)* 411–423.
- Pohl, Walter, Archaeology of identity. Introduction. In: *Archaeology of identity. Archäologie der Identität*, ed. Walter Pohl/Mathias Mehofer. *Forschungen zur Geschichte des Mittelalters 17 = Österreichische Akademie der Wissenschaften, phil.-hist. Klasse, Denkschriften 406 (Wien 2010)* 9–23.
- Rocca, Cristina la, La migrazione delle donne nell'alto medioevo tra testi scritti e fonti materiali. Primi spunti di ricerca. In: *Archeologia e storia delle migrazioni, Europa, Italia, Mediterraneo fra tarda età romana e alto medioevo. Atti del Convegno internazionale di studi Cimitile-Santa Maria Capua Vetere, 17–18 giugno 2010*, ed. Carlo Ebanista/Marcello Rotili (Cimitile 2011) 65–83.
- Rubbeis, Flavia de, Scritture nazionali e aree culturali. Le epigrafi tra forme, contenuti e trasmissioni testuali in Italia e nell'Europa altomedievale. In: *Post-Roman Transitions. Christian and Barbarian Identities in the Early Medieval West*, ed. Walter Pohl/Gerda Heydemann. *Cultural encounters in late antiquity and the middle ages 14 (Turnhout 2013)* 549–576.
- Tjäder, Jan-Olof, Die nichtliterarischen lateinischen Papyri Italiens aus der Zeit 445–700 (Lund 1954–1982).
- Rummel, Philipp von, *Habitus barbarus. Kleidung und Repräsentation spätantiker Eliten im 4. und 5. Jahrhundert. Reallexikon der Germanischen Altertumskunde, Ergänzungsband 55 (Berlin, New York 2007)*.
- Rummel, Philipp von, The Fading Power of Images. Romans, Barbarians, and the Uses of a Dichotomy in Early medieval Archaeology. In: *Post-Roman Transitions. Christian and Barbarian Identities in the Early Medieval West*, ed. Walter Pohl/Gerda Heydemann. *Cultural encounters in late antiquity and the middle ages 14 (Turnhout 2013)* 365–406.
- Venayre, Sylvain, s. v. Grand Trek (1835–1840). *Encyclopædia Universalis* (<http://www.universalis.fr/encyclopedie/grand-trek/>) [16. 10. 2015].
- Whately, Conor, Organisation and life in the late roman military. A bibliographic essay. In: *War and warfare in late Antiquity*, ed. Alexander Sarantis/Neil Christie. *Late antique archaeology 8,1 (Leiden, Boston 2013)* 209–238.
- Wolfram, Herwig, s. v. Origo gentis. In: *Reallexikon der Germanischen Altertumskunde 22 (Berlin, New York 2003)* 178–183.
- Wolfram, Herwig, *Compte-rendu de P. Heather, Goths and Romans 332–489. Francia 20, 1993, 257–258.*

Andrea Czermak

Diet Reconstruction Based on C/N Stable Isotope Analysis

What Can It Contribute to Address Questions on Cultural Change?

Stable isotope analysis of carbon and nitrogen ratios has become a “must-have” method in archaeological studies allowing a general characterisation of an individual’s diet, and providing information about subsistence strategies. Some food sources are clearly distinguishable, such as C3 (wheat) versus C4 (millet) plants and marine versus terrestrial diet. Hence current approaches usually aim to characterise the human dietary composition in comparison to domestic fauna and other potential food sources, often in combination with advanced statistical methods.

Carbon and nitrogen isotope ratios are usually obtained from bone material, which represents an “isotopic blend” of dietary intake of roughly 10 years before an individual’s death. Barring very rare exceptions, individuals show the typical diet of a non-industrialised population consuming common food resources in central Europe. Accordingly inter-individual human data often do not show any significant differences, rendering the approach of little use to provide evidence for social or cultural differentiation within a community and over a specific time period. Furthermore, as diets available in early medieval central Europe offer little variation regarding isotope composition, the possibility of differentiation is limited.

The approach, however, becomes far more powerful when taking samples from tissues that are developed at different times during lifetime. By sampling dentin layers, changes through life history can be detected and a chronology of an individuals’ diet reconstructed that can then be related to the wider archaeological and historical context. Diet does reflect individuals’ residence and subsistence,¹ and thus can potentially provide evidence for cultural changes,² as well as social differences within a population.³ Hence, if applied in the right way, isotope analysis can indeed be a powerful tool to address questions of cultural changes.

¹ Pollard et al. 2012; Beaumont et al. 2012.

² Lightfoot et al. 2012.

³ Killgrove/Tykot 2013; Knipper et al. 2015; Hakenbeck et al. 2010; Schutkowski et al. 1999.

Stable Isotope Analysis

In modern archaeology, stable isotope analysis is widely used to address questions on dietary differentiation, life history, but also in a broader context on social differentiation, and migration. While earlier research focused primarily on human subsistence, economy, and interaction of systems, more recent approaches also try to address social dynamics in ancient populations, bearing in mind social rules, identity and the roles of individuals as a dynamic force of cultural change, socially constructed food acquisition and/or distribution within communities, and the collective social and political motivations for human mobility. Hence stable isotope analysis in archaeology is now used considering both subsistence and social reasons that cause human dietary and mobility decisions.

Isotope analysis has its strengths but also its limitations, particularly on the information that it can provide when applied to central European material.⁴ Importantly, it requires a profound understanding of the sampled tissue, its structure and decay, as well as the biological and ecological mechanisms responsible for the isotopic signals observed. For a better understanding of the method and its potential pitfalls a brief description of the background and basic principles is given firstly.

Stable isotope analysis of human remains draws on the large and long-established field of isotope geochemistry in earth and plant sciences.⁵ The method was then adapted in ecology to reconstruct complex dietary behaviour of animals in their specific habitats and scaling trophic structures.⁶ Eventually, stable isotope analysis found its way into archaeology. At the beginning, its application focused mostly on the analysis of human skeletal tissues as a way to reconstruct major transitions in human diet. Today, approaches aiming to get a higher temporal-resolution of the dietary intake of humans and animals help to better define changes in the human diet. Isotope analysis is used to investigate a diverse spectrum of topics relating to dietary and subsistence practices, mobility, social organization, identity, and gender differences.⁷

Isotopes are variants of a particular chemical element, which have the same number of protons but differ in the number of neutrons that together form the atom's nucleus. The atomic number of an element is equal to the number of its electrons (or protons respectively) and identifies the specific element. As the chemical reaction of an element is "controlled" by the electrons, isotopes are chemical equivalent, being able to bind to the same elements. The difference is in their mass number. The number of nucleons, the sum of protons and neutrons in the atomic nucleus, provide the mass number. Thus, their chemical behaviour such as reaction rate and

⁴ For review on prospects of stable isotope research see Makarewicz/Sealy 2015.

⁵ Craig 1953, 1954; Park/Epstein 1960.

⁶ DeNiro/Epstein 1978, 1981; Minagawa/Wada 1984; Schoeninger et al. 1983.

⁷ Ambrose et al. 2003; Kellner/Schoeninger 2008; Müldner/Richards 2005.

bond strength varies, because chemical and physical properties are related to atomic mass. For example, the atomic number of nitrogen is 14, representing seven protons in the nucleus. A neutron number of 7 in the nucleus sums up with the protons in the mass number 14, representing the most common form of nitrogen (^{14}N) in the atmosphere. With one more neutron nitrogen is building a stable naturally occurring isotope of nitrogen (^{15}N). Those isotopes of an element that do not undergo radioactive decay are called “stable isotopes”.

Ratios of stable isotopes are quantified with an isotope rationing mass spectrometer; the abundances are typically expressed relative to a standard and as ratios of the rare to common isotope in delta (δ) notation, e.g. carbon as $^{13}\text{C}/^{12}\text{C} = \delta^{13}\text{C}$ and nitrogen as $^{15}\text{N}/^{14}\text{N} = \delta^{15}\text{N}$ (Tab. 11.1). The data gives the ratio heavier to lighter isotope of the sample relative to the ratio of a standard. Negative δ values mean less heavy isotopes in the sample compared to standard.⁸

Tab. 11.1: Natural abundance of carbon and nitrogen in the atmosphere.

Element	Isotopes	Abundance (%)	Standard
Carbon	^{12}C	98,892	Vienna Pee Dee Belemnite (VPDB)
	^{13}C	1,108	
Nitrogen	^{14}N	99,635	Atmospheric Nitrogen
	^{15}N	0,365	
$\delta^{\text{E}}: [(R_{\text{sample}}/R_{\text{standard}})-1] \times 1000$			

Molecules of greater mass form stronger, more stable bonds with other elements. Thus, the “heavier” isotopes accumulate in body tissues, leading to a fractionation in the food chain. Collagen, the organic protein rich part of body tissues is used for carbon and nitrogen isotope analysis. Proteins are composed of amino acids, and essential amino acids, which the body cannot synthesise, originate from dietary protein.

Nitrogen isotopes fractionate during physiological processes within an organism. With each step in the food chain nitrogen ratios increase.⁹ The stepwise enrichment of ^{15}N with each upward shift in trophic level is used to investigate animal protein sources in human diet such as meat or dairy products. On that account the relative contributions of plant and animal foods are determined by comparing the $\delta^{15}\text{N}$ values of humans with the values of potential food sources in the same ecosystem. However, this underestimates the complexity of the distribution of nitrogen isotopes in ecosystems and how dietary ^{15}N is incorporated into body tissues. For

⁸ For review on stable isotopes see West et al. 2006 and Lee-Thorp 2008.

⁹ Hedges/Reynard 2007; Caut et al. 2009.

instance, it does not account for the distribution of the isotopes in the plant portion of the food, the incorporation and fractionation into body tissues and its actual enrichment in consumers' tissues that can vary between 3 and 6 ‰. Thus, in order to interpret the $\delta^{15}\text{N}$ values of higher trophic level consumers attempting to “reconstruct” diet, we need to understand the isotopic structuring in flora and fauna of the same ecosystem first.¹⁰

Carbon isotopes mainly provide information on the biochemical mechanisms food plants use to fix carbon after incorporating CO_2 for photosynthesis from the atmosphere. The $\delta^{13}\text{C}$ values of plants that use specific types of photosynthesis are passed on to the body tissues of the consumer.¹¹ The “C3” photosynthetic pathway is dominant in temperate Europe, whereas “C4”-plants are adapted to fix carbon more efficiently in arid and warm areas. Millet is the only relevant C4 plant introduced since the Neolithic period.¹²

Carbon ratios can also reflect the so-called “canopy effect”, that denotes the lower presence of ^{13}C -isotope in CO_2 under a canopy of leaves than in the atmosphere as heavier, naturally low-abundant carbon isotope being already bound in upper leaves and plants with better access to the balanced isotope composition from the atmosphere. Thus, $\delta^{13}\text{C}$ is lower in plants growing in woodland providing the potential to detect differences between species feeding in open versus forested environments.¹³ Similarly, we can determine whether the carbon originated from a terrestrial or an oceanic carbon cycle.¹⁴

In combination $\delta^{13}\text{C}$ and $\delta^{15}\text{N}$ ratios are used to distinguish between different terrestrial, freshwater and marine food sources.¹⁵ However, stable C/N isotope ratios do not reproduce exact menus, but rather allow distinguishing between broad food-categories like terrestrial versus aquatic protein sources, meat versus plants, and C4 grasses/cereals versus C3 fruits and vegetables (Fig. 11.1).

To determine the contribution of potential food sources, human isotope data are normalized to corresponding faunal samples. The human data range is then calculated by adding a “trophic level” to the mean value of herbivores (one trophic level = $\delta^{13}\text{C}$: 0.8–1.3 ‰; $\delta^{15}\text{N}$: 3–5 ‰). Human diet, however, is not directly deducible from faunal collagen data. Human data often show a less pronounced trophic level shift within a food chain as would be expected from the comparison with herbivore collagen data.¹⁶ Furthermore, nitrogen isotope ratios in different species of wild or

10 Makarewicz/Sealy 2015.

11 Tieszen et al. 1983; Farquhar et al. 1989.

12 Rösch 1998; Le Huray/Schutkowski 2005.

13 Drucker/Bocherens 2009.

14 Fry 1989.

15 Schoeninger/DeNiro 1984.

16 Knipper et al. 2013.

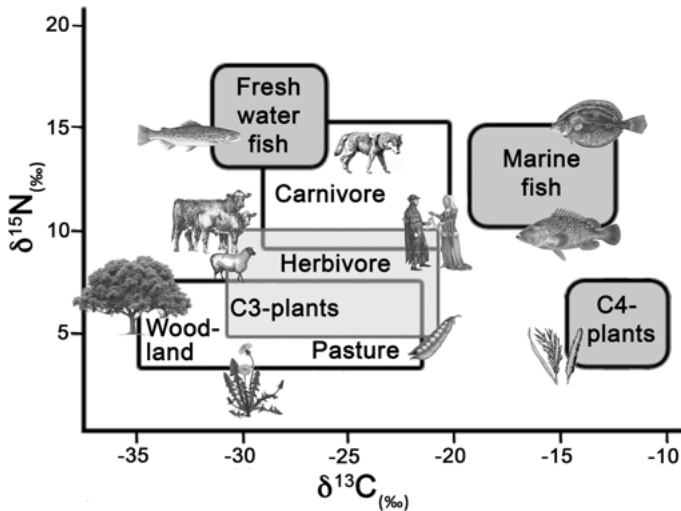


Fig. 11.1: Schematic representation of a Central European food web in the Early Middle Ages, including main food sources and their isotopic position.

domestic herbivores depend on seasonality, availability of food sources, and their dietary preferences. Hence, for more reliable results floral data are essential.

In addition, numerous environmental, anthropogenic and metabolic factors contribute to nitrogen isotopic shifts in herbivores.¹⁷ Despite being essential for interpreting the $\delta^{15}\text{N}$ values of consumers at higher trophic levels, most of these factors remain poorly understood.

So-called “mixing models” are used as a means of estimating source contributions attempting to detangle different dietary components. These statistical models work on the presumption of food sources having clearly separated isotope values. If the isotope values of the consumers, their potential foods and the extent of fractionation in the consumer tissue are known, the proportion of each food in the total diet can be calculated.¹⁸ Yet, complex metabolisms and other factors discussed above cannot be incorporated. Also, the more food sources contributing to an animal’s diet, the less meaningful are estimates of their importance, particularly for dietary generalists such as humans. Therefore mixing models apparently provide all too simplistic answers to complex issues.

Besides, attempts to “reconstruct” diet often face more challenges: due to the lack of settlement remains related to the investigated cemeteries the number of plant and animal samples collected from the archaeological context is mostly too small to adequately characterize the extent of isotopic variation in food sources. Thus, faunal

¹⁷ Merav/Flaherty 2012; Makarewicz/Sealy 2015.

¹⁸ Caut et al. 2010; Phillips et al. 2014.

data typically used for normalizing human isotope ratios are either not directly related to the site or sometimes not even contemporary. Moreover, diet available in Early Medieval Central Europe offers little variation regarding isotope composition. Therefore, with no sea-fish available and millet not unknown, but uncommon, a meaningful differentiation is rather limited. This is exemplified in Fig. 11.2, displaying isotope ratios from bone bulk collagen of Early Medieval graveyards.¹⁹ The data show a normal variation within every site. The differences between sites are smaller than variations within each site, as would be expected for “typical” populations’ diets based on common food resources in central Europe.²⁰ Comparisons between individuals often show no statistically significant differences, rendering the approach of little use to provide evidence of social or cultural differentiation and changes within a community.

Bone and Teeth

Carbon and nitrogen isotope ratios are usually gained from bone material, which has a relatively high turnover rate, depending on bone type and the age of the individual. Therefore, isotope signals obtained from bone bulk collagen represent an “isotopic blend” of dietary intake of up to 10 years before death. Accordingly, isotopic consequences of possible dietary changes are “averaged out” by bone remodelling.²¹ Hence the approach is not particularly useful to detect changes in diet during an individuals’ lifetime.

In contrast to bone, teeth do not remodel during lifetime. Once formed during childhood and adolescence, their isotope composition does not change. Thus, teeth reflect the diet over the timespan of their development providing a chronology of dietary intake (Fig. 11.3). Sample material from teeth is also assumed to suffer less from post-depositional chemical alterations.²²

Calcified tissue in teeth is emerging periodically. The timing of the development of human teeth, the direction and rate of growth and mineralisation is well established.²³ Dentin grows sequentially from the crown to the root tip, forming incremental features with consistent periodic repeat intervals.²⁴ The daily secretion rate of dentin in human teeth is ranging from 2 to 6 μm per day, resulting in short-period lines (“von Ebner’s lines”). Long period lines (“Andresen lines”) are formed every 8–10 days with a

¹⁹ Data taken from Schutkowski et al. 1999; Strott 2006; McGlynn 2007; Hakenbeck et al. 2010; Czermak 2012; Knipper et al. 2013.

²⁰ Willerding 2003.

²¹ Hedges et al. 2007.

²² Lee-Thorp et al. 2003.

²³ Dean et al. 1993; Dean/Scandrett 1995; Dean et al. 2014.

²⁴ Kawasaki 1980; Dean 1998; Smith 2006.

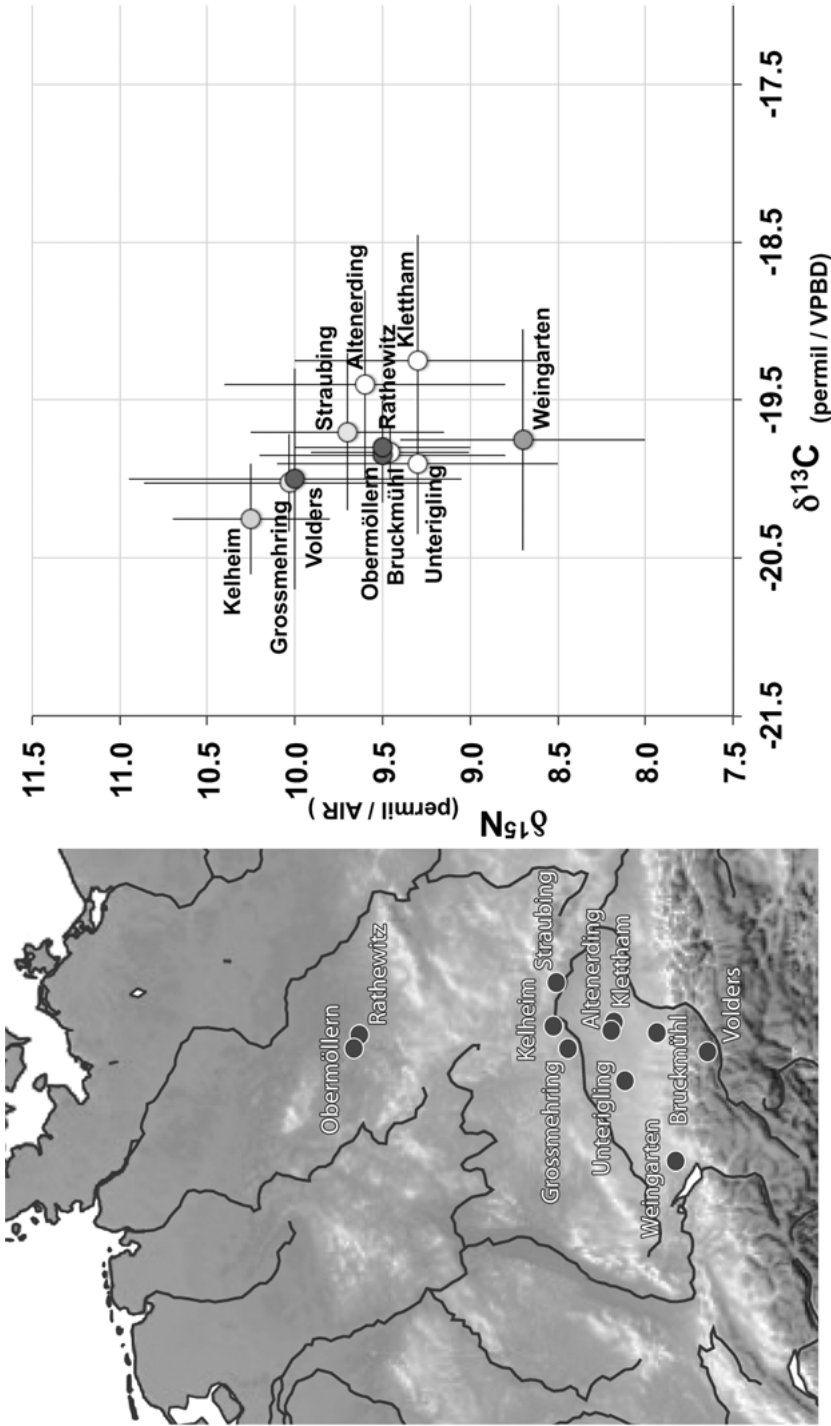


Fig. 11.2: Median and range of data from bone-bulk isotope analysis of various Early Medieval sites from different environments and ecosystems in Central Europe (data from Schutkowski et al. 1999; Strott 2006; McGlynn 2007; Hakenbeck et al. 2010; Czermak 2012; Knipper et al. 2013).

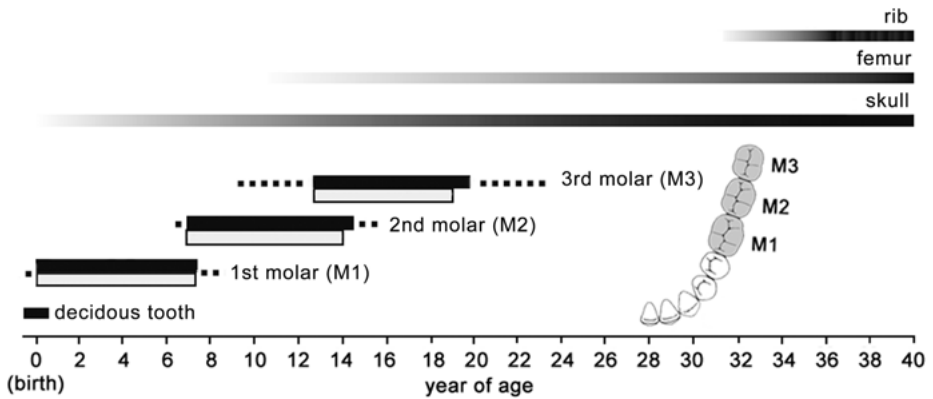


Fig. 11.3: Developmental stages and approximate turnover time of body hard tissues commonly used for isotope analysis (modified after Tütken 2010).

distance ranging from 20–30 μm .²⁵ Roughly estimated, a dentine sample length of 100–150 μm covers ca. 3 weeks, 1–1.5 mm approximately 30 weeks and 2–3 mm cover a time span of about 1 year (Fig. 11.4). Incremental manifestations become apparent as contrasting linear pattern, visible in transmission light microscope images.²⁶ Counts and measurements of the incremental lines have been used to determine rate and duration of tooth formation²⁷ and age at death for juveniles.²⁸

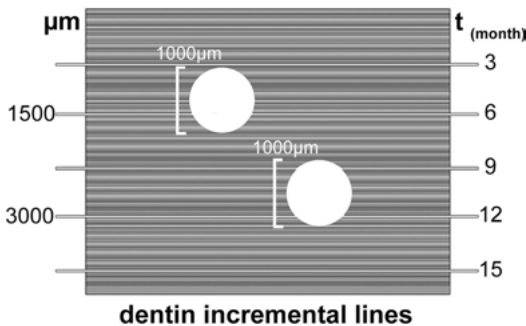


Fig. 11.4: Scheme of Andresen lines in the tooth dentine. Approximate timespan a micro-sample of 1 mm width can cover.

Serial sampling that follows the pattern of dentine incremental structures provides a high-resolution isotopic record of dietary changes and can give information about changing environmental conditions during individuals' early lifetime.

²⁵ Kawasaki 1980; Dean/Scandrett 1995; Dean 1998; Smith 2006, 2008.

²⁶ Smith 2006.

²⁷ Dean 1995.

²⁸ Huda/Bowman 1995.

A number of studies focussed on isotope analysis of tooth dentine to reconstruct diet or migration.²⁹ Serial sampling of teeth has recently been used to address various aspects of individuals' life history.³⁰

To reconstruct and detect potential changes in the early life history of individuals molars of permanent teeth were used for analyses. Sampling the 1st, 2nd and 3rd molar, dietary pattern over the first 20–22 years of an individuals life could be reconstructed (Fig. 11.5).

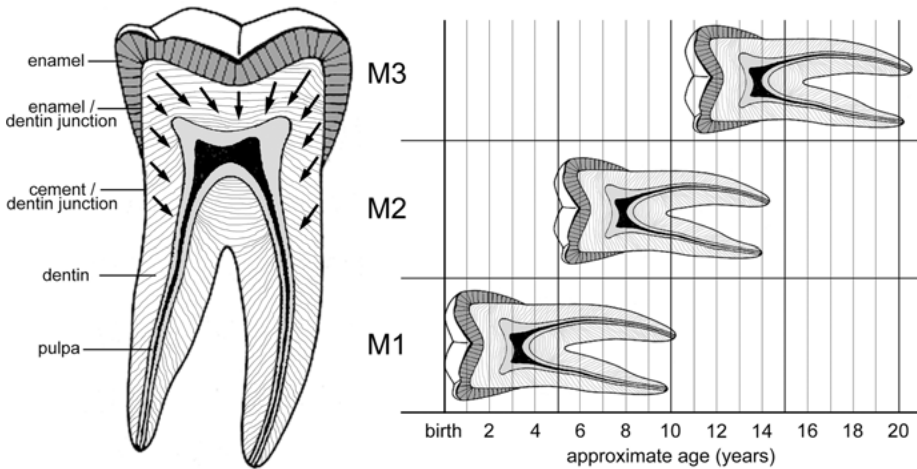


Fig. 11.5: Tooth structure and development. Teeth grow in layers from crown to root (left). Molars are providing a chronology of dietary intake during childhood and youth (right).

Tooth Dentine Microsampling

In order to take samples from tooth dentine considering the natural growth structure of the teeth, an improved method for serial microsampling was developed.. Teeth are first cut longitudinal into two halves with a Buehler saw. One tooth-half is then demineralised, serial microsamples are cut off the complete root with a scalpel (Fig. 11.6, left), before measuring isotope ratios of carbon and nitrogen stable isotopes using standard mass-spectrometry.

Additionally, high-resolution images of tooth root thin sections are taken to visualise the incremental lines. As the covered time period depends on the sample size, which again depends on collagen quality, the wavelength specific auto-

²⁹ Fuller et al. 2003; Pollard et al. 2012; Whitmore 2016; Erikson et al. 2017.

³⁰ Henderson et al. 2014; Eerkens et al. 2011, 2013, 2016; Burt 2015; Beaumont et al. 2012, 2014, 2016; Sandberg et al. 2014.

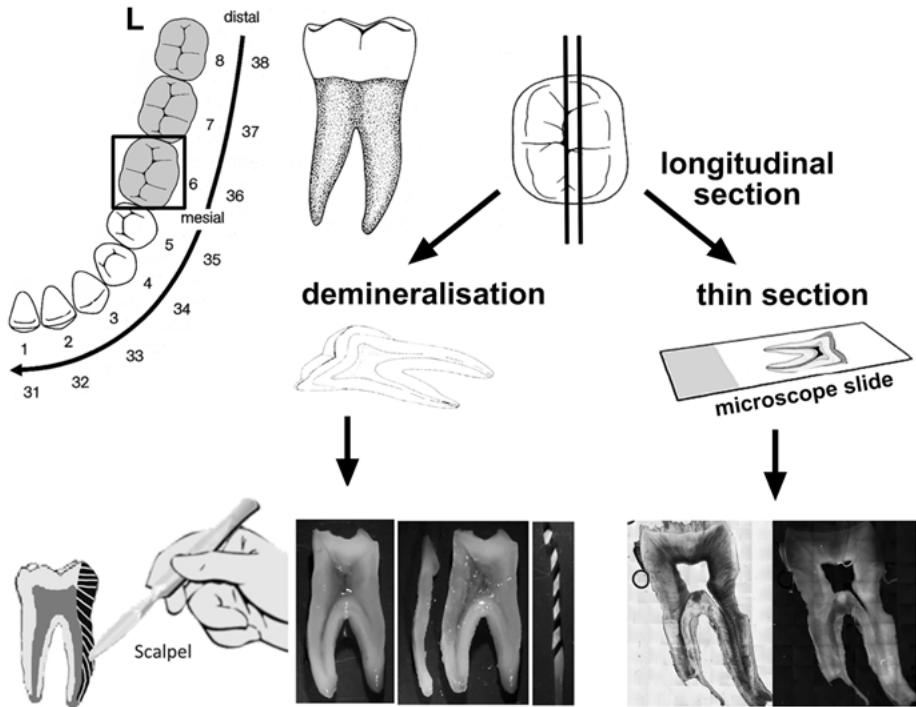


Fig. 11.6: Tooth dentine microsampling workflow. After sectioning the tooth longitudinal, in an additional longitudinal cut a thin section is collected and mounted on a microscope slide. Images of the section are recorded using a high-resolution fluorescence microscope to image the incremental lines and to visualize the collagen preservation. One tooth-half is demineralized and then the microsamples are cut, following the increments.

fluorescence of collagen is used to identify well-preserved areas of collagen and to align the sample (Fig. 11.6, right).³¹

To assign samples to an approximate age, we developed a scheme for molars, based on the London Atlas of tooth development.³² The Atlas, mainly used in forensic science, is based on developmental stages of dentition to estimate the age of an individual. This scheme allows for a relatively precise age related mapping of the dietary intake. The data gained from teeth are compared to the isotope ratio of an individual's bone bulk collagen, which reflects an average of the dietary intake before death.

The improved method for dentine serial microsampling was for the first time applied on individuals buried in the Early Medieval cemetery of Niedernai, France.³³ Selected results of serial micro-samples from 1st, 2nd and 3rd molars of three

³¹ Koenig 1994; Georgakoudi et al. 2002; Czermak et al. 2018; Czermak et al. forthcoming.

³² Al Qahtani et al. 2010.

³³ Czermak/Brather-Walter, forthcoming.

individuals are shown in Fig. 11.7 as examples for stable, non-altering diets and a contrasting different diet, also revealing distinct changes in dietary intake within a short period of time. Elevated $\delta^{15}\text{N}$ -ratios at the beginning of the individuals' life reflect breast milk consumption. The following decline in $\delta^{15}\text{N}$ is the result of the weaning process, the transition from breast milk to normal food.³⁴

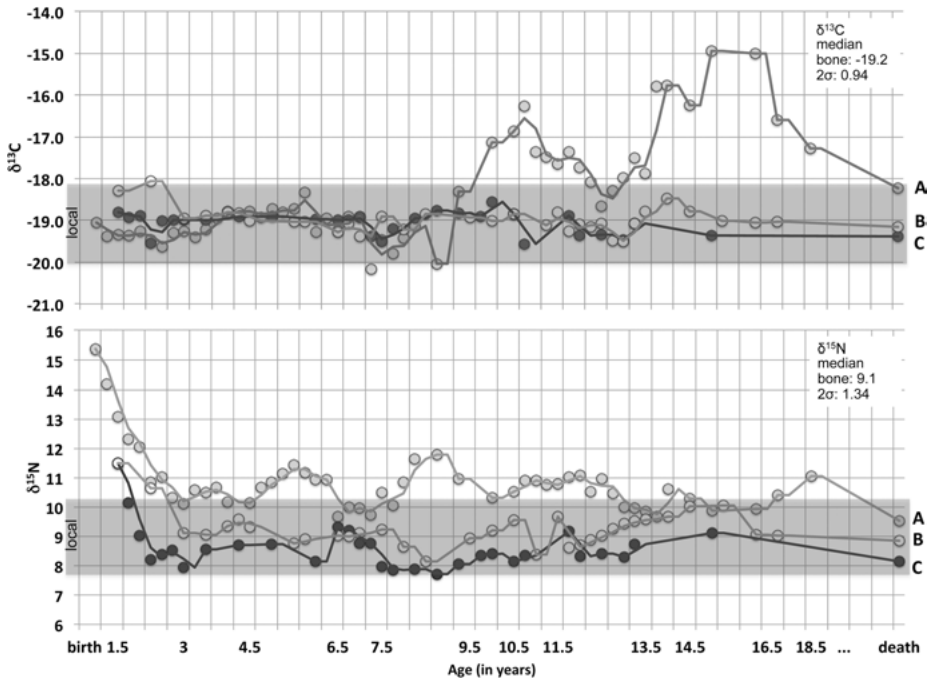


Fig. 11.7: Chronology of three individuals' dietary intake: Timeline of nitrogen and carbon isotope ratios of multiple microsamples from tooth dentine of first (M1), second (M2) and third (M3) molars. Example for an almost steady diet (individual B and C) and large scale changes in dietary intake (individual A). "Local" data range: mean value and second standard deviation of bone bulk data from all individuals buried at the cemetery.

The chronology of dietary intake of individuals B and C shows no significant changes in isotope ratio during their early life. At the time of their death, the isotope data shows still the same ratio. All data stay within the "local" data range, which is determined from the mean value and the second standard deviation bone bulk data from all individuals buried at the cemetery. The data suggest, that their living conditions appear steady and untroubled. These individuals did not change their diet and most likely did not change their environment within the detectable timespan.

³⁴ Schurr 1998; Richards et al. 2002; Reynard/Tuross 2015.

In contrast, individual A shows clearly changing isotope compositions over time. The $\delta^{15}\text{N}$ -ratios are significantly higher than the “local” range, elevated by up to 2‰ about the age of 5 as well as the age of 8, the latter accompanied by a 1‰ drop in $\delta^{13}\text{C}$ -ratios. This can be an indicator for freshwater fish as a major part of diet.³⁵

At around ten years of age the individual’s $\delta^{13}\text{C}$ -ratios increase about 1.5‰, followed by a decline and then once again rise at the age of thirteen up to 3‰ from -18 to -15 ‰. These elevated $\delta^{13}\text{C}$ -ratios are a significant marker for the consumption of C4 plants. Millet is the only relevant C4 plant relevant in central Europe³⁶ but is rarely found in archaeobotanical records from this period. The most abundant cereals in the area and at that time period were oat, spelt and “Einkorn”, less frequent rye, barley and emmer, and only infrequently millet.³⁷ To obtain such high $\delta^{13}\text{C}$ -ratios, the proportion of millet in this individuals diet must have been quite high, caused by regular rather than occasional millet consumption. Thus, it is likely that individual A did not only change its diet, but also changed its environment, moving to and living in an area where millet was a common food source at that time.

As the $\delta^{13}\text{C}$ values decline again after the short period of about two years, the diet and most likely the environment changed again. At the end of life the values are within the range that was determined as “local”, suggesting an adaption to local food.

Summary and Perspective

Despite being a “staple method” in current archaeological studies, stable isotope analysis of carbon and nitrogen ratios often reaches its limits when applied to central European human remains. Diets available in early medieval central Europe offer little variation regarding isotope composition and thus, differentiation is rather limited. Furthermore, carbon and nitrogen isotope ratios are usually gained from bone material, which represent an “isotopic blend” and only provide information on the average dietary intake of the last period of an individual’s life. Time-averaged isotope signatures from bone bulk collagen do not reveal episodic nutritional changes. Thus, the approach is of little use to provide evidence of social or cultural differentiation and changes within a community and over a specific time period.

Nonetheless under specific conditions, isotope analysis can be a powerful tool to address questions of cultural changes. Social and cultural changes should be

³⁵ Hedges/Reynard 2007.

³⁶ Rösch 1998; Le Huray/Schutkowski 2005.

³⁷ Rösch 1998, 2008; Brombacher/Hecker 2015.

reflected in individuals' life history. Diet does reflect residence and subsistence,³⁸ and thus can potentially display cultural changes,³⁹ as well as social differences within a population.⁴⁰

By taking samples from tissues that develop at different times during lifetime, we can reconstruct a chronology of individuals' diet. Serial microsampling of teeth provides several benefits. We can capture individuals' diet over time, providing a chronology of dietary intake. Any sample covers a specific timespan and the sample area can be related to a particular period of an individual's life. By sampling different teeth and tissues it is possible to trace individuals' diet over a long period and thus allowing to trace dietary changes within small time spans that would not be possible by simple bone isotope analysis. The results can then be interpreted in a wider archaeological and historical context. Importantly, the capabilities (and limitations) of stable isotope analysis methods have to be in concordance with the archaeological question, which requires a careful and unbiased assessment of the method regarding a given project. This can only be achieved with a profound understanding of both the archaeological and biophysical backgrounds, which calls for a close collaboration between researchers of both fields.

References

- Al Qahtani, Sakher Jaber/Hector, Mark P./Liversidge, Helen M., Brief Communication. The London Atlas of Human Tooth Development and Eruption. *American Journal of Physical Anthropology* 142, 2010, 481–490.
- Ambrose, Stanley H./Buikstra, Jane/Krueger, Harold W., Status and gender differences in diet at Mound 72, Cahokia, revealed by isotopic analysis of bone. *Journal of Anthropological Archaeology* 22, 2003, 217–226.
- Beaumont, Julia/Gledhill, Andrew/Lee-Thorp, Julia/Montgomery, Janet, Childhood Diet. A Closer Examination of the Evidence from Dental Tissues using Stable Isotope Analysis of Incremental Human Dentine. *Archaeometry* 55/2, 2012, 277–295.
- Beaumont, Julia/Gledhill, Andrew/Montgomery, Janet, Isotope analysis of incremental human dentine. Towards higher temporal resolution. *Bulletin of the International Association of Paleodontology* 8/2, 2014, 212–223.
- Beaumont, Julia/Montgomery, Janet, The Great Irish Famine. Identifying Starvation in the Tissues of Victims Using Stable Isotope Analysis of Bone and Incremental Dentine Collagen. *PLOSone* 11/8, 2016, e0160065. doi:10.1371/journal.pone.0160065.
- Brombacher, Christoph/Hecker, Dominique, Agriculture, food and environment during Merovingian times. Plant remains from three early medieval sites in northwestern Switzerland. *Vegetation History and Archaeobotany* 24, 2015, 331–342.

38 Pollard et al. 2012; Beaumont et al. 2012.

39 Lightfoot et al. 2012.

40 Killgrove/Tykot 2013; Kjellström et al. 2009; Knipper et al. 2015; Hakenbeck et al. 2010; Schutkowski et al. 1999.

- Burt, Nicole M., Individual dietary patterns during childhood. An archaeological application of a stable isotope microsampling method for tooth dentin. *Journal of Archaeological Science* 53, 2015, 277–290.
- Caut, Stéphane/Angulo, Elena/Courchamp, Franck, Variation in discrimination factors ($\Delta^{15}\text{N}$ and $\Delta^{13}\text{C}$). The effect of diet isotopic values and applications for diet reconstruction. *Journal of Applied Ecology* 46, 2009, 443–453.
- Craig, Harmon, The geochemistry of the stable carbon isotopes. *Geochimica Cosmochimica Acta* 3, 1953, 53–92.
- Craig, Harmon., Carbon 13 in plants and the relationships between carbon 13 and carbon 14 variations in nature. *Journal of Geology* 62, 1954, 115–149.
- Czermak, Andrea, Soziale Stratifizierung im frühen Mittelalter. Aussage- und Nachweismöglichkeiten anhand von biologischen Indikatoren, Thesis (München 2012).
- Czermak, Andrea/Schermelleh, Lothar/Lee-Thorp, Julia, Short report: Imaging-assisted time-resolved dentine sampling to track weaning histories. *International Journal of Osteoarchaeology* 28(5), 2018, 535–541. doi.org/10.1002/oa.2697.
- Czermak, Andrea/Schermelleh, Lothar/Lee-Thorp, Julia, Fluorescence screening of collagen preservation in tooth dentine. *Palaeogeography, Palaeoclimatology, Palaeoecology*. in revision.
- Dean, M. Christopher/Beynon, A. David/Reid, Donald J./Whittaker, David K., A Longitudinal Study of Tooth Growth in a Single Individual Based on Longand short-period Incremental Markings in Dentine and Enamel International. *Journal of Osteoarchaeology* 3, 1993, 249–264.
- Dean, M. Christopher./Scandrett, Adrian E., Rates of Dentine Mineralization in Permanent Human Teeth. *International Journal of Osteoarchaeology* 5, 1995, 349–358.
- Dean, M. Christopher, Comparative observations on the spacing of short-period (von Ebner's) lines in dentine. *Archives of Oral Biology* 43, 1998, 1009–1021.
- Dean, M. Christopher/Liversidge, Helen M./Elamin, Fadi, Combining radiographic and histological data for dental development to compare growth in the past and the present. *Annals of Human Biology* 41/4, 2014, 336–347.
- DeNiro, Michael J./Epstein, Samuel, Influence of diet on the distribution of carbon isotopes in animals. *Geochimica Cosmochimica Acta* 42, 1978, 495–506.
- DeNiro, Michael J./Epstein, Samuel, Influence of diet on the distribution of nitrogen isotopes in animals. *Geochimica Cosmochimica Acta* 45, 1981, 341–351.
- Drucker, Dorothée G./Bocherens, Hervé, Carbon stable isotopes of mammal bones as tracers of canopy development and habitat use in temperate and boreal contexts. In: *Forest Canopies. Forest Production, Ecosystem Health, and Climate Conditions*, ed. Jason D. Creighton/Paul J. Roney. Nova Science Publishers (2009) 103–109.
- Eerkens, Jelmer W./Berget, Ada G./Bartelink, Eric J., Estimating weaning and early childhood diet from serial micro-samples of dentin collagen. *Journal of Archaeological Science* 38, 2011, 3101–3111.
- Eerkens, Jelmer W./Bartelink, Eric J., Sex-Biased Weaning and Early Childhood Diet Among Middle Holocene Hunter-Gatherers in Central California. *American Journal of Physical Anthropology* 152/4, 2013, 471–483.
- Eerkens, Jelmer W./Sullivan, Kelli/Greenwald, Alexandra M., Stable isotope analysis of serial samples of third molars as insight into inter- and intra-individual variation in ancient diet. *Journal of Archaeological Science* 53, 2016, 277–290.
- Eriksson, Gunilla/Frei, Karin Margarita/Howcroft, Rachel/Gummesson, Sara/Molin, Fredrik/Lidéna, Kerstin/Frei, Robert/Hallgren, Fredrik, Diet and mobility among Mesolithic hunter-gatherers in Motala (Sweden). The isotope perspective. *Journal of Archaeological Science. Reports*, 2017, in press.

- Farquhar, Graham D./Ehleringer, James R./Hubick, Kerry T., Carbon isotope discrimination and photosynthesis. *Annual Reviews of Plant Physiology and Plant Molecular Biology* 40, 1989, 503–537.
- Fuller, Benjamin T./Richards, Michael P./Mays Simon A., Stable carbon and nitrogen isotope variations in tooth dentine serial sections from Wharram Percy. *Journal of Archaeological Science* 30, 2003, 1673–1684.
- Fry, B./Sherr, Barry F., $\delta^{13}\text{C}$ measurements as indicators of carbon flow in marine and freshwater ecosystems. In: *Stable Isotopes in Ecological Research, Series Ecological Studies* 68 (1989) 196–229 (Reprinted from *Contributions in Marine Science* 27, 1984, 13–14).
- Georgakoudi, Irene/Jacobson, Brian C./Müller, Markus G./Sheets, Ellen E./Badizadegan, Kamran/Carr-Locke, D. I./Crum, Christopher P./Boone, Charles W./Dasari, Rakesh/Van Dam, Jacques/Feld, Michael S., NAD(P)H and collagen as in vivo quantitative fluorescent biomarkers of epithelial precancerous changes. *Cancer Research* 62, 2002, 682–687.
- Hakenbeck, Susanne/McManus, Ellen/Geisler, Hans/Grupe, Gisela/O'Connell, Tamsin, Diet and mobility in Early Medieval Bavaria. A study of carbon and nitrogen stable isotopes. *American Journal of Physical Anthropology* 143/2, 2010, 235–249.
- Hedges, Robert E. M./Clement, John G./Thomas, C. David L./O'Connell, Tamsin C., Collagen turnover in the adult femoral mid-shaft: modelled from anthropogenic radiocarbon tracer measurements. *American Journal of Physical Anthropology* 133, 2007, 808–816.
- Hedges, Robert E. M./Reynard, Linda M., Nitrogen isotopes and the trophic level of humans in archaeology. *Journal of Archaeological Science* 34, 2007, 1240–1251.
- Henderson, Rowena C./Lee-Thorp, Julia/Loe, Louise, Early Life Histories of the London Poor Using $\delta^{13}\text{C}$ and $\delta^{15}\text{N}$ Stable Isotope Incremental Dentine Sampling. *American Journal of Physical Anthropology* 154, 2014, 585–593.
- Huda, Tushar F. J./Bowman, Jacqui E., Age Determination From Dental Microstructure in Juveniles. *American Journal of Physical Anthropology* 97, 1995, 135–150.
- Kawasaki, Kenzo/Tanaka, Shu/Ishikawa, Takao, On the daily incremental lines in human dentine. *Archives of Oral Biology* 24, 1980, 939–943.
- Kellner, Corina M./Schoeninger, Margaret J., Wari's imperial influence on local Nasca diet. The stable isotope evidence. *Journal Anthropological Archaeology* 27, 2008, 226–243.
- Killgrove, Kristina/Tykot, Robert H., Food for Rome. A stable isotope investigation of diet in the Imperial period (1st–3rd centuries AD). *Journal of Anthropological Archaeology* 32/1, 2013, 28–38.
- Kjellström, Anna/Storå, Jan/Possnert, Göran/Linderholm, Anna, Dietary patterns and social structures in medieval Sigtuna, Sweden, as reflected in stable isotope values in human skeletal remains. *Journal of Archaeological Science* 36, 2009, 2689–2699.
- Knipper Corina/Peters, Daniel/Meyer, Christian/Maurer, Anne-France/Muhl, Arnold/Schöne, Bernd R./Alt, Kurt W., Dietary reconstruction in Migration Period central Germany. A carbon and nitrogen isotope study. *Archaeological and Anthropological Science* 5, 2013, 17–35.
- Knipper, Corina/Held, Petra/Fecher, Marc/Nicklisch, Nicole/Meyer, Christian/Schreiber, Hiltrun/Zich, Bernd/Metzner-Nebelsick, Carola/Hubensack, Vera/Hansen, Leif/Nieveler, Elke/Alt, Kurt W., Superior in Life. Superior in Death. *Current Anthropology* 56/4, 2015, 579–589.
- Koenig, Karsten/Schneckenburger, Herbert, Laser-induced autofluorescence for medical diagnosis. *Journal of Fluorescence* 4/1, 1994, 17–40.
- Lee-Thorpe, Julia A./Sponheimer, Matt/Van der Merve, Nikolaas J., What do Stable Isotopes tell us about Hominid Dietary and Ecological Niches in the Pliocene? *International Journal of Osteoarchaeology* 13, 2003, 104–113.
- Lee-Thorpe, Julia A., On isotopes and old bones. *Archaeometry* 50, 2008, 925–950.

- Le Huray Jonathan D./Schutkowski Holger, Diet and social status during the La Tène period in Bohemia. Carbon and nitrogen stable isotope analysis of bone collagen from Kutná Hora-Karlovo and Radovešice. *Journal of Anthropological Archaeology* 24, 2005, 135–147.
- Lightfoot, Emma/Šlaus, Mario/O'Connell, Tamsin, Changing Cultures, Changing Cuisines. Cultural Transitions and Dietary Change in Iron Age, Roman, and Early Medieval Croatia. *American Journal of Physical Anthropology* 148, 2012, 543–556.
- Makarewicz, Cheryl A./Sealy, Judith, Dietary reconstruction, mobility, and the analysis of ancient skeletal tissues. Expanding the prospects of stable isotope research in archaeology. *Journal of Archaeological Science* 56, 2015, 146–158.
- Merav, Ben-David/Flaherty Elizabeth, Stable isotopes in mammalian research: a beginner's guide. *Journal of Mammalogy* 93(2), 2012, 312–328.
- McGlynn, George, Using ^{13}C -, ^{15}N -, and ^{18}O stable isotope analysis of human bone tissue to identify transhumance, high altitude habitation and reconstruct palaeodiet for the early medieval Alpine population at Volders, Austria. Dissertation, LMU Munich (2007).
- Minagawa, Masao/Wada, Eitaro, Stepwise enrichment of ^{15}N along food chains. Further evidence and the relation between d^{15}N and animal age. *Geochimica Cosmochimica Acta* 48, 1984, 1135–1140.
- Müldner, Gundula/Richards, Michael P., Fast or feast. Reconstruction diet in later medieval England by stable isotope analysis. *Journal of Archaeological Science* 32, 2005, 39–48.
- Park, Roderic/Epstein, Samuel, Carbon isotope fractionation during photosynthesis. *Geochimica Cosmochimica Acta* 21, 1960, 110–126.
- Phillips, Donald L./Inger, Richard/Bearhop, Stuart/Jackson, Andrew Lloyd/Moore, Jonathan W./Parnell, Andrew C./Semmens, Brice X./Ward, Eric J., Best practices for use of stable isotope mixing models in food-web studies. *Canadian Journal of Zoology* 92, 2014, 823–835.
- Pollard, A. Mark/Ditchfield, Peter/Piva, Eleonora/Wallis, Sean/Falys, Ceri/Ford, Steve, “Sprouting like a cockle amongst the wheat”. The St. Brice's day massacre and the isotope analysis of human bones from St. John's college, Oxford. *Oxford Journal of Archaeology* 31/1, 2012, 83–102.
- Reynard, Linda M./Tuross, Noreen, The known, the unknown and the unknowable. Weaning times from archaeological bones using nitrogen isotope ratios. *Journal of Archaeological Science* 53, 2015, 618–625.
- Richards, Michael/Mays, Simon/Fuller, Benjamin T., Stable carbon and nitrogen isotope values of bone and teeth reflect weaning age at the Medieval Wharram Percy site, Yorkshire, UK. *American Journal of Physical Anthropology* 19, 2002, 205–210.
- Rösch, Manfred, The history of crops and crop weeds in south-western Germany from the Neolithic period to modern times, as shown by archaeobotanical evidence. *Vegetation History and Archaeobotany* 7, 1998, 109–125.
- Rösch, Manfred, New aspects of agriculture and diet of the early medieval period in central Europe. waterlogged plant material from sites in south-western Germany. *Vegetation History and Archaeobotany* 17 (Suppl. 1), 2008, S225–S238.
- Sandberg, Paul A./Sponheimer, Matt/Lee-Thorpe, Julia/Van Gerven, Dennis, Intra-Tooth Stable Isotope Analysis of Dentine. A Step Toward Addressing Selective Mortality in the Reconstruction of Life History in the Archaeological Record. *American Journal of Physical Anthropology* 155, 2014, 281–293.
- Schoeninger, Margaret J./DeNiro, Michael J., Nitrogen and carbon isotopic composition of bone collagen from marine and terrestrial animals. *Geochimica Cosmochimica Acta* 48, 1984, 625–639.
- Schoeninger, Margaret J./DeNiro, Michael J./Tauber, Henry, Stable nitrogen isotope ratios of bone collagen reflect marine and terrestrial components of prehistoric human diet. *Science* 220, 1983, 1381–1383.
- Schurr, Mark R., Using stable nitrogen-isotopes to study weaning behaviour in past populations. *World Archaeology* 30/2 Population and Demography, 1998, 327–342.

- Schutkowski, Holger/Herrmann, Bernd/Wiedemann, Felicitas/Bocherens, Hervé/Grupe, Gisela, Diet, Status and Decomposition at Weingarten. Trace Element and Isotope Analyses on Early Mediaeval Skeletal Material. *Journal of Archaeological Science* 26, 1999, 675–685.
- Smith, Tanya, Experimental determination of the periodicity of incremental features in enamel. *Journal of Anatomy* 208, 2006, 99–113.
- Smith, Tanya, Incremental dental development. Methods and applications in hominoid evolutionary studies. *Journal of Human Evolution* 54/2, 2008, 205–224.
- Strott Nadja, Paläodemographie frühmittelalterlicher Bevölkerungen Altbaierns. Diachrone und allopatrische Trends, Thesis (München 2006).
- Tieszen, Larry L./Boutton, Thomas W./Tesdahl, K. G./Slade, Norman. A., Fractionation and Turnover of Stable Carbon Isotopes in Animal Tissues. Implications for $\delta^{13}\text{C}$ Analysis of Diet. *Oecologia* 57, 1983, 32–37.
- Tütken, Thomas, Die Isotopenanalyse fossiler Skelettreste. Bestimmung der Herkunft und Mobilität von Menschen und Tieren. In: *Umweltarchäologie. Naturkatastrophen und Umweltwandel im archäologischen Befund*, ed. Hans-Rudolf Bork/Harald Meller/Renate Gerlach. Tagungen des Landesmuseums für Vorgeschichte Halle 3 (Halle/S. 2010) 33–51.
- West, Jason B./Bowen, Gabriel J./Cerling, Thure E./Ehleringer, James R., Stable isotopes as one of nature's ecological recorders. *Trends in Ecology and Evolution* 7/21, 2006, 408–414.
- Whitmore, Katie Marie, Diet at medieval Alytus, Lithuania. Stable carbon and nitrogen isotope analysis of bone and dentin collagen, Master Thesis (Orlando 2016), URL <http://etd.fcla.edu/CF/CFE0005738/Whitmore2014MATHesisOmega.pdf>
- Willerding, Ulrich, Die Landwirtschaft im frühen Mittelalter (6.–10. Jh.). Ackerbau. In: *Frühgeschichte der Landwirtschaft in Deutschland*, ed. Norbert Benecke/Peter Donat/Eike Gringmuth-Dallmer/ Ulrich Willerding. *Beiträge zur Ur- und Frühgeschichte Mitteleuropas* 14 (Langenweißbach 2003) 151–172.

Philipp von Rummel

Conclusion and Perspectives

The Freiburg conference that gave rise to this volume was part of the research project “Nied’Arc 5”, funded by the French ANR and the German DFG, on the 5th-century cemetery in Niedernai (Alsace, France). This cemetery with its 32 tombs has been completely excavated with modern excavation techniques in 1995, and is the only necropolis of the second half of the 5th century not only within Alsace but also in its wider surroundings. The focus of the French-German research project lies on the question whether the fundamental cultural changes during the 5th century which are visible in the archaeological material were caused by the immigration of population groups from the east, or whether they could be seen as a cultural re-orientation of the former Roman population. In contrast to older studies that tried to answer these questions on the basis of only a selection of archaeological finds, this Freiburg- and Strasbourg-based project takes into consideration the whole spectrum of archaeological finds and features from the cemetery and uses a variety of modern scientific methods. The project is thus a fitting frame for a conference that aims for a critical discussion between archaeologists, historians, and archaeo-bioscientists, and, as Susanne Brather-Walter explains in her introduction.

The debate about the relationship between the humanities and natural sciences is, of course, not new at all. It has been on the agenda ever since archaeology established itself as an academic discipline, as Stefanie Samida shows in her article. Nowadays, full integration of natural science sources is actually widely considered to be a matter of course in archaeology, after the possibilities and limitations of radiocarbon dating, to take one example, have been extensively debated decades ago. This might have contributed to the fact that the debate, so aptly entitled “pride and prejudice” by Sabine Deschler-Erb in this volume, has so far been conducted primarily between archaeologists and natural scientists whereas there has been conspicuous silence on the part of text-based historians, with few exceptions.¹ Many highly interesting analyses and associated theories resulting in rapidly enhancing possibilities of studying ancient DNA, such as those Johannes Krause presented at the Freiburg conference,² concern periods of human history for which no written sources exist and in which historians accordingly take little interest. Since the recent

¹ Cf. the conference “Genetic History: A Challenge to Historical and Archaeological Studies” organized by Jörg Feuchter and Stefanie Samida in Berlin (October 1–2, 2015), published online in *Medieval Worlds: The Genetic Challenge to Medieval History and Archaeology*. *Medieval Worlds* 4, 2016 (http://www.medievalworlds.net/medieval_worlds?frames=yes).

² Johannes Krause, *Die genetische Herkunft der Europäer. Einsichten aus genomweiten Untersuchungen alter Skelette*. This paper has not been published in this volume. Cf. Mathieson et al. 2015.

foundation of institutions like the *Max Planck Institute for the Science of Human History* in Jena (Germany) or the *Initiative for the Science of the Human Past* at Harvard (USA) text-based historians feel more challenged, particularly in the face of the wide-ranging claims to explanatory power raised by some scientists, and, even more so, as periods and regions become the focus of discussion for which written sources deliver a greater density of data. New data from organic or inorganic samples is now self-confidently introduced into a field in which the status of other archaeological sources as historical sources of equal status and value has been debated for well over a hundred years. This makes the discussion in between the different disciplines even more interesting, not least because of the fact that the names of historically active groups are now coming into play too. Thus, Stefanie Samida, Magali Coumert, Corina Knipper and Irene Barbiera assess recent discussions on Anglo-Saxons, Goths in Italy, and Lombards. The central question here is: can natural science sources increase our knowledge of these peoples?

In certain areas the answer is definitely yes. This is demonstrated in many of the papers this volume. Tombs and human skeletal material provide information on nutrition, age, size, health, specific activities, kinship and mortuary rituals, to say nothing of the informative value of sources outside mortuary contexts, which furnish data on settlement activity, landscape utilization, the procurement and use of raw materials and many other questions. Interdisciplinary collaboration, however, becomes a true challenge when the transformation, spread, collapse and migration of biological groups and populations has to be interpreted with historical methods, and when it comes to the discussion of the importance of biological kinship in the formation and distinction of historically known ethnic groups.

Opinions diverge widely on this point. On the one hand we read for example that genetics can finally answer questions that historians and archaeologists have not been able to answer; on the other hand we hear that ethnic identity has nothing to do with genes. This discussion – in a somewhat different form – is not new either: it is familiar from the debate about the ethnic interpretation of archaeological finds, which was conducted intensively not least in Freiburg too³ and indeed continues to be, as Susanne Brather-Walter has shown in her paper. Various contributors to this volume point out problems that can result when ethnonyms known from texts are applied to archaeological finds. On the other hand, archaeologists specializing in late antiquity and the early middle ages are still concerned that if the discipline adopts a too critical stance towards ethnic interpretation, it will cease to qualify as a historical discipline and will no longer be able to participate in the dialogue with other disciplines, especially the neighbouring historical disciplines. If ethnic names are taboo, they feel, then multidisciplinary conferences, projects and so

³ Particularly in the DFG-Sonderforschungsbereich (SFB) 541 “Identitäten und Alteritäten. Die Funktion von Alterität für die Konstitution und Konstruktion von Identität” (1997–2003).

forth would be pointless as historians and archaeologists would no longer be able to understand each other.⁴ Since a couple of years now historians and archaeologists are joined by natural scientists, particularly by geneticists, in this discussion making mutual comprehension even more difficult. This can be seen as a tragic situation, or – to the contrary – as an opportunity. I think that we should take the opportunity. This is shown very clearly in various papers in this volume and is explicitly demonstrated by Frans Theuws.

It is crucial that there is agreement on how commonly used terms are understood methodologically and theoretically. To repeat it in words of Stefanie Samida in this volume, there can be no interdisciplinarity without a genuine reflection on theories and methods in each of the participating disciplines. Within the frame of a conference modelled around a 5th-century cemetery, it should be underlined that in the debate about ethnic interpretation in early medieval archaeology, even those colleagues most critical of it have never demanded that names such as Alamanni, Goths or Franks should not be used. It would be absurd just to reject ethnic names that occur in texts and to think that this would be a solution to the difficult problem of interpreting early medieval groups in the context of different types of sources. Joint approaches, however, are in need of a common understanding of the problem that early medieval ethnic groups are changing through time and even hardly to define in a precise way in certain time slices. Small differences of phrasing can make considerable difference in the rigour of the meaning, and may prevent unproductive misunderstandings none of the parties is interested in. It is thus necessary for a fruitful debate that scientists are informed about the methodological problems that come with the (historical) terminology they use, and the same is true for historians and archaeologists interested in the result of genetic analysis: there is a need of a common understanding of terminology and nomenclature, since these are ultimately the tools we need to communicate with one another.

Another point, also brought at the conference and in this volume, is of crucial importance as well: the matter of the hierarchy of sources and the related question of what history actually is. I think that we have to consider all sources that provide data about the past as historical sources, no matter whether we are talking about a bone, a gene sequence, a potsherd, a brooch, a building or a text: they all help us to write history. As some sources are better suited than others to answer particular questions, it is the setting of the problem that creates hierarchies. It is thus the question asked that gives a source a specific value, not the nature of the source itself. These leads to the question if a specialist who puts historical questions to historical sources is not a historian anyway, regardless of which special field he/she originates? If we agree that it is the question asked that give sources a specific value, not the nature of the source itself, we have also to admit that questions are highly specific, focused on periods, places and individuals.

⁴ E.g. Bierbrauer 2004, 47–48.

This being so, it is not really far-sighted to claim in absolute terms that certain sources or specializations are superior, or to hold, as Kristian Kristiansen does, that the natural sciences open a new door to “previously hidden absolute knowledge”.⁵ These words are true in a certain way, of course, but in this oversimplifying sense a brooch, a pot, a sword or rests of a house are also “absolute knowledge”, as is a text of Ammianus Marcellinus or Gregory of Tours. The importance of the whole breadth of all sources bequeathing information on past life should be beyond question. There are no historical sources that are *a priori* more important than others.

In the context of research project like “Nied’Arc 5” on the 5th-century cemetery in Niedernai and its focus on questions of cultural change, the importance of information based on sources other than biological rests and analysed material is shown by several papers in this volume, without any claim of exclusiveness. This is, for example, shown by Susanne Brather-Walter, explaining that bow brooches were no indicators of ethnic identity in the early middle ages, by Sebastian Schmidt-Hofner, demonstrating that strong demand for agrarian workforce was a factor for the immigration into the empire in the fourth and earlier fifth centuries, or by Frans Theuws, bringing new arguments for the explanation of Childeric’s burial in Tournai into the discussion. It goes without saying that scientific approaches such as presented by Sabine Deschler-Erb (archaeobiology), H el ene Reveillas and Jean-Bernard Huchet (archaeoethanatology), Corina Knipper (isotope analysis and mobility), Cl emence Hollard and Christine Keyser (archaeogenetics), and Andrea Czemak (isotope analysis and diet) expand the knowledge about a cemetery like the one of Niedernai and the people buried there in such an enormous way that the time in which archaeological research projects could be conducted without any integrated scientific analysis is certainly over.

It is of crucial importance to be aware that we are dealing with highly sensitive issues when we think about groups, ethnicity and ethnic identity in the early middle ages. These fields have been misused in the past and may be misused again at any time. In his paper, Roland Steinacher hints to the problems caused recently by the comparisons with the Migration Period that have been made in contemporary press; and Magali Coumert’s paper articulates very clearly that simplifying essentialists views on culture and ethnicity in past times can have serious consequences in the present. We should listen to each other carefully, explain our positions well, and develop an awareness of other fields of scientific enquiry and their potential pitfalls regarding sources – a task that applies to us all. Archaeologists, in my view, should get involved more self-assertively in the debate, and should assume responsibility even as co-authors of scientific studies. And archaeologists who take a critical view should seek to engage in cooperation all the more.

⁵ Kristiansen 2014, 27. Cf. the comments to this article in the same volume of *Current Swedish Archaeology*.

Interpretation of the archaeological record is an activity that must be undertaken collectively, as several speakers pointed out. But the research design also needs to be developed in collaboration. Reinhard Wenskus, as long as go as 1979, put it very aptly when he said that in the field of ethnic interpretation too many historical and philological issues are embedded in every historical question archaeologists (and we should add natural scientists here) ask, making a “pure” method, which is not charged with problems of other neighbouring fields, an impossible undertaking.⁶ The German proverbial “marching separately but striking together” of diverse historical sub-disciplines, citing a strategic military advice of the 19th century Prussian general Helmuth von Moltke, is therefore not possible either, and particularly not in the collaboration of humanities and natural sciences: Before we march we have to decide where to head.

References

- Bierbrauer, Volker, Zur ethnischen Interpretation in der frühgeschichtlichen Archäologie. In: Die Suche nach den Ursprüngen. Von der Bedeutung des frühen Mittelalters, ed. Walter Pohl. Forschungen zur Geschichte des Mittelalters 8 = Österreichische Akademie der Wissenschaften, phil.-hist. Klasse. Denkschrift 322 (Wien 2004) 45–84.
- Kristiansen, Kristian, Towards a new paradigm? The third science revolution and its possible consequences in archaeology. *Current Swedish Archaeology* 22, 2014, 11–34.
- Mathieson, Iain/Lazaridis, Iosif/Rohland, Nadin/Mallick, Swapan/Patterson, Nick/Alpaslan Roodenberg, Songül/Harney, Eadaoin/Stewardson, Kristin/Fernandes, Daniel/Novak, Mario/Sirak, Kendra/Gamba, Cristina/Jones, Eppie R./Llamas, Bastien/Dryomov, Stanislav/Pickrell, Joseph/Arsuaga, Juan Luís/Bermúdez de Castro, José María/Carbonell, Eudald/Gerritsen, Fokke/Khokhlov, Aleksandr/Kuznetsov, Pavel/Lozano, Marina/Meller, Harald/Mochalov, Oleg/Moiseyev, Vyacheslav/Rojo Guerra, Manuel A./Roodenberg, Jacob/Vergès, Josep Maria/Krause, Johannes/Cooper, Alan/Alt, Kurt W./Brown, Dorcas/Anthony, David/Lalueza-Fox, Carles/Haak, Wolfgang/Pinhasi, Ron/Reich, David, Genome-wide patterns of selection in 230 ancient Eurasians. *Nature* 528, 2015, 499–503.
- Pohl, Walter, Editor’s Introduction: The Genetic Challenge to Medieval History and Archaeology. *Medieval worlds* 4, 2016, 2–4 (http://www.medievalworlds.net/0xc1aa500e_0x00348d0d.pdf).
- Wenskus, Reinhard, Randbemerkungen zum Verhältnis von Historie und Archäologie, insbesondere Mittelaltergeschichte und Mittelalterarchäologie. In: *Geschichtswissenschaft und Archäologie. Untersuchungen zu Siedlungs-, Wirtschafts- und Kirchengeschichte*, ed. Herbert Jakuhn/Reinhard Wenskus. *Vorträge und Forschungen* 22 (Sigmaringen 1979) 637–657.

⁶ Wenskus 1979, 650.

Indices

General Index

- Acculturation 113, 175
Aethiopians 108
Agri decumati 116
Agri deserti 57, 68, 73,
128, 131
Alamanni 85, 107, 110, 116, 118, 201
Alans 168
Ambiani 69
Anglo-Saxons 9, 118, 200
Annona 69, 113
Anthropology, cultural (ethnology) 16–17, 105,
137–138,
– physical 2, 16, 24, 26, 28, 33, 51, 156
Archaeobotany 24, 26, 28, 192
Archaeozoology 2, 16, 24–26, 28
Arvii 69
Asia 69, 108, 111

Barbarians 56–57, 68–78, 103–118, 120, 128,
130–132, 141, 163–166, 169, 171, 174–177
Bavarians 116
Bellovaci 69
Belts see dress
Big data 16–17
Bithynians 74, 76
Boers 164–166, 171
Borders 79, 106–109, 112–114, 116–118, 134,
166, 172, 175
Bronze age 18, 119
Brooches 39, 43, 85–97, 113, 134, 141, 172,
174–175, 201–202
Burgundians 116, 118
Burial practices 33–51, 125–147, 202

Carpi 168
Celts 108–109
Ceramics 62, 112
Chamavi 69
Chernyakhov culture 167, 171, 173
Christians 62, 114, 142–145, 175
Chronology 1, 86, 89–90, 92–93, 95–97, 119,
137, 175–176, 181, 186, 189, 191, 193
Church 38–41, 46, 62–63, 70, 114–115, 126,
142, 145

Cimbrians 109–110
Clothes, clothing see dress
Coloni 55, 58–61, 64, 68, 70–74, 77–78
Colonists 164, 166
Communication 1, 4, 76–77, 92, 94–95
Contamination 26, 152–153, 156
Costume see dress
Curiales 66

Dacians 168
Danes 119
Dediticii 71, 113
Diet 2–3, 17, 27, 181–193, 200, 202
Distribution 27, 69, 77, 86–87, 89, 94, 116,
133–135, 137, 143, 154, 164, 171, 182–184
DNA 3, 17–18, 26–28, 151–156, 199
– mitochondrial 153–155
– Y-chromosome 154
Dress 23, 46, 49, 112, 117, 139, 141, 168–169,
171, 173–177

Economy 55–58, 61–67, 71, 76, 78–79,
104–105, 110, 112, 117, 182
Egyptians 111
Environment 108, 125, 151, 184–185, 187–188,
191–192
Ethnic interpretation 3, 85–86, 90, 94, 96–97,
130, 136, 166–167, 173–177, 200–201, 203
Ethnicity 78, 111, 113, 116, 119, 129–130, 137,
146, 163, 167–170, 172, 174, 176–177,
200, 202
Exchange 13–14, 18, 25, 65, 90, 106, 113, 125,
137, 172

Fibulae see brooches
Foederati 107, 113, 117
Franks 69, 75, 107, 110, 116, 118, 169, 201
Frisians 69
Frontiers see borders
Funerary practices see burial practices

Gender 137–139, 146, 166, 173, 175, 182
Genetics 2, 9, 16, 24, 26, 151, 200, 202
Geology 16, 28

<https://doi.org/10.1515/9783110616651-013>

- Gepidae* see *Gepids*
Gepids 119, 167, 172
Germans (ancient) 9, 97, 106–107, 109–112, 115–116, 118–120, 127, 129–132, 135, 169, 173, 176
Geto-Dacians 168
Gets 118
Glass vessels 112, 143
Goths 72–73, 76, 107, 111, 116, 118, 120, 166–168, 171–174, 176–177, 200
Greeks 108, 110, 113, 115, 118
Gutones see *Goths*
- Haplotype, haplogroups* 154
Heruli 116, 172
Honorati 65–66
Huns 55, 79, 117–118, 163, 168–169
- Iberians* 110
Identities 78, 106, 108, 110–111, 127, 129–130, 132, 134, 137, 146, 163, 166, 168, 170, 172–177, 182, 200, 202
Invasions 9, 106–107, 115, 118, 120, 177
Isaurians 113
Isotope analysis 1–3, 9, 17–18, 24, 26, 28, 125, 181–193, 202
 – Carbon 181, 183–184, 186, 189, 191–192
 – Nitrogen 181, 183–186, 189, 191–192
- Jastorf culture* 119
Jewellery 112
- Kinship* 17, 27, 111, 154, 156, 166, 200
- Labor* 55–56, 58–61, 63–64, 67–70, 72–74, 76, 78–79
Laeti 69, 71, 113
Language 106, 166, 169, 171
Lemovii 167
Libyans 108
Lifetime 3, 17, 26–27, 62, 64, 105, 110, 137–138, 175, 181–193
Lingones 69
Lombards 2–3, 93–94, 118, 174, 177, 200
Lugurians 110
- Marriage* 60, 137, 139, 174, 176–177
Marcomanni 116
Maurusioi 108
Men 17, 55, 63–65, 67, 69–71, 73, 107–108, 112, 114, 129–130, 132–136, 138–140, 154, 174, 176
Migrations 3–4, 9, 16, 56–57, 59, 68, 74, 76, 78–79, 93, 103–104, 106–107, 110–111, 117–120, 127–128, 146, 154, 163–164, 166, 168–173, 175, 182, 189, 199–200, 202
Millet 181, 184, 186, 192
Mobility 4, 17, 27, 58–60, 68, 127, 137, 182, 202
- Neolithic* 17, 35, 119, 184
Nutrition see *diet*
- Ostrogoths* 85, 118–119, 168–169
- Paganism* 144–145, 175
Peoples 3–4, 103–105, 107–112, 117–120, 165, 200
Persians 75, 108, 112
Phoenicians 108, 113
Phrygians 74, 76
Pollen analysis 2, 16, 18, 28
Preservation 26, 151, 155, 176, 190
Przeworsk culture 172–173
- Radiocarbon dating* 16, 38, 199
Religion 18, 166
Representation 65, 137, 139–140, 146, 175
Ritual 18, 126, 128, 130, 132–147, 200
Roman empire 1, 55, 57, 59, 62, 64–65, 68, 71–72, 74–76, 78, 103–106, 113, 163, 166–167, 169, 202
Romans 71–72, 74, 105, 107, 110, 112–113, 117–118, 128, 131, 165, 174–175
Rugians 167, 199
Rugii see *Rugians*
- Sarmatians* 73, 167–168
Saxons 116
Sciri 55–56, 70, 76–77
Scyths 68, 72, 74, 108–109, 111, 119, 167–171

Slaves 56, 59, 65, 68, 70, 72–73, 112
 Slavs 119
 Social conditions 1, 4, 14, 17–18, 57–59, 62,
 65–66, 74, 78, 112–114, 116, 128–129, 131,
 136–139, 145–146, 166, 174–177, 181–182,
 186, 192–193

Techniques 86–89, 93, 95
Thervingi 170
 Thracians 108
 Thuringians 85, 116
 Tooth dentine microsampling 189–192
 Transformations 1, 4, 78, 105, 110, 117, 128,
 138–139, 145, 200
Treveri 69
Tributarii 73–74
Tricasses 69
 Type, typology 26, 38, 85–87, 90, 92–97, 130,
 133–134, 138, 172, 175

Vandals 79, 107, 116, 117–120, 168
Vandili see Vandals
 Variation 86–87, 89–95, 137, 175, 186
 Visigoths 118, 168

Weapons 74, 104, 112, 115, 117, 129–130, 132,
 134, 136, 164, 174–175
 Wielbark culture 167–168, 171–173
 Women 69, 85–97, 112, 129, 136, 138–140,
 163–177

Index of Geographic Names

Adrianople 74, 118
 Aegean 66, 68
 Africa 57, 60, 62, 66, 71, 89, 108, 111–113,
 116–117, 120, 168
 Aldingen, Lkr. Tuttlingen, D 87
 Altenerding, Gem. Erding, D 91
 Appenine Peninsula see Italy
 Arabia 115
Aremorica 114
 Armenia 113
 Asia Minor 66, 68

Baltic Sea 119, 166–167
 Basque 114

Bavaria 87
 Belfort, F 93–94
 Bithynia 70
 Bittenbrunn, Gem. Neuburg a. d. Donau, D 85
 Black Sea 112, 116, 118, 166
 Bonn, D 90
 Britain 9, 115, 134, 166
 Brochon, dép. Côte-d'Or, F 90
 Bruges, dép. Gironde, F 34–36, 38–46
 Bulgaria 118

Cividale, prov. Udine, I 87
 Cologne, D 128
 Constantinople 70, 76, 114, 118, 120
 Corsica 110
 Czech Republic 94

Dacia 116
 Danube river 75, 113, 116, 118
 Douvrend, dép. Seine-Maritime, F 94–95

Egypt 61, 65–66, 108, 112, 115, 119
 Egyin Gol, aim. Khövsgöl, MGL 154
 Eisleben, Lkr. Mansfeld-Südharz, D 87
 Elbe river 116
 England see Britain
 Envermeu, dép. Seine-Maritime, F 87
 Eurasia 119, 154

Finthen, Gem. Mainz, D 90
 Florida 166
 France 33, 35, 87, 90, 112,
 115, 133–134, 136
Frigidus river (Vipava) 107

Gallia see Gaul
 Gaul 69, 71, 75, 114–117,
 120, 125–147
 Gelbe Bürg near Dittenheim, Lkr. Weißenburg-
 Gunzenhausen, D 87
 Germany 9, 93–95, 104–105, 119, 137
 Gersheim, Saarpfalz-Kr., D 90
 Gougenheim, dép. Bas-Rhin, F 37
 Großharras, Bez. Mistelbach, A 91
 Grottamare, prov. Ascoli-Piceno, I 94–95

Heidenheim/Brenz, D 88
 Herten, Lkr. Lörrach, D 88
 Hungary 2, 87

- Iberian Peninsula see Spain
 India 166
 Italy 2, 61, 68, 71, 73, 77, 85, 94,
 166, 174–177, 200
- Judea 115
- Kent 88
 Kerch, Crimea, UKR 169
 Kiskőrös, kom. Bács-Kiskun, H 88
 Königernheim, Lkr. Mainz-Bingen, D 92
 Kranj, SLO 90
- Lake Triton 108
 Lauchheim, Ostalbkr., D 93–95
 Loire river 114, 133, 144
 Lombardy 94
- Mahlberg, Ortenaukr., D 90
 Masuria 95
 Mediterranean 57, 110–111, 113, 170
 Mistřín, Gem. Svatobořice-Mistřín, okr.
 Hodonín, CZ 92
 Modena, I 73
 Mühlhausen, D 88
 München-Feldmoching, D 89
- Naumburg, D 91–92
 Niedernai, dép. Bas-Rhin, F 1–3, 190, 199, 202
 Nový Šaldorf, okr. Znojmo, CZ 88
- Oberwerschen, Gem. Hohenmölsen, Burgen-
 landkr., D 92
 Oder river 116
- Palmyra 115
 Paris, F 128, 144
 Parma, I 73
 Praha-Podbaba, CZ 88, 91
- Ravenna, I 93, 119–120, 134
 Reggio Emilia, I 73
 Reinsdorf, Burgenlandkr., D 91–92
 Reuden, Burgenlandkr., D 91
 Reutlingen, D 85
 Rhine river 1, 69, 86, 96, 109–111, 113–116,
 130–131
 Riphean mountains 170
- Romania 118
 Rome, I 73, 76, 105–107,
 112–114, 120, 141
 Russia 166
- Sagalassos, il Burdur, TR 28
 Sardinia 112
 Saint-Dizier, dép. Haute-Marne, F 134
 Scandinavia 94–95, 118–120, 167, 171
 Schletz, Gem. Asparn a. d. Zaya, A 92
 Schwenningen, D 86
 Seine river 114, 134
 Sicily 112
 Sokolnice, okr. Brno-venkov, CZ 91
 Spain 71, 112, 115–117, 120
 Stößen, Burgenlandkr., D 87
 Světec, okr. Teplice, CZ 93
 Switzerland 94
 Syria 63, 66, 109, 115
 Szentendre, kom. Pest, H 87
 Szentés-Kökenyzug, kom. Csongrád, H 87
- Tanais* river (Don) 108
 Testona, prov. Torino, I 87
 Thrace 55, 69, 74–76, 107, 111
 Thuringia 85, 87
 Tournai, prov. Hainault, B 128, 140–145, 202
 Transsylvania 90
 Troy, TR 15, 119
- Ukraine 167
- Várpalota, kom. Veszprém, H 87
 Verdun, dép. Meuse, F 36
 Villenave-d'Ornon, dép. Gironde, F 47–50
 Vindonissa, CH 28
 Vistula river 119, 167
 Volhynia 167
- Waben, dép. Pas-de-Calais, F 90
 Waging am See, Lkr. Traunstein, D 91
 Weimar, D 92
 Weser river 116
 Westhofen, Lkr. Alzey-Worms, D 96
 Wien-Salvatorgasse, A 92
- Záluží, Čelákovice, okr. Praha-východ, CZ 91
 Závist, Dolní Břežany, okr. Praha-západ, CZ 91

Index of Personal Names

- Adam of Bremen (before 1050–1081/1085) 119
 Alaric (um 370–410) 107, 168
 Alexander the Great (356–323 BC) 117
 Allectus (usurper 293–296) 69
 Ammianus Marcellinus (ca. 330–ca. 395) 73,
 79, 111–112, 116, 172, 202
 Amory, Patrick 168, 170
 Anthemius (emperor 467–472) 55, 77
 Arcadius (emperor 395–408) 107, 112
 Augustine of Hippo (354–430) 64, 115
 Augustus (emperor 27 BC–14 AD) 107
 Ausonius (ca. 310–393/394) 73
- Banaji, Jairus 64
 Banks, Arron 103
 Barbiera, Irene 172, 174–175
 Barth, Frederic 132
 Beard, Mary 103
 Benn, Gottfried (1886–1956) 105
 Bierbrauer, Volker 85
 Börm, Henning 117
 Boulestin, Bruno 33
 Brather, Sebastian 172
 Bray, Peter 13
 Brulet, Raymond 142
- Caracalla (emperor 211–217) 113
 Carausius (usurper 287–296) 69
 Cassiodor (ca. 485–ca. 580) 118
 Caesar († 44 BC) 109–112
 Childeric († ca. 481/482) 128, 134, 136, 140,
 146, 202
 Chrysostom (344/349–407) 62
 Claudius (emperor 41–54) 110
 Claudius Gothicus (emperor 268–270) 72
 Clovis (king ca. 481/482–511) 126, 134,
 140–143, 146, 169
 Constantius Chlorus (emperor 293–306) 69
- Darwin, Charles (1809–1882) 25
 Demandt, Alexander 104–105, 115
 Dossey, Lesley 62
 Duday, Henri 33, 35, 40
- Effros, Bonnie 174
 Eratosthenes of Cyrene (276–194 BC) 108
 Eunapius (347/349–after 414) 73
- Friedell, Egon (1878–1938) 105
 Frigeridus (4th c.) 73
 Frobenius, Leo (1873–1938) 105
 Fuest, Veronika 14–15
- Geary, Patrick 2
 Geographus Ravennatus (ca. 700) 119
 Gillett, Andrew 163
 Goffart, Walter 169
 González-Ruibal, Alfredo 16–17
 Gregory of Tours (538–594) 144, 202
 Gruen, Erich 111
- Hagendorn, Andrea 28
 Halsall, Guy 114, 131, 135, 140
 Hansen, Svend 19
 Hartmann, Dirk 19
 Heather, Peter 105, 163, 165–168,
 170–173, 177
 Heer, Oswald (1809–1883) 24
 Hekataios (ca. 560–ca. 480 BC) 108
 Helmholtz, Hermann von (1821–1894)
 10–13, 18
 Helmold of Bosau (ca. 1120–after 1177) 119
 Herodotus (5th c. BC) 108
 Hilberg, Volker 95
 Honorius (emperor 395–423) 70, 77
 Horace (65–8 BC) 115
- Jordanes († after 552) 118–120,
 167, 170, 172
 Juba I. († 46 BC) 113
 Juba II. († 23) 113
 Justinian (emperor 527–565) 134
- Kaufmann, Wolfgang 106
 Kazanski, Michel 168, 173
 Kemp, Wolfgang 18
 Kocka, Jürgen 15
 Kossinna, Gustaf (1858–1931) 119
 Krause, Johannes 199

- Kristiansen, Kristian 16–18, 202
 Kulikowski, Michael 166
- La Rocca, Cristina 175
 Lévi-Strauss, Claude (1908–2009) 105
 Libanius (314–after 393) 63–64, 66
 Livy (ca. 59 BC–ca. 17 AD) 115
- Marcus Aurelius (emperor 161–180) 116
 Maximian (emperor 286–305) 69
 McCormick, Michael 2
 Messala Avienus (*praefectus*) 71
 Mittelstraß, Jürgen 12
- Nagler, Anatoli 19
 Newton, Isaac (1642–1727) 11
 Niklasson, Elisabeth 16, 18
 Nye, Joseph 104
- Odoacer (king 476–493) 168
 Orosius (ca. 385–ca. 418) 115
 Ovid (43 BC–17 AD) 115
 Otto of Freising (ca. 1112–1158) 119
- Pacatus Drepanius (4th c.) 76
 Paul the Deacon (725/730–797/799) 118–119
 Pliny (23/24–79) 115–116
 Pollard, Mark 13
 Posidonius of Apameia (135–51 BC) 109–111
 Pottast, Thomas 27
 Pythagoras (ca. 570–ca. 510 BC) 11
- Radagaisus († 406) 73
 Ranke, Leopold von (1795–1886) 129
- Rummel, Philipp von 174–175
 Rütimeyer, Ludwig (1825–1895) 24
- Saturninus (4th c.) 74
 Schliemann, Heinrich (1822–1890) 15
 Seneca (ca. 1–ca. 65) 110
 Shapur (Shahanshah 240/242–270) 115
 Snow, Charles Percy (1905–1980) 11–12
 Sozomen († ca. 450) 70
 Spengler, Oswald (1880–1936) 104–105
 Synesius of Cyrene (ca. 370–after 412)
 68, 112
- Tacitus (ca. 58–ca. 120) 110–111, 116
 Themistius (ca. 317–after 388) 74–76
 Theodoric II. (king 474–526, *magister militum*,
patricius) 118, 168, 176
 Theodosius I. (emperor 379–395)
 74–76, 107
 Theodosius II. (emperor 408–450) 55, 77
 Toynbee, Arnold J. (1889–1975) 105
 Truc, Cécile 135
- Ulfilas (ca. 311–383) 171
- Valens (emperor 364–378) 79
 Valerian (emperor 253–260) 115
 Vegetius (late 4th c.) 108, 118
 Veit, Ulrich 9
 Vergil (70–19 BC) 115
 Virchow, Rudolf (1821–1902) 15, 24
- Ward-Perkins, Bryan 105
 Wolfram, Herwig 167, 169