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Bermudian English

A sociohistorical and linguistic profile

Nicole Eberle

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by Nicole Eberle

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Nicole Eberle
September 2020

CHAPTER 1

Introduction

While Bermuda is one of the oldest continuously inhabited British overseas territories with a rich 400-year history, it is also one of the blank spots considering the vast amount of linguistic research that focuses on locales around the globe where English varieties are spoken. Comparatively few (published) studies describe the structure and use of the local variety of English on any linguistic level, be it from a diachronic or synchronic perspective: Bermudian English (BerE) remains one of the most under-researched varieties of English to date (Cutler, Hackert & Seymour 2006: 2066). Considering the historical time-depth of the locale as well as the position and role of Bermuda in relation to British overseas endeavors in the wider geographical region, taking a closer look at Bermuda and BerE is in many ways long overdue.

Indeed, Bermuda is an insightful setting to address questions regarding new-dialect formation, processes of contact-induced change, the spread of English in the wider geographical region and typological alignments, for various reasons outlined in the chapters to follow. Since the archipelago has, for instance, never changed hands, which is a somewhat rare aspect considering colonization histories of other (island) settings, it provides an example of a comparatively stable context according to which new-dialect formation can be discussed (see Sections 3.1 and 3.2). Since it also served as an important historical hub regarding settlers' cross-migration movements between Britain and the colonies on the American mainland as well as in the Caribbean, an in-depth description of these movements as well as a discussion of Bermuda's contact history contribute to a more comprehensive picture regarding the spread of English and diffusion of linguistic features along the North American coast and in the Caribbean (see Sections 3.2 and 5.2). Shedding further light on processes of contact-induced change, their linguistic consequences in and beyond Bermuda, and contemporary typological relationships between BerE and varieties that have developed in comparable scenarios (see Section 5.2) thus provides additional perspectives based on a sociohistorical and morphosyntactic profile of a hitherto under-researched variety of English.

In a number of comparable sociolinguistic studies, many of these linguistic phenomena, which warrant analysis in the Bermudian context, have been discussed in relation to the particular geographical context within which they can be observed: namely island settings (for instance Patrick 1991, Jamaica; Aceto & Williams' 2003

overview of studies on Eastern Caribbean varieties; Childs, Reaser & Wolfram 2003, Reaser 2004, Hackert 2012, the Bahamas; Cutler 2003, the Turks and Caicos Islands; Schreier 2003 and 2008, Tristan da Cunha and St. Helena, respectively; Deuber 2014, Jamaica and Trinidad; Myrick 2014, Saba). Because of their topographical characteristics, such settings are sometimes argued to be exemplary sites which allow the study of these phenomena in relative isolation (Schreier 2003, 2008, 2017; Hickey 2012: 2–3; Schilling-Estes 2002; Wolfram 2004). Schreier (2008: 223), for instance, formulates this particularly strongly, in stating that

> insular communities offer an ideal test setting for studying processes of contact-induced language change, sociolinguistic diversification and parallel developments of language(s) in isolation. They provide an excellent opportunity for studying how "new" varieties come into being in distinct settings and contact scenarios, how and from where they draw their characteristic features, whether they undergo similar and/or parallel developments, etc.

With its focus on Bermuda and BerE, on such linguistic processes and on similar questions that have been investigated in previous studies of island varieties, the present book aims to complement the global picture that has emerged from this line of research. However, it also aims to complicate notions of insularity and isolation in its discussion of BerE's sociohistorical and morphosyntactic profile according to specific issues pertaining to language variation and change in this particular locale. Since Bermuda's history and people are characterized by intense phases of contact and levels of mobility, respectively, an in-depth focus on contact and mobility is integrated throughout the chapters to follow. With such an approach, I aim to highlight the comparative potential of the present study as well as complement existing variationist research focusing on varieties of English in similar settings and in the wider geographical region.

1.1 Bermudian English as a blank spot: Existing research

BerE has only recently attracted the attention of a number of researchers (Eberle & Schreier 2013; Holliday 2016; Hall 2018, 2019; Fubler fc.; Imami fc.); hence, the existing literature that deals with any linguistic aspect of the variety is comparatively sparse. One of the few studies I am aware of is Ayres (1933): he provides a description of BerE phonology, highlights certain salient features (both vowel and consonant features) and lists these in an impressionistic manner (see Ayres 1933: 3). In the course of his article, Ayres (1933: 4) aligns BerE with American English: "[i]t has the level tone of American speech, the briskness of the coastal type, a characteristic crispness, and would create least remark, if indeed any at all,

between, say, Norfolk, Virginia, and Charleston, South Carolina". This assessment is partly echoed in Trudgill (2002: 32), who argues for a demarcation of varieties along ethnic lines, however: "[t]here are noticeable differences between the speech of Blacks and that of Whites – the former being more Caribbean in character, the latter more like the English of coastal South Carolina".

One of the more recent sources that address BerE, i.e. Cutler, Hackert and Seymour (2006), revisits points made by both Ayres and Trudgill, in an overview article of the language situations in Bermuda and the Bahamas. Their statement that "[t]he formation of Bermudian English must have taken place in an environment similar to that found later in the early colonial Bahamas" (2006: 2066) again highlights similarities between the Bermudian scenario and Caribbean scenarios. Additionally, they (2006: 2067) draw attention to the fact that Ayres "draw[s] parallels between Bermudian and Gullah, the creole spoken in the South Carolina and Georgia lowlands and offshore Sea Islands"; a fact that is of particular interest since, they (2006: 2067) argue, "these shared features underscore the view of a historical Bermuda-Bahamas-Carolina triangle".

Three of the most recent studies which address various aspects of BerE are Holliday (2016) and Hall (2018, 2019). Holliday (2016) provides an acoustic analysis of young, black BerE speakers' vowel systems and compares these to systems of Mainstream U.S. English speakers, finding a number of substantial differences which qualify alignment claims made in earlier research (Ayres 1933), based on data stemming from this sub-group of BerE speakers: according to Holliday (2016: 9), "[t]he BE [Bermudian English] system is characterized by fronted high and mid back vowels, a potential [æ]/[ɛ] merger, and prerhotic centralization and merger of front vowels, at least in word final position".

Hall (2018, 2019) analyzes linguistic performances of BerE, also from a phonetic/phonological perspective. In her 2019 article, for instance, she provides an acoustic analysis of "one of the most heavily stereotyped sounds of Bermudian English" (223), namely the MOUTH vowel, "[examining] the behaviour of [this] variable in the speech of a very specific community of practice (elite white performers) in two contrasting styles, and [comparing] it to the same variable in the group of speakers they appear to be impersonating (black Bermudians)" (225). Her findings are indicative of "linguistic parody observed in the white group" and "suggest that this linguistic practice is not only a performance of 'Bermudian-ness,' but also a performance of a racialized stereotype which reflects and reinforces the raciolinguistic hierarchies of contemporary Bermudian society" (223).

In this context, I want to address one of three additional sources which are of relevance for the present study and its focus and which do not originate in a "classic" academic context. Smith and Barritt's *Bermewjan Vurds* (2005, 7th ed.) is a dictionary which lists expressions the authors consider typically Bermudian in

orthographical transcription. While the dictionary was compiled for humorous purposes, it provides a glimpse into linguistic features that are considered stereotypical and into dimensions that are relevant for linguistic identity construction processes in the Bermudian context. Example (1), for instance, provides an illustration of an entry which features /th/ stopping as well as monophthongization and lengthening of /aʊ/, the feature analyzed by Hall (2019), discussed above: "**DAHN-DE-COUNTRY**: eastwards, towards St. George's. N.B. east is always down: 'Cup Match is DAHN-DE-COUNTRY this year.'" (np., formatting adopted from the original).

Indeed, *Bermewjan Vurds* is so well-known among Bermudians that it was brought up in numerous conversations and interviews, which suggests that the features listed have – in some ways and for some groups of speakers – come to index local identity (see for instance Johnstone, Andrus & Danielson 2006: 96, who discuss a similar point regarding regional speech in Pittsburgh). In her (2019) article, Hall addresses the complexities that need to be considered with regard to such sources in light of performances of race in the Bermudian context in more detail.

The second source, Werkin's "Onion Patch English" (reprinted in 1977), is a brief article which contains a folk-linguistic description of the local Bermudian variety, published as part of a recipe book that was written in the 1970s. The author maintains that BerE (or "Onion Patch English", as it is called throughout the short account) exhibits a certain "purity" because it was transmitted from earliest settler dialects and argues that this allows a comparison with earlier varieties of English spoken in the 1600s and 1700s (Werkin 1977: 91). While this certainly overstretches the analytical potential of BerE (echoing, however, arguments put forth regarding "conservative" dialects in the U.S., see Schreier 2017 for a discussion and refutation of such claims), the text is insightful in that it addresses typological assessments based on perceptions, which echo the alignment attempts outlined above: Werkin (1977: 91) states that BerE "does not sound American, though certain similarities do appear in parts of New England and in the more coastal states" and that "to North American ears it definitely does not sound like British English at all". Examples of phonological and lexical features, mostly nautical expressions as well as examples of house names and nicknames, provide further insights into (sometimes formulaic) expressions considered to be typically Bermudian, such as greetings for instance: *How you been keeping?* (1977: 94; note that the auxiliary is absent in this example; see Section 5.1.4).

Thirdly, the Bermuda National Library houses a collection of short studies conducted by a group of students during a summer school in Bermuda in 1976, called "Bermudian English: Vocabulary, Dialects and Borrowings". These focus on various linguistic aspects mostly corresponding to the title, but also moving beyond vocabulary in discussing more general linguistic topics and providing additional morphosyntactic and syntactic example structures. While the texts of this compilation

need to be considered with a certain level of caution, owing to their nature, as it seems they were the final requirement of an Introduction to Linguistics course, they provide relevant evidence for the present study with regard to vocabulary and language use in Bermuda during the 1970s.

First, in what seems to be a general introduction, the writers (np.) state that "[t]here has […] been a tremendous influence on the students by the foreign teachers who are contracted to teach here" and that "[t]he dialects […] change rapidly, due to the fact that all tertiary education must be received away from the Islands". Both these points address issues of relevance: many students in Bermuda seem to have been confronted with teachers speaking diverse regional varieties in the educational system, throughout parts of Bermuda's history and definitely in the 1970s, and it would not be too much of a stretch to infer that such varieties might have been seen as acquisitional targets in terms of second-dialect acquisition. Also, already in the 1970s, pursuing tertiary education meant moving off-island for a longer period of time, with consequences in terms of individual mobility influencing students' linguistic repertoires (see Chapter 3 for a more detailed discussion of these issues). Second, a discussion of borrowings lists numerous examples of different origin, many of which stem from the West Indies (which echoes other statements in this regard). Third, in a more general overview of the dialect (p. 36), the authors address high levels of inter-community contact as well as isolation and maintain that no community in Bermuda can be described as isolated, except perhaps the Portuguese (which reflects historic discrimination against the Portuguese community that is further discussed in Chapter 3). They then draw a connection between this and low levels of regional variation; a statement which is somewhat qualified in a subsequent, more detailed discussion, where the authors (p. 36) note that

> [i]t is possible that there are still slight variations in speech, according to what part of the island the speaker grew up in, but the differences would seem to fall into the realm of phonetics, rather than any broader method of discernment. There would seem to be a greater American influence of pronunciations in the St. George's/St. Davids area than elsewhere in the island, probably as a result of greater continual exposure to Americans because of the presence of the Naval Air Station […]. At no point, however, is it possible to positively define a dialect as characteristic of a particular area.

These aspects are discussed in greater detail in Section 3.2.[1]

1. In this context, an additional source is relevant, which was occasionally brought up in interviews with younger Bermudians: Bermemes, which comprises a social media network creating Bermudian content, using linguistic features considered to be typically Bermudian (for more information and examples, see, for instance, their instagram or Facebook accounts; @Bermemes).

In terms of BerE morphosyntax, no study to date has published a comprehensive description of variable features (beyond mentioning exemplary structures) or an in-depth feature analysis, as far as I am aware. The pilot study which formed part of the present project (Eberle & Schreier 2013) is the first to provide a tentative descriptive profile of variable morphosyntactic features, albeit of an ethnic sub-variety (African BerE; ABerE), and to address questions regarding this particular variety's historical origins and typological affiliations. Tracing shared morphosyntactic features of ABerE and a selected number of varieties spoken in the wider geographical region, based on sociolinguistic interview data and data stemming from the *electronic World Atlas of Varieties of English* (*eWave*, Kortmann & Lunkenheimer 2011), we (Eberle & Schreier 2013: 301) reach the conclusion that ABerE, and by extension BerE, can and "should, sociolinguistically speaking, be classified as a variety of Caribbean English indeed". The structural similarities which feed into this conclusion are explained as "most likely the result of a two-way transfer pattern: from various settings throughout the Caribbean to Bermuda (mostly via the slave trade) and from Bermuda to other locations (Eleuthera on the Bahamas, Grand Turk)" (Eberle & Schreier 2013: 301). Here again, the same connection is highlighted as in previous sources discussed above: namely close historical, social and linguistic relationships between Bermuda and the Caribbean.

1.2 Research design and aims

The under-researched nature of BerE and the differing statements regarding its alignment have informed the design of the present study in a crucial way. It addresses this gap in research by combining a diachronic approach, which traces the evolution and subsequent development of BerE in a sociohistorical profile, with a synchronic approach, which focuses on qualitative typological and quantitative feature analyses in a linguistic profile. First, relying on historical sources outlining the Bermudian social history in the diachronic part, I attempt to gain insights regarding input and donor varieties and the formative as well as subsequent developmental phases of BerE, so as to account for potential structural similarities across varieties which have developed in comparable scenarios. Second, relying on sociolinguistic interview data collected during two fieldtrips to Bermuda in the synchronic part, I outline a descriptive profile of morphosyntactic variation in BerE (Section 5.1), which moves beyond the tentative description outlined in Eberle and Schreier (2013): it is based on a larger dataset and includes variable morphosyntactic features of not only ABerE.

This description serves as backdrop for the analysis of typological alignments, which complements the qualitative part of the present study. Again including data

from the *eWave* (similarly as in the pilot study), I compare the morphosyntactic feature ratings that are listed in the *eWave* for a number of different varieties with the same ratings for BerE, in order to establish contemporary typological affiliations. To also check for potential traces of input and donor varieties, I further cross-reference the *eWave* feature list with lists from Baker and Huber (2001) and compare the ratings for the resulting "subset" of features across the same varieties. With such a combined approach, checking for contemporary as well as historical typological affiliations with other English(-based) varieties in the wider geographical region is possible (see Section 5.2).

Subsequently, two quantitative feature analyses of syllable-coda consonant cluster reduction (CCR) and past *be* leveling provide a complementary perspective to the more global picture emerging in the qualitative part of the present study. In order to determine which linguistic and/or social factors condition variation in these features, the sociolinguistic interview data are coded and subjected to mixed-effects logistic regression analyses using Rbrul. Distribution rates and relative frequencies as well as constraint rankings are compared to results of similar studies that have analyzed the same features in other native, nativized or contact-derived varieties of English.

CCR and past *be* leveling are selected for analysis based on a number of reasons. First, both phenomena are exceedingly well-researched in a number of English(-based) varieties worldwide, which provides the necessary backdrop for a comparative assessment, as the extensive body of existing literature makes it possible to contextualize the Bermudian findings (see Section 5.3). Second, past *be* leveling is more noticeable as a nonstandard feature than CCR, which, as a morpho-phonological variable, is less salient and observed in all speakers "in all but the most self-conscious styles" (Guy 1980: 2). Hence, a comparison of the quantitative results for these two features might also be insightful regarding the nature of the present dataset, especially in terms of formality, since past *be* leveling might not be as frequently observed as CCR in a more formal dataset (see Chapter 4). Third, both features are candidates for "vernacular universals" put forth by Chambers (2003, 2004), i.e. nonstandard features potentially shared by vernaculars around the globe (see Section 2.2.1). As such, especially a quantitative analysis of frequencies and constraint rankings is insightful in terms of BerE's status compared to other varieties for which similar studies exist and in terms of a tentative assessment of "the amount and impact of language contact" that must have occurred during its formation (Schreier 2008: 204; he argues this to be the case with regard to CCR and copula absence in St. Helenian English [StHE]).

While the present study is, thus, situated within a very classic variationist sociolinguistic framework, especially in its reliance on sociolinguistic interview data and investigation of variable linguistic features, it also aims to move beyond this

approach. In focusing particularly on patterns of mobility/ies and the changing nature of individual mobility/ies in the Bermudian context, I attempt to account for the fact that Bermuda has been (see Sections 3.1.1–3.1.4) and continues to be (see Section 3.1.5) a community shaped by mobility on many levels: historically, socially, economically. In light of this, I integrate more recent theorizations of spatiality, migration and mobility (such as the framework of the sociolinguistics of mobility) in the following chapters and argue that it is necessary to consider mobility in as much detail as possible in order to account for the dynamics of language variation and change in BerE morphosyntax (see Section 2.2.4 and Chapters 3 and 4).

In particular, five overarching sets of research questions govern the present study. (1) and (2) address the qualitative part:

1. Does BerE exhibit structural similarities to Caribbean varieties or varieties in the wider geographical region, such as other Atlantic or U.S. varieties? With which varieties does BerE align and how might it be classified based on typological affiliations?
2. In how far can it be argued that comparable social and sociolinguistic contexts account for these structural similarities? Based on the results of the typological analyses, what can be inferred regarding diffusion patterns of morphosyntactic features in the wider geographical region, considering both a present-day and historical perspective? Do results speak for a transfer of BerE or an early colonial koiné as a donor variety throughout the wider geographical region, but especially the Caribbean?

(3) and (4) concern the quantitative analyses:

3. How high are the absolute CCR rates and which factors constrain reduction in BerE? Which patterns emerge regarding past *be* leveling?
4. How do these absolute reduction rates and constraint rankings of CCR as well as leveling rates and constraint rankings of past *be* leveling compare to those of other English varieties for which similar studies exist?

Finally, the last question (5) raises a more general issue, which governs the entire study:

5. Can any linguistic patterns or consequences be observed which might be traced to Bermudians' increasing levels of mobility/ies or which might speak towards a change in people's everyday mobility/ies affecting the variety?

Before addressing these questions in Chapter 5, I first outline the theoretical backdrop of the present study in Chapter 2. Its approach is mainly informed by frameworks anchored in contact dialectology, dialects in contact, dialect and variationist

typology as well as the sociolinguistics of mobility. The historical, social and linguistic contexts of the Bermudian community are the focus of Chapter 3. I outline Bermuda's history and highlight various forms and levels of mobility/ies as well as cross-migration patterns that are revisited in the respective analysis sections. Chapter 4 provides a global overview of methodological considerations as well as a description of the dataset: I discuss the corpus and potential caveats resulting from the nature of the dataset. The qualitative and quantitative analyses are in turn addressed in Chapter 5. On the basis of the questions just outlined, I first focus on the qualitative description of morphosyntactic variation, before retracing typological ties in the comparative analyses and discussing quantitative findings in the feature analyses. The conclusion, finally, revisits and contextualizes the main results and raises issues that warrant future research.

In combining qualitative and quantitative approaches, a more comprehensive picture of the typological status of and morphosyntactic variation in BerE can be drawn: while the historical and comparative typological analyses allow a more general discussion of BerE morphosyntactic variation, based on a variety-specific approach, the quantitative analyses of selected features make it possible to gain first structural insights based on a more fine-grained assessment of which (extra-)linguistic factors govern the system in these specific contexts. In light of this, the global aim of *Bermudian English. A Sociohistorical and Linguistic Profile* is to shed light on trends that speak towards the degree of restructuring BerE must have undergone since its formation and on its typological alignment with regard to varieties in the wider geographical region as well as to provide a starting point for further research into questions that remain. These are manifold indeed, as the present book is but a first step in an effort to provide a linguistic analysis of one of the least-known varieties of the English language to date.

CHAPTER 2

The theoretical framework of Bermudian English as a contact-based variety

The spread of English around the globe during the British colonial period has led to the emergence of new varieties of English (be they native, nativized, or restructured varieties) in numerous locales, including Bermuda. Depending on the individual locales and contexts, different factors have been identified to play a role in the formation of these varieties, as Trudgill (2008: 241–242) describes:

> [n]ow if we ask why new varieties […] developed in the new locations, then we can cite a number of different factors, such as linguistic change, adaptation, and language contact. But it seems obvious that dialect contact and dialect mixture must also have been very important factors in determining the nature of colonial varieties of European languages, such as […] the colonial Englishes.

Since Bermuda represents one of the few *tabula rasa* (see Kerswill 2013; Schreier, Eberle & Perez 2017) settings in British colonization history and since BerE primarily emerged out of a dialect contact situation, as discussed in more detail in Section 3.2, the last factors Trudgill lists are central both in terms of historical new-dialect formation and subsequent development of the variety. Consequently, contact dialectology, dialects in contact, as well as new-dialect formation theories form a first, overarching theoretical backdrop of the present study. These are discussed in Section 2.1, together with different models that describe common processes to be observed during the formation phases of new varieties (Trudgill's three-stage model; Schneider's "Dynamic Model"). This theoretical outline of contact dialectology and new-dialect formation mainly informs the reconstruction attempt of BerE's early formation phase, input varieties and historical development, i.e. the present study's historical profile, but also the qualitative analyses of typological ties.

The qualitative analyses also heavily rely on frameworks put forth in dialect and variationist typology. This line of research is of particular relevance here, for two reasons: first, such studies discuss linguistic similarities of varieties according to different structural, functional, or sociohistorical dimensions and, accordingly, propose a number of classifications which are of importance in an attempt to situate BerE in the canon of English varieties in the wider geographical region, as

outlined in Sections 3.2 and 5.2. Second, based on such theoretical frameworks, it is possible to gain further insights with regard to questions raised in the historical profile, i.e. BerE's input varieties, origins and degree of restructuring. Consequently, approaches of dialect and variationist typology and classifications which are of relevance are outlined in Section 2.2.

Section 2.2 further provides a discussion of more recent developments in theorizations of space, spatiality, migration and mobility in dialect and/or language contact and change frameworks, as such a broadening of theoretical perspectives complements the more classical approaches of contact dialectology and dialect typology and allows for an integration of more recent developments in the field as well as specific characteristics of the Bermudian speech community. In particular, the sociolinguistics of mobility approach, as an approach that has emerged more recently, is of importance here.

2.1 Contact dialectology and dialects in contact

The first theoretical framework which governs the present study is contact dialectology or what Britain (2012a: 219) refers to as "[t]he dialect contact paradigm of research in – mostly variationist – sociolinguistics". This paradigm "investigates change mechanisms under extensive, long-term contact conditions" (Schreier 2014: 96; see also Schreier 2003, 2008) and focuses on linguistic outcomes which result from contact between varieties of the same language (i.e. regional dialects and sociolects, according to Schreier 2014: 96). An extensive body of research addresses such mechanisms and numerous studies have been published which "have demonstrated clear typologies of change, linguistic outcomes which recur when dialect contact takes place" (Britain 2012b: 21–22; see for instance Trudgill 1986, 2004a, 2008; Siegel 1993; Kerswill 1993, 1996, 2004, 2013; Britain & Trudgill 1999; Hickey 2003a; Kerswill & Trudgill 2005; or Britain 2006, 2009a, 2012a/b, 2013a/c). Also, numerous case studies discuss (specific phenomena in) various settings, adopting historical or contemporary perspectives: for instance, Kerswill and Williams (1992, Milton Keynes); Britain (1997a, 1997b, 2010c, English Fens; 2001b, New Zealand); Sudbury (2000, Falkland Islands); Watts (2006, Cheshire); Schreier (2008, St. Helena); or Cheshire, Fox, Kerswill and Torgersen (2008, Multicultural London English). Before I turn to a discussion of the recurring processes and outcomes of dialect contact which are most relevant in the present context, however, I briefly want to raise a terminological point.

The question as to how to separate language from dialect contact has been controversially discussed (see Schreier 2003, 2008) and Schreier (2008: 50), for instance, highlights that "a strict separation […] obscures the fact that the two often

co-occur". Since "'[p]ure' dialect contact scenarios are exceedingly rare and there is nearly always concomitant language contact as well" (Schreier 2008: 49), it is necessary to pay particular attention to the individual contexts of each contact setting and analyze linguistic outcomes with careful consideration of the contact dynamics that characterize these respective settings (Schreier 2008: 49–50). I attempt to account for this here by not only discussing the social history of Bermuda and sociolinguistic context of BerE in as much detail as possible considering the scope of the present book (Chapter 3), but also by broadening the theoretical backdrop where necessary. Hence, I selectively include relevant arguments and theoretical stances that are put forth in the language contact literature, so as to complicate the extensive focus on dialect contact adopted in the present section.

However, because the earliest settlers who arrived in Bermuda during the colony's foundation phase all came from a similar regional background, such a strict focus on contact dialectology allows to account for many of the processes at work during the variety's early formation phase and much of its subsequent development. By way of a working definition, I consequently follow Schreier's (2017) definition of dialect contact as "interaction between intrinsically variable subsystems (e.g. dialects) of a common super-system (a language)". These variable subsystems are structurally and typologically related (Siegel 1985; Schneider 2003; Schreier 2017) and very often described as mutually intelligible (Trudgill 2008; see also Britain & Trudgill 1999; for a more detailed discussion of the question as to how to further differentiate between languages and dialects, see for instance Bisang 2004).

2.1.1 Accommodation, its linguistic outcomes, and koinéization

In certain types of dialect contact situations, i.e. when speakers of such variable subsystems come into contact and interact over an extended period of time, speaker interaction may lead to linguistic accommodation (Trudgill 1986; Britain & Trudgill 1999; Britain 2012b). Schneider (2008: 264) defines accommodation as follows: "[i]n a process of accommodation, individuals approach each other's speech behavior by adopting select forms heard in their environment, thus increasing the set of shared features". Such an increase in shared features, also often discussed in terms of "linguistic convergence" (Britain 2012a: 221), is a process that is influenced by multiple factors, a number of which are discussed by Trudgill (1986):

1. linguistic accommodation may happen within or beyond a speech community;
2. speakers involved may be children or adults (see also Britain 2009b; or Kerswill, Cheshire, Fox & Torgersen 2013);
3. accommodation may be short- or long-term (see also Britain & Trudgill 1999);
4. and the degree of accommodation is subject to individual variability.

Since different linguistic outcomes may result depending on which of these factors are prominent, the "nature of the linguistic accommodation that occurs when speakers of different dialects meet" is, according to Britain (2009a: 137), a key factor in an attempt to understand the outcomes of dialect contact and, consequently, also a key factor in an attempt to describe the formation phase and subsequent development of BerE.

Regarding the first point listed above, the main difference between accommodation within or beyond a speech community is, according to Trudgill (1986: 12), that accommodation within a speech community "involves altering the frequency of usage of particular variants of variables over which the speaker already has control" rather than adopting new variants of variables, because the speakers who interact share a similar linguistic background. In contrast, accommodation beyond a speech community may give rise to the adoption of new features in settings where speakers of different backgrounds interact, as in transplanted speech communities for instance (Trudgill 1986: 12). Secondly, the agents involved in the interaction, i.e. children or adults, may affect the speed and degree of accommodation. Because of the "greater linguistic flexibility" that young children display during language acquisition, Trudgill (1986: 31; italics in the original) argues that their "*speed* of accommodation is greater, and […] so is the *degree*". Adults generally seem to be slower in linguistically converging towards a set of shared features and only capable to accommodate incompletely or imperfectly in face-to-face interaction, which is of relevance in new-dialect formation models (see below, Trudgill 1986: 57–58; Britain 2009a: 137) and, in the present context, in an attempt to trace different groups of agents who must have been instrumental in shaping the variety in Bermuda (Section 3.2.).

Thirdly, while many studies focus on effects of long-term accommodation, which must have occurred in colonial settings where speakers came into contact due to one-off acts of migration and which might have led to koinéization and new-dialect formation through routinized accommodation, as in Bermuda, comparatively few studies have investigated "the short-term phonological, grammatical, and other structural accommodation that is the prerequisite to longer term contact" (Britain 2013a: 209; see Llamas, Watt & Johnson 2009; Watt, Llamas & Johnson 2010; Babel 2010; or Ruch 2015, for instance; as well as studies that have emerged within an audience design framework, compare Britain's 2013a: 209 discussion). While these short-term accommodation effects are somewhat less relevant than long-term effects in the context of the present study, a particular analytical challenge highlighted by Britain (2012a: 221) nevertheless plays an important role: in studies focusing on short-term accommodation effects, it is more straightforward to establish "what the 'ingredients' of [the original dialect] 'mix' were", which led

to the emergence of certain features. Indeed, in Coupland's (1984) study of accommodation in exchanges between travel agents and customers in travel agencies, i.e. the study Britain (2012a: 221) cites as an example, the speakers involved in this short-term interaction scenario can be identified beyond doubt as contributing features, i.e. "ingredients", to this dialect mix. In contrast, it is more difficult to establish such ingredients when focusing on "mass migrations that cause dialect contact on a larger scale" (Britain 2012a: 221) and on long-term accommodation (see Britain 2012a: 221). I set out to examine potential ingredients that must have come into play in the Bermudian situation in the historical profile and qualitative analyses, in an attempt to find clues regarding input varieties.

Should it be possible to establish to some degree what these ingredients were, a related analytical challenge also arises: establishing which features are accommodated to in these contact and mixture situations (Britain 2013a: 209). Trudgill (2004a: 93), on the one hand, proposes that salience is a key factor at play and argues that "it is salient features – those which are 'noticed' (cf. Schmidt, 1990) by speakers" which are accommodated to. While such features may be noticed for various reasons, the notion of salience is by no means an uncontroversial or clearly defined concept; a point that is also highlighted by Siegel (1997; as discussed in Cheshire, Kerswill, Fox & Torgersen 2011; see also below). On the other hand, Trudgill (1986: 16) also maintains that certain factors might play a role in intervening, delaying or preventing accommodation. Such factors may "produce […] a hierarchy of features such that those with the fewest or weakest inhibiting factors are accommodated to first, regardless of the actual speed of accommodation of a given individual" (Trudgill 1986: 21). Taking this argument further, it should, by inference, be possible to speculate on a potential sequence of features that are accommodated to, based on the lowest number of inhibiting factors that might be at play, at least in studies of phonological accommodation effects.

While it remains a matter of debate whether accommodation not only plays a crucial role in dialect contact and mixture situations, but also leads to mixture (see Trudgill 2008 and Bauer 2008, for instance, who differ in their views), a point that is less subject to debate is the importance of long-term accommodation in connection to the processes of koinéization and new-dialect formation: once accommodation becomes long-term, it "can become routinised and permanent through the process of koineisation, and a new dialect can emerge" (Britain & Trudgill 1999: 245; Britain 2012a: 219). The term "koinéization" is variably defined in the literature: some sources use it interchangeably with new-dialect formation (Schreier 2008, 2014), while others apply it so as to refer to "the process which leads to the mixing of linguistic subsystems" (Siegel 1985: 375–376, quoted in Schreier 2003: 20) or "to the linguistic processes that sometimes occur when different dialects or closely

related linguistic subsystems come into contact" (Siegel 1997: 125–126, 1993; see also Trudgill 1986; Kerswill 2006; Britain 2012a). Because numerous complicating factors also play a role (for a discussion see Schreier 2003: 19, 2008: 31), I use the term in pace with Siegel (1997) and follow lines of argumentation that outline the linguistic processes involved as (1) leveling; (2) simplification; (3) interdialect formation; and (4) reallocation (Britain 2012a: 224–225, 2012b: 21–22; Trudgill 1986, 1989; Britain & Trudgill 1999).

Leveling, firstly, refers to a reduction process "whereby marked or minority linguistic variants in a dialect mix are eradicated in favour of more common, less marked variants which have a wider social currency in the locale" (Britain 2001a: 71, drawing on Britain 1997b and Sudbury 2000). As becomes evident from this definition, the process combines both a linguistic and social dimension, in that variants may be leveled away because of their linguistic, regional, or social markedness or because they are perceived as stigmatized variants (Trudgill 2004a; Schreier 2010, 2017; Britain 2012a, 2013a). This point is especially relevant in terms of feature selection processes in new-dialect formation, to which I return below. Simplification is also a reduction process, namely a reduction of redundancy and irregularity (Britain 2013a: 214; see Britain 2012b: 23 for a more in-depth discussion of this process and Schreier 2010 and 2017 for a discussion of reasons why the term is problematic). Taken together, leveling and simplification are among the most common processes involved in and outcomes of dialect contact (Britain & Trudgill 1999: 254).

The third process, interdialect formation, may result from imperfect accommodation, in that such accommodation may lead to the emergence of forms that were not present in any input variety (see, for instance, Britain 2013a: 210, 2012a). Incomplete accommodation is, however, not the only reason why such new "hybrid" forms (Britain 2013a: 223) may arise: they may also result from "overgeneralization and hyper-adaptation" (Schreier 2010: 457, drawing on Trudgill 1986). Reallocation, then, is the fourth and final process. Where two or more competing forms survive the leveling process, reallocation may be involved: "variants in the mixture which were originally from different regional dialects may avoid extinction by acquiring different sociolinguistic or other functional roles in the outcome of the mixture" (Britain & Trudgill 1999: 247; see Schreier 2010: 455–456 for a discussion of reasons for reallocation).

Finally, in order for a new variety to fully emerge in a given setting, focusing needs to set in. Le Page and Tabouret-Keller (1985) have introduced this term, which refers to a process of "crystallization of new norms" that is of paramount importance in "the stabilization of a new dialect" in a given speech community (Schreier 2017: 348). Since crystallization and stabilization are lengthy processes, a certain degree of social continuity and stability is necessary, so that a variety may

focus (Schreier 2003: 10). Once this is completed, however, speakers of a fully focused variety agree on normative structures and are aware of linguistic differences between their variety and others (Schreier 2010: 457).

2.1.2 New-dialect formation models

With this more general discussion of linguistic processes and outcomes involved in dialect contact as backdrop, I now turn to a more detailed review of theories and models which address common processes to be observed in the formation and emergence of new, contact-based varieties in dialect contact settings as well as similar scenarios, and to questions as to how these are relevant in the Bermudian context. To begin with, a number of arguments and concepts put forth in Mufwene's (1996, 2000, 2001, 2007) "ecology"-based approach to language evolution are of importance here, even though his approach focuses mainly on language contact situations: namely, (1) the notion of the "founder principle" or "founder effects", and (2) the concept of the "feature pool" (see also Schreier 2002, 2008; Wolfram 2004; Trudgill 2004a; Britain 2008).

The founder principle holds that the input varieties spoken by the founding population play a crucial role in the formation of a contact-based variety in colonial settings, such as Bermuda, because "the structural properties of [such a] variety are for the most part determined by the dialects spoken by the colony's founders" (Schreier 2002: 79; Schneider 2003; Sankoff 1980, as discussed in Meyerhoff 2006a: 120). This is based on the argument that linguistic outcomes which result from contact and mixture situations are "constrained by the nature of the linguistic input" (Schneider 2013: 240; for a qualification of the deterministic nature of this argument, see Schreier 2017), at least to some degree, since features present in these input varieties form part of a feature pool, out of which certain features are selected during the initial contact scenario (Schreier 2017: 349). Because of high levels of variation, the linguistic situation is still extremely diffuse at such an early stage; it is only in a next step, once feature selection processes are underway, that variability may be reduced (Schreier 2010; see also Kerswill & Williams 1992, whom Schreier draws on, for instance).

In this context, the question as to which features and variants are selected and survive leveling and focusing processes is of paramount importance. Multiple social and linguistic factors have been identified to play a role (as briefly touched upon above). A first, social factor is demographics: according to Britain and Trudgill (1999: 247), for instance, the "proportions of different dialect speakers present will be vital", because these account for distributional patterns of features and their variants. "Variants with the widest social and geographical distribution" (Schreier

2010: 455) have better chances of being selected, also because of aspects such as prestige, status, and stigma associated with these features.[2] This is closely connected to frequency, since the features with the widest social and geographical distribution are the most frequent, which are argued to be the most likely survivors (Schreier 2010: 455–456; see Siegel 1993: 115 and 1997 as well as Hickey 2003a: 221 for important points of criticism, however).

Linguistic factors which have been argued to play a role are salience, regularity, and transparency (see, for instance, Cheshire, Kerswill, Fox & Torgersen 2011: 177, Siegel 1997, and Britain 2009b for a discussion of these concepts and problematic aspects). First, as briefly discussed above, features or variants which are or become salient, i.e. noticed, for various reasons may be leveled away during selection processes, similarly as features or variants which are marked (a number of reasons are discussed in Sudbury 2001: 76; see also Mufwene 2008; Britain 2009b). Second, more regular features or variants have been argued to have higher chances of surviving in the emerging variety, since "the relative 'complexity' […] of the competing linguistic variants" (Britain 2009b: 144) seems to be influential as well. Finally, more transparent features seem to be more likely to be selected, with transparency referring to a "one-to-one relationship between form and meaning" (Cheshire, Kerswill, Fox & Torgersen 2011: 177, drawing on Siegel 1997).

Once such selection, leveling and focusing processes are completed and once extensive variability is reduced, the newly formed varieties "have […] adopted features from at least two (very often, more) donors" (Schreier 2010: 455) and may also exhibit new features or variants (compare Schreier 2017: 353). In this context, it is not to be neglected that the emerging variety is also influenced by general linguistic developments that occur irrespective of the contact and mixture situation, since "linguistic change must [continue] to take place in the normal way" (Trudgill 2004a: 129) also during new-dialect formation.

One point of contention in the literature is how long feature selection, leveling and focusing processes last. Arguments which address this differ quite extensively: some researchers and theorists put forth specific time ranges – for instance Trudgill (2004a: 23), who argues that a fully focused variety may emerge within fifty years in a specific locale, taking potential "colonial lag" (Trudgill 1999, 2004a; Görlach 1987) into account –, while others highlight further complexities at play. Schreier's (2008: 32) argument, for instance, illustrates the difficulties in defining an end point of the developments and processes that play a role, when he states that, "[t]aken

2. Note, however, that prestige, status and stigma are very context-dependent in both a regional/local and historical sense (Britain, p.c. August 2017): what would be stigmatized features in these types of settings may vary greatly, depending on the local origins of the settler population and the ideologies that these population groups brought with them to the new locale.

to extremes, one might even suggest that new-dialect formation is never finished since the offspring varieties are in a constant state of variation and change, making it impossible to decide when norms have stabilised". This is especially relevant in an attempt to reconstruct the origins and developmental phases of varieties such as BerE, to which I return in Chapter 3.

Based on this more general outline of new-dialect formation, I want to focus more explicitly on Trudgill's (2004a) new-dialect formation model at this point. Drawing on data from different (post-)colonial Southern hemisphere varieties of English and discussing a number of settings comparable to Bermuda, he proposes a three-stage model to describe the development of colonial varieties of English (Trudgill 2004a: 113) and attempts to arrive at a theoretical explanation for linguistic similarities and differences which are noticeable in English varieties that have emerged in comparable contexts (see also Meyerhoff 2006b, for a comprehensive discussion of Trudgill's model). This point especially resonates with the research questions that lie at the outset of the present study's historical and qualitative analyses.

At Stage I in Trudgill's model (2004a: 89), adult speakers of different dialect backgrounds come into contact before the departure to their respective destinations, on the journey as well as during the early years that mark the establishment of the settlements. Dialect contact, mixing and accommodation occur; since adults are the primary agents involved, however, accommodation remains limited. As a consequence, leveling occurs only in a "rudimentary" way: "most notably of minority, very localised Traditional-dialect features" (Trudgill 2004a: 89; see also Schreier 2014). Stage II, then, is "characterized by extreme intra- and interspeaker variability" (Meyerhoff 2006b: 178). The first generation of native-born children is "forced to react to the plethora of dialect forms with which they are surrounded, in the speech of adults, in the development of their own individual varieties" (Trudgill 2004a: 101). The forms which survive koinéization processes are still unstable at Stage II, since the variety focuses and crystallizes only at the next stage, with the second generation of children involved (i.e. children of the first native-born generation; Trudgill 2004a: 113). Majority forms are retained at Stage III and the new variety stabilizes, once focusing is completed (Trudgill 2004a: 113).

In his discussion of the model and its three stages, Trudgill (2004a: 148; see also pp. 28 or 243) discards the importance of social factors such as status, prestige, or identity in the formation of new varieties, especially at Stages II and III. It is only after the new variety has crystallized, i.e. after Stage III, Trudgill concedes, that social factors might play a role: this is "because it is only after focusing has occurred that there is a coherent enough system for children to assign social meaning to" (as Meyerhoff 2006b: 186 summarizes Trudgill's argument). An important qualification is, however, that Trudgill's argument is based on very specific settings:

he discards such social factors "in the very specific case of new-dialect formation where there is no local vernacular form of English that children might even modestly orient to" (Meyerhoff 2006b: 186; see also pp. 187–188), i.e. in the type of setting we are dealing with here.

Based on his model, then, Trudgill (2004a: 26) argues that

> given sufficient linguistic information about the dialects which contribute to a mixture, and given sufficient demographic information about the proportions of speakers of the different dialects, it is possible, within certain limitations, to make predictions about what the outcome of the mixture will be, at least in broad outline.

As such, he affirms his understanding of new-dialect formation as deterministic (see also Meyerhoff 2006b; Kerswill 2013), but qualifies this somewhat in stating that such predictions are only possible in certain types of contact situations: namely "purely with respect to the unusual type of situation in which colonial varieties develop, in tabula rasa environments, out of dialect mixtures" (Trudgill 2004a: 26–27; see also Schreier 2008: 50–51).

This argument is particularly intriguing when we consider the setting at hand, as it provides an important argumentative baseline for the present study's historical and qualitative parts. Since theoretical knowledge of common processes at work in new-dialect formation and dialect contact scenarios and insights into demographic factors characterizing the (founder) population might allow speculations on input varieties and the early formation phase of BerE, I attempt to reconstruct such factors in as much detail as possible in Chapter 3. In order to shed further light on potential input varieties and common linguistic processes which must have played a role in the historical contact scenario and BerE's subsequent development and which might account for some of the contemporary typological affiliations, I also aim to trace similarities between BerE and other English varieties in the qualitative analyses, based on knowledge of BerE's synchronic state (compare also Schneider's 2003: 240 argument and Montgomery's 1989 study).

I am aware that such an attempt to reconstruct the origins and development of BerE is subject to a number of methodological problems and challenges (see Britain 2012a: 224–225). Firstly, studies which aim to trace developments during the formation phase of varieties are *post hoc* studies in their focus on "[s]tudying how new dialects formed well after the event" (Britain 2012a: 224–225; 230). As many historical details as possible need to be considered, since knowledge about the founding population(s), (the structural properties and typological relatedness of) input varieties, as well as the ethnographic and ecological contact situation is crucial (Britain 2008). This can be methodologically challenging when too little historical information is available and/or problematic when the available details are not reliable.

Secondly, Wolfram (2004: 92–93) outlines a related point:

> [o]n a practical level, the application of the founder principle assumes that we know the structural traits of the original donor varieties and that these may be distinguished reliably from features that derive from other sources, including parallel, independent development and diffusion. It assumes further that we have a clear understanding of dialect lineage during earlier time periods.

Since Bermuda's colonial history evolved over 400 years and sources are scarce, such a clear understanding is by no means a given: rather, "ascertaining genuine founder effects [is] an elusive methodological challenge" in the Bermudian context as well, similarly as Wolfram (2004: 92–93) argues more generally with regard to isolated dialect communities.

Finally, the arrival of new immigrant groups and shifting population demographics continuously influence a particular setting. Accordingly, the feature pool may also be shifting and new linguistic inputs may be available for selection in a constantly evolving contact scenario. Indeed, which features form part of the feature pool "is likely to vary at different stages of the development of a colony, as every wave of immigrants is likely to contribute its share of variants […] to the colonial feature pool" (Mufwene 2008: 257; see also Schreier, Eberle & Perez 2017). Attempts to reconstruct a historical contact scenario need to take this into account, which I aim to do in Chapter 3.

A second model that aims to account for similarities and differences in the formation of newly emerging varieties is Schneider's (2003, 2007) "Dynamic Model of the Evolution of Post-Colonial Englishes". Schneider (2003: 241) argues for a "shared underlying process which drives the formation of New Englishes" and focuses (2003: 235, 2007: 3–4) on varieties that have emerged out of a particular "type of contact situation caused by historical circumstances, [namely] the expansion and relocation of the use of a single language to new territories where a characteristic type of language contact situation evolves" (Schneider 2003: 235, 2007: 3–4). In these types of situations, Schneider (2007: 31) argues, a "factor of major importance is the ethnographic ecology of the sociopolitical and […] communicative relationship between the parties involved in a colonization process". He (2007: 31) calls these "the 'strands' of communicative perspective" and divides the parties involved into a settler (STL) and indigenous (IDG) strand, who "share a common language experience and communication ethnography" (Schneider 2007: 32). While the two groups or strands are competing, they become increasingly intertwined "and their linguistic correlates come to approximate one another in an ongoing process of mutual linguistic accommodation over time" (Schneider 2003: 243–244; see also Schreier, Eberle & Perez 2017: 248). This process of accommodation results in one of Schneider's core points, namely that the two groups converge linguistically to the

point that a new set of shared norms characterizes the entire speech community at the end of the evolution process (Schneider 2007: 31, 32, 2003: 24).

During each of the five phases that Schneider's model comprises – i.e. (1) foundation; (2) exonormative stabilization; (3) nativization; (4) endonormative stabilization; as well as (5) differentiation –, he (2007: 30–31) argues that

> manifestations of four different parameters can be observed […], with a monodirectional causal relationship operating between them: (1) extralinguistic factors, like historical events and the political situation, result in (2) characteristic identity constructions on the sides of the parties involved. These, in turn, manifest themselves in (3) sociolinguistic determinants of the contact setting […], which, consequently, cause specific (4) structural effects to emerge in the form(s) of the language variety/-ies involved.

Since the model, its five phases and their characteristics have been comprehensively described in previous literature and since the theoretical framework and research design of the present study are not as extensively grounded on Schneider's model, I refrain from outlining the five phases in more detail here. A number of sources provide detailed overviews, apart from Schneider's own texts of course (2003, 2007; see 2007: 56 for a schematic overview of the model): for instance, Kirkpatrick (2007), Collins and Yao (2012), or Schreier, Eberle and Perez (2017).

One of the alternative scenarios Schneider (2007: 58) identifies is of particular importance, however, in the Bermudian context: namely the scenario where one of the groups present is enslaved (see Schneider 2007: p. 60ff.). Schneider (2007: 61, 62) does not include enslaved people in the STL or IDG strands, but notes noticeable similarities between enslaved people and the IDG strand. On the one hand, enslaved people "were the one important, erstwhile 'other' group" (Schneider 2007: 62) the speakers of the STL strand came into contact with. On the other hand, "like many IDG groups they were burdened with the task of adjusting linguistically to a target language established by the STL community" (Schneider 2007: 62). Indeed, to survive within a colonial ecology and adapt to the communicative needs of their new situation, "they were therefore forced to adjust to the new linguistic environment as rapidly and as effectively as possible under the circumstances" (Schneider 2007: 62).

Such rapid language shift of one of the groups involved is argued to influence the characteristics and duration of the model's phases. For one, phase 3 – nativization – must begin much earlier in such situations (Schneider 2007: 62), namely "in phase 1 and certainly in phase 2. Given the speed of this process and the lack of an IDG strand (and hence overt bilingualism), the linguistic differences between phases 2 and 3 become practically blurred" in such contexts. Secondly, "[t]he stigma that is socially tied to the slaves' language, the creole" is also influential since it "tends to be stronger and more persistent than that associated with

'plain' [post-colonial Englishes]" (Schneider 2007: 63). This aspect plays a role in terms of phase 4 – endonormative stabilization –, as it "detains further development and hinders the acceptance of an endonormative standard" (Schneider 2007: 63; note that Schneider continues to argue that this is the case only for a while and might change depending on the development of the variety in question). Finally, Schneider (2007: 62) concludes that "[s]laves constitute a group in their own right which, given the primary nature of their linguistic input, can be called the 'substrate strand'".

In connection to Bermuda, then, a number of points need to be considered. For one, the situation corresponds in most parts to the scenario just outlined, with the enslaved people constituting a group in their own right, a substrate strand: I follow Schneider's line of argumentation that the enslaved people must have been forced to rapidly adjust to their new linguistic environment and also argue that they contributed linguistic input to the Bermudian feature pool in vital ways, thus influencing the development of BerE extensively. As most of the enslaved people must have spoken some restructured variety of English upon arrival (see Section 3.2) and as no creole developed in Bermuda, I am hesitant to adopt Schneider's arguments without qualifications, but am confident to claim that nativization must indeed have occurred earlier than in phase 3.

Secondly, and in contrast, developments and local characteristics within the STL strand must have corresponded more closely to those outlined by Schneider (2007: 38–39) in phases 1 and 2, for instance in terms of norm-orientation towards a distant homeland during the early phase of the colony's establishment. The situation is more complex, however, when we take phases 4 and 5 into consideration. Regarding endonormative stabilization, I would argue that throughout Bermuda's history, no particular Event X can be identified, which would have been such an "exceptional, quasi-catastrophic political event" as to cause a shift in the construction of the STL strand's group identity "from a self-association with the former mother country […] to a truly independent identity" (Schneider 2007: 48). While it could be argued that a number of historical events had a strong and lasting impact on Bermudian settlers, I would maintain that it is the sum of these events which must have led to a re-orientation towards a locally-based identity: for instance, the demise of the Somers Islands Company,[3] the trade restrictions enforced before the turn towards the sea, or the policies communicated during the American War of Independence (to name only a few examples of historical events discussed in Chapter 3). Since increasing segregation between the STL strand and substrate

3. In the following, I use "Somers Islands Company", for the same reasons that Jarvis outlines in his (2010a: 478, note 12) book.

strand seems to characterize subsequent decades and centuries in Bermuda (see Hall 2019), however, the degree of endonormative stabilization and differentiation is difficult to gauge (see Section 3.2.2).[4]

2.2 Beyond dialects in contact

The theoretical baseline of the qualitative analyses, with their aim to identify and compare distributional patterns of morphosyntactic features across a number of English varieties, is typological in nature: I adopt a dialect typological framework, in that the analyses in Section 5.2 are concerned with cross-linguistic variation based on dialect data and "interpret English non-standard morphosyntactic phenomena as specimens of cross-linguistic variation", similar to Siemund (2013: 18). As such, they mainly follow approaches outlined by Kortmann and Szmrecsanyi (Kortmann & Szmrecsanyi 2004; Szmrecsanyi & Kortmann 2009a, 2009b; Kortmann & Szmrecsanyi 2011, among others).

In Section 2.2.1, I briefly discuss two forms of linguistic universals which are especially relevant in dialect typology and sociolinguistics, namely vernacular universals and angloversals, since this discussion provides the backdrop for an overview of more recent developments in the field. The discipline seems to have shifted from an investigation of common cross-dialectal patterns based on "standardness" of varieties, i.e. nonstandard and standard varieties, towards one based on contact intensity, i.e. high-contact and low-contact varieties. Trudgill (2011) especially has argued that this is one of the more fruitful criteria according to which English varieties can be classified and has developed a typology ranging from high-contact to low-contact varieties. I particularly focus on this development here, because it reflects classification attempts of English-based varieties put forth in the literature, which allow me to contextualize and discuss BerE accordingly, in Section 2.2.2.

2.2.1 Universals and typologies of English(-based) varieties

Linguistic universals are features which are shared across languages or varieties: they are genuinely universal if they "do not govern language particulars, but capture fundamental and general properties of language and thus by definition apply to all languages" (Siemund 2009: 324; Szmrecsanyi & Kortmann 2009b). Different

4. In contemporary Bermuda, some of the more vernacular features of BerE are certainly stigmatized; many of my informants displayed language ideologies as outlined by Hall (2019: 225): "as in other sites of 'non-standard' English varieties, prescriptivist attitudes co-exist with feelings of dialect pride."

types of universals have been described, namely genuine universals, typoversals, phyloversals, areoversals, vernacular universals, "features that tend to recur in vernacular varieties of a specific language", and varioversals (Szmrecsanyi & Kortmann 2009b: 33, see 33–34 for definitions). I concentrate on vernacular universals and angloversals here, as these two types "try to capture phenomena relating to specific forms of language, namely non-standard spoken vernaculars" (Siemund 2013: 17–18), and reflect the focus of the present study.

Vernacular universals, a term introduced by and mainly associated with Chambers (2003, 2004, 2012; variably also called "vernacular roots"), refer to "a small number of phonological and grammatical processes recur[ring] in vernaculars wherever they are spoken" (Chambers 2004: 128–129). Examples of such universals include morpheme-final consonant cluster simplification, leveling of irregular verb forms, default singulars or subject-verb nonconcord, multiple negation or negative concord, and copula absence or deletion (Winford 2009: 208–209, drawing on Chambers 2004: 129; see also Filppula, Klemola & Paulasto 2009: 15). It is argued that diffusion processes cannot account for the ubiquity and universal spread of these features (Britain & Fox 2009: 177; Szmrecsanyi & Kortmann 2009b), since "they [make] an appearance in sociohistorically unrelated varieties […] [and] are thus to some extent independent of the varieties' sociohistorical backgrounds and of contact-induced change mechanisms" (Schreier 2009: 57). Based on such arguments, Chambers (2004: 128–129) maintains that vernacular universals must be innate or "natural outgrowths, so to speak, of the language faculty".

In comparison, angloversals are cited as an "example of a 'weaker' type of universal" by Filppula, Klemola and Paulasto (2009: 2). According to a definition put forth by Szmrecsanyi and Kortmann (2009a: 1647), the term refers to "features which tend to recur in varieties of English, be they L1 vernaculars, L2 vernaculars, or pidgins and creoles". While this definition does not correspond to Mair's definition (2003: 84; for a more detailed discussion, see Kortmann & Szmrecsanyi 2004; Szmrecsanyi & Kortmann 2009a; Davydova, Hilbert, Pietsch & Siemund 2011), I use the term in accordance with Kortmann and Szmrecsanyi in the following sections.

In their (2004) study, which is based on data from the *Handbook of Varieties of English* project and which focuses on presence or absence of 76 morphosyntatic features in 46 nonstandard varieties of English, Kortmann and Szmrecsanyi discuss potential angloversal candidates and provide a list of examples which have been "found in at least 75 per cent of all the varieties surveyed" (1154; see also Siemund 2013). While such high occurrence rates certainly speak for these particular features being widespread, they do not speak for them being universal, a point Szmrecsanyi and Kortmann also address in later studies (2009a, 2009b). In these studies, they (2009b: 37) do not report any feature to be "attested in each and

every variety sampled" and continue arguing that the features which are outlined to be vernacular universals could "be more appropriately considered areoversals precisely because of their preponderance in vernacular Englishes spoken in America". This illustrates that, while the comparative potential of features with such high occurrence rates is immense (which is of particular importance in the context of the present study; see below), a certain level of caution is necessary when using the term "universal" (Szmrecsanyi & Kortmann 2009b: 37; see also Kortmann & Szmrecsanyi 2004: 1156).

A number of additional aspects have also been criticized in connection to vernacular universals and angloversals, which need to be considered here (for a comprehensive overview of various points of criticism, see Siemund 2009 or Kortmann & Szmrecsanyi 2011). For one, Siemund (2009: 337) raises an issue specific to vernacular universals: namely that the features which are proposed to be vernacular universals by Chambers "are not specific to vernaculars". The phonological features for instance, such as CCR, "can most likely be found in all spoken registers" (Siemund 2009: 337). Secondly, it is again Siemund (2009: 336; compare also 2013: 6–7 and Davydova, Hilbert, Pietsch & Siemund 2011) who highlights an issue relevant to both vernacular universals and angloversals: namely the fact that "[c]oncentrating on phenomena that all varieties have in common […] may mask important details". Such details only emerge in more fine-grained feature analyses, as is suggested by Schreier (2009: 76) in his discussion of vernacular universals. Since both features which are subjected to quantitative analyses in the present study have been put forth as candidates of vernacular universals, this is a highly relevant point: because of the widespread nature of CCR and *be* leveling, I focus on such more fine-grained differences as much as possible within the scope of the analyses, so as to gain insights that are as diagnostic as possible in terms of aligning or differentiating BerE with or from other English(-based) varieties (Sections 5.3.1 and 5.3.2).

Adopting one of the more critical perspectives on these types of universals, Trudgill (2009, for instance) argues that the search for vernacular universals has not been successful, because not enough features with truly universal spread have been found (Trudgill 2009: 304–305; see also the discussion in Filppula, Klemola & Paulasto 2009: 14; or Schreier 2009: 76). Rather, he suggests a shift in perspective to account for typological similarities and differences across varieties: "[f]or him, the important distinction […] is not between standard and nonstandard varieties, but between high-contact (both standard and nonstandard) and low-contact varieties, such as Traditional Dialects of English" (Filppula, Klemola & Paulasto 2009: 14).

Trudgill further develops this argument in his (2011) book, where he argues that common processes of simplification (high-contact) or complexification (low-contact) may be observed in varieties with similar contact histories (Trudgill 2011: 20–24; see also Kortmann & Szmrecsanyi 2011; Schreier 2016a). Accordingly,

he suggests a classification of varieties based on contact intensity, a "sociolinguistic typology" of high- and low-contact varieties: the former includes transplanted L1 Englishes or colonial standards, language-shift Englishes, and Standard L1 varieties, and the latter "traditional, regional non-standard varieties with a long tradition of mother-tongue speakers (and natural transmission)" (Schreier 2016a: 140, who also lists examples of these varieties). This approach has also been subjected to criticism, for instance by Siemund (2013: 283–284) and Schreier (2016a: 153), who grants it "some synchronic validity", but simultaneously highlights that "there is strong evidence that [varieties] change across time and are subject to diachronic flexibility". Hence, a diachronic assessment of a specific variety's contact history may reveal phases of high and low contact, which may give rise to both simplification and complexification phenomena: one such variety is Tristan da Cunha English (TdCE; see Schreier 2016a: 153).

While the concepts of universals across languages or varieties are thus subject to a number of problematic issues which need to be considered in typological research of any kind, a combination of typological and variationist methods allows for important insights regarding shared features, common patterns and potential typological classifications of varieties of English (compare also Trudgill 2009: 319–320). With new conceptual tools designed to facilitate an assessment of not only presence or absence of features, but also their pervasiveness, such as Kortmann, Schneider, Burridge, Mesthrie and Upton's (2004) *A Handbook of Varieties of English*, Kortmann and Lunkenheimer's (2012) *Mouton World Atlas of Variation in English*, and the corresponding *eWave*, it has become possible to conduct comparative studies on a larger scale and shed light on cross-linguistic patterns across a wide range of varieties (Section 5.2.1).

2.2.2 How to classify Bermudian English?

In the following, I briefly review additional typologies and classifications of English varieties that have been outlined in the literature and discuss the status of BerE, so as to situate BerE within these existing models and so as to provide the backdrop for the results of the comparative typological analyses. Different classification criteria are addressed in turn: regionality or areality, historical developments or time depth, contact intensity and contact history, as well as mode of language acquisition or function (Siemund 2013: 6–7; Schreier 2009: 58–59).

To begin with, varieties may be grouped according to regionality or areality (Siemund 2009: 337), with different "levels" of regionality or areality coming into play: regional varieties, national varieties or multiple varieties clustered under an areal umbrella term. The varieties represented in the *eWave* are classified along

these lines (among others), for instance, into regional or national varieties, which in turn are grouped according to more wide-ranging areal dimensions (see the discussion in Section 5.2.1).

Also, varieties may be classified according to time depth, i.e. in terms of "colonial involvement and settlement history" (Schreier 2009: 58–59). Types of varieties which are of relevance here would be settler varieties, spoken "typically by European colonizing groups who migrate for political, economic, or religious reasons to geographically distant, often overseas, territories" (Schreier, Eberle & Perez 2017: 243), colonial varieties and post-colonial varieties, which also play an important role within the framework of New Englishes (for further details see, for instance, Siemund 2013; Schneider 2003, 2007; Mesthrie & Bhatt 2010; for a complication of the notion of "colonial" and "post-colonial" varieties, see Meyerhoff 2006b: 175).

In connection to time depth, contact intensity and contact history are also of relevance (Schreier 2009: 58–59). Varieties can be classified into low-contact varieties, high-contact varieties, pidgins and creoles, depending on whether their formation and subsequent development were influenced by dialect or language contact and whether koinéization or linguistic processes which characterize language contact situations were involved, "giv[ing] rise to pidgin and creole varieties" (Schreier 2009: 58–59). This is similar to Trudgill's approach outlined above and is also part of the *eWave* classification (see Section 5.2.1).

An integration of pidgins and creoles in such a classification, however, is a complex issue, as it resonates with an ongoing debate in pidgin and creole studies, centering around the question as to whether such varieties are to be considered dialects of their lexifier languages or individual languages with very specific contact and development histories (Siemund 2013: 10). More detailed discussions and overviews which focus on this issue can be found in Mufwene (2001) or Kortmann and Szmrecsanyi (2011), for instance.

Finally, the mode of language acquisition or function also allows for a classification of English varieties: into first language varieties (L1), which might be institutionalized (see Schreier 2009: 58–59), second language varieties (ESL), or foreign language varieties (EFL). For a more detailed discussion of characteristics, I refer the reader to Siemund (2009: 325) or Schreier (2014).

As has become evident even in this brief overview, the dimensions of each criterion are interdependent: time depth is closely related to contact history and to function of a variety in a given setting. Also, in some settings, a classification of a specific variety may not be straightforward: Kortmann and Szmrecsanyi (2004: 1184), for instance, discuss that classifications according to mode of language acquisition or function may be problematic as "there are no sharp dividing lines between [the] three categories [L1, L2, or Pidgins and Creoles in their discussion]". A discussion of BerE serves to exemplify the complexities at play.

In terms of regionality, it can be said that Bermuda's topographic setting delineates the speech community in such a way that immediate regional affiliation is one of the more straightforward criteria. The insular nature of the archipelago can be seen as a natural dialect boundary, as argued in a number of previous studies focusing on other island settings (compare, for instance, Schreier 2008).[5]

In terms of areality, however, I want to return to a point raised in Eberle and Schreier (2013: 301): namely our assessment that BerE "should, sociolinguistically speaking, be classified as a variety of Caribbean English". I am hesitant to continue arguing along these lines, as I have come to regard the areal umbrella term of "Caribbean English" as problematic in a number of ways, if it remains unspecified: it subsumes a highly diverse range of varieties under a simplified areal umbrella term and is too much of an abstraction away from a much more complex reality, considering the high levels of internal differentiation and variability evident in individual varieties (see also Siemund 2009: 355; Davydova, Hilbert, Pietsch & Siemund 2011: 293). Also, the Caribbean is notoriously difficult to demarcate as a region or area, as outlined in Myrick, Eberle, Schneier and Reaser (2019).

It is, however, safe to say that BerE is closely connected to various varieties spoken in the Caribbean, especially considering time depth and historical development. Indeed, BerE and many Caribbean varieties have formed in comparable sociohistorical and sociolinguistic contexts. Bahamian varieties, for instance, are prime candidates for comparison in this regard (Cutler, Hackert & Seymour 2006: 2066) and I return to this in the typological analyses in Section 5.2.

Regarding the other criteria discussed above, BerE can be further classified as one of the oldest nativized varieties of English (Chapter 3). It is an L1 variety, which is the only official language in Bermuda. Because dialect contact and mixture played a major role during BerE's formation phase and because cross-migration has continued throughout Bermuda's history, which has led to intense and prolonged contact within the wider geographical region (Section 3.2), it can also be labelled a high-contact variety. In this regard, however, it is necessary to consider the diachronic development of BerE as well as internal variability in as much detail as possible, as such classification attempts speak toward levels of homogeneity which mask additional layers of heterogeneity and complexity (see Section 3.2 and 5.2.1 for a more in-depth discussion of this).

At this point, I want to briefly address a final aspect, namely the fact that BerE can be further described as a lesser-known variety of English (LKVE; Schreier,

5. Considering the present focus on Bermudian mobility/ies and the historical, social and psychological particularities of the speech community and speakers in question, however, I would argue that this is a much more complicated issue in the present context and that the "insular nature" of Bermuda would warrant an in-depth discussion in its own right.

Trudgill, Schneider & Williams 2010; Williams, Schneider, Trudgill & Schreier 2015; Trudgill 2002). Even though such a description does not refer to a framework which allows a classification of separate "types" of varieties *per se*, the notion of LKVEs draws on many of the factors just outlined and describes a "fairly heterogeneous set of ignored varieties of English throughout the anglophone world" (Schreier, Trudgill, Schneider & Williams 2010: 3). The following characteristics of LKVEs, as outlined by Schreier, Trudgill, Schneider and Williams (2010: 4), can be said to apply for BerE too:

- it is spoken as a first language, in a setting where bi- or multilingualism is only marginal;
- it is "identified as distinct [variety] by [its] speech communit[y] and other groups in [its] social environment" (Schreier, Trudgill, Schneider & Williams 2010: 4);
- it is associated with a specific region;
- it was "originally transmitted by settler communities or adopted by newly-formed social communities that emerged early in the colonial era" (Schreier, Trudgill, Schneider & Williams 2010: 4) and derives from British input varieties;
- it was formed by dialect contact; and
- it "function[s] as identity [carrier] for [its] communit[y]" (arguably, to some degree at least; Schreier, Trudgill, Schneider & Williams 2010: 4).

The only two points that set BerE apart are that it is not spoken by a minority community or a community embedded into a larger one and that it is not an endangered variety.

In the context of the present study, ascribing BerE the status of a LKVE is insofar relevant as I agree with Schreier, Trudgill, Schneider and Williams' (2010: 3) argument that the under-representation of such LKVEs should be addressed, because "[they] are as much part of the big picture as major (or standard) varieties are, and their study contributes considerably to language diffusion and spread".[6] Especially this last point is of particular importance considering the Bermudian scenario and the analytical potential of BerE, as addressed in this book.

6. Though the distinction between "minor" and "major" varieties entails certain problematic inferences that warrant further discussion.

2.2.3 Space, spatiality, migration and mobility

While the present study and its research design rely in large parts on more classical dialectological, variationist and typological research paradigms as discussed above, additional frameworks are also of relevance in order to account for the particularities of the situation in Bermuda. Since Bermudian history and contemporary reality are so extensively characterized by migration, movement(s), and acts of mobility, theorizations of space, spatiality, migration, and mobility more generally and the framework of the sociolinguistics of mobility in particular are of prime relevance. I briefly review the theoretical context out of which this framework has emerged and discuss central tenets as well as linguistic consequences of increased levels of mobility, which will be revisited in connection to the Bermudian setting in Chapter 3.

Even though space is such an important dimension of research in traditional dialectology or the study of (geographical) variation, it has been undertheorized until relatively recently (Britain 2013b: 1, 2002b; since Britain is one of the researchers who have increasingly focused on such issues, the following overview is largely based on articles and sources published by him): "space has largely been treated as an empty stage on which sociolinguistic processes are enacted. It has been unexamined, untheorised and its role in shaping and being shaped by variation and change untested". This is not to say that space has not played any role at all, but rather that it has been treated in a somewhat unidimensional way, with less focus on social dimensions and with "few demands on social theory of any kind [being made]" (Britain 2013b: 2, see this article for a more in-depth discussion of the treatment of space in dialectology). This, Britain (2009b: 142–143) argues, has also been the case in early variationist sociolinguistics: "when [variationism] has engaged with space, it has tended to be a socially devoid, Euclidean, distance-is-all type of space".

Only more recent studies have begun to consider social dimensions and questions as to "how a richer, socially sensitive approach to space within the discipline can shed light on variation and change" (Britain 2009b: 148; compare also Higgins 2017). Such an approach involves engaging with newer theories of spatiality, a concept Britain (2010b: 72; italics in the original) defines as follows:

> *[s]patiality*, […] in the approach taken here, is a tridimensional realisation of space: the "consumption" of distance. It is at once physical (how far is it from Earth to the Moon?), social (the human mediation and manipulation of space […]) and psychological (our reactions to and interpretations of perceptions of physical and social spaces). (see also Massey 1984: 5)

Taking these aspects into account, both space and spatiality are "socially constructed" in a continuously evolving process (Allen, Massey & Cochrane 1998: 138, quoted in Britain 2009b: 147–148): hence, spatiality is not restricted to the purely physical, to measurable distance, but "recognizes that 'the fact that social processes take place over space and in a geographically-differentiated world affects their operation'" (Massey 1985: 16, quoted in Britain 2009b: 142–143). This is not to discard the physical dimension or to limit its importance (compare Britain 2013b: 2), but rather to develop a more multilayered understanding of dimensions of space that allow further insights into questions of linguistic relevance (see Britain 2010b: 73).

In the context of the present setting, this line of argumentation is especially relevant because the Bermudian community has been shaped and reshaped by continued cross-migration, acts of mobility, and contact up until the present day. Based on Britain's (2010b: 76) statement that "[a]ll interaction is spatialized", I consequently argue that the following dimension should not be ignored:

> [t]he coming together to engage in face-to-face interaction involves both movement through (socially created) space and the overcoming of "coupling" (constraints on people's abilities and resources to participate in face-to-face interaction) and "steering" or "authority" (the "volitional, normative and institutional channeling and regulation of activities [Carlstein 1978: 48]") constraints. (Britain 2010b: 76)

I attempt to take this into account by tracing dimensions that might play a role in spatialized interaction in Bermuda, so as to combine a more classical approach to language variation and change with such newer developments that have influenced variationist sociolinguistics. Because I agree with Britain's (2010b: 76) claims that we "need a sociolinguistic model which places interaction at the very center", especially considering the Bermudian setting, and that "linguistic change cannot be fully understood solely through an appreciation of the process of time, but must also factor in a sensitivity towards the process of space too" (Britain 2010b: 72), I give these issues prominence where possible in the chapters to follow.

In order to do so, theorizations of migration and mobility need to be considered. First, while an attempt at defining migration is problematic in some respects (see Kerswill 2006: 2273 for a more in-depth discussion), Kerswill (2006: 2272) highlights that "there is usually agreement on the parameters that must be examined in describing and categorizing cases of migration. These include:

- space
- time
- motivation
- [and] socio-cultural factors (Lewis 1982, 9–19; Boyle et al. 1998, 34–38)".

I particularly want to focus on the dimensions of space and time here.[7]

With regard to space, the concept of migration is often described in terms of crossing administrative boundaries, i.e. "as 'movement across the boundary of an areal unit'" (Boyle, Halfacree & Robinson 1998: 34, quoted in Kerswill 2006: 2273), or in terms of a local move, i.e. a "move within an areal unit" (Lewis 1982: 10, quoted in Kerswill 2006: 2273). This is reflected in the terminology used for people who migrate and who can be labelled as "in-migrants" and "out-migrants": "[a] move across a boundary within a country is termed internal migration, the people involved being in-migrants to the areal unit, those moving out of it (to whatever destination) being out-migrants" (Kerswill 2006: 2273, drawing on Boyle, Halfacree & Robinson 1998: 34–35). It is noteworthy here that the notion of space invoked in this context is reminiscent of the more unidimensional notion of Euclidian space discussed above, in its reliance on distance and direction for definitional purposes (see also Kerswill 2006: 2274).

With regard to time, then, "'[m]igration' implies a degree of permanence in the move" (Kerswill 2006: 2275). While such a definition and the notion of permanence are also problematic in a number of ways, four temporal categories have been put forth in the literature, as outlined by Kerswill (2006: 2275; see Kerswill 2006 for a comprehensive discussion of problematic aspects): "daily, periodic, seasonal and long term (Gould & Prothero 1975, cited in Lewis 1982, 17–18). Daily movements include commuting, while the latter three categories involve overnight stays". In my attempt to differentiate between migration and mobility in the present study, I draw on this dimension and the degree of permanence in the move, yet slightly diverge from these categorizations, as I discuss daily movements not in terms of migration, but in terms of short-term acts of mobility (see below and Chapter 4 for a more detailed overview).

From a sociolinguistic perspective, Kerswill (2006: 2273) argues that "the distinction between moves within and across administrative boundaries within a state is of little consequence except insofar as the boundaries reflect, or in some cases shape, different allegiances". This is relevant in the present context, because few informants have not moved parishes, which would represent administrative boundaries in Bermuda. I would argue, however, that not all of these boundaries reflect or shape allegiances to the same degree: taking statements of my informants into account, the boundaries of parishes such as St. George's seem to do so quite strongly (especially St. Davids, see Chapter 3), whereas those of Pembroke and Devonshire, for instance, do not. According to Kerswill (2006: 2274), a more

7. Due to the present study's focus, I concentrate on these dimensions, which is by no means intended to diminish the relevance of, for instance, forced migration in the Bermudian context (for a more detailed discussion, see Kerswill 2006: 2277).

important parameter is "that of in- vs. out-migration, since these alter the demographic balance of the location under scrutiny in terms of age, socio-economic class, ethnicity, other socio-cultural factors and language" for longer periods of time. For this reason, and to address the interplay of the factors listed, I outline cross-migration patterns in more detail in Chapter 3 and further discuss their relevance in terms of the sociohistorical and sociolinguistic development of the setting and variety under analysis.

Second, similar to migration, mobility can be conceptualized according to different geographical and social dimensions, which are interdependent in many respects. For example, focus can lie on

1. intra- or international mobility: here, the crossing of national boundaries plays a role, similarly as discussed above in connection to migration (note that intra-national mobility would be more "mundane" than international mobility, following Britain's terminology [see 2013c: 168, for instance]);
2. intra- or inter-regional mobility: this is a further sub-division of intra- or international mobility (see Britain 2009b: 152);
3. short- or long-distance mobility (with distance being very much connected to national boundaries or the crossing of national boundaries, i.e. the first point): what constitutes short- or long-distance mobility may vary depending on conceptualizations of said distance, space and spatiality in given locales (see Britain 2013c: 168); as well as
4. social mobility.

Especially this last dimension is crucial considering factors that play a role in prompting migration (if we think of push and pull factors that motivate people to move; for a discussion see Schreier, Eberle & Perez 2017).

Two points need addressing here as they play into social mobility: social mobility can, firstly, refer to an "individual's categorical movement up or down the scale of socioeconomic classes" (Sheller 2011: 1). The goal of moving up this scale plays an important role in people's motivations to be mobile, quite generally, as it is one of the factors prompting people to move. Secondly, and crucially in the present context, (access to) mobility is socially stratified and "differentiated: 'the suggestion of free and equal mobility is … a deception, since we don't all have the same access to the road'" (Wolff 1993: 253, quoted in Britain 2013b: 18–19). The fact that mobility and acts of mobility "[occur] at different and uneven rates and intensities" (Britain 2013a: 215) affects population groups and individuals in diverse ways and, accordingly, has an impact on linguistic outcomes in equally diverse ways (Britain 2013b: 18–19).

As a consequence, Britain (2013c: 172) highlights that an assessment of agency, i.e. who engages in such mobilities, is of paramount importance. In Bermuda,

almost everybody I met is intensely mobile, especially in terms of short-distance, intra-national acts of mobility. The only potential exceptions I know of would be a number of elderly Bermudians, who live a more sedentary life because of their age (which is not to say that they were not mobile during their younger years, of course). Long-distance, international mobility is still very much socially stratified, however, especially in an educational context, as it is only accessible to people from higher social classes. I re-address this in as much detail as possible throughout the following chapters and especially in Chapter 3, drawing on such an assessment of acts of mobility and agents involved in these acts of mobility, because I agree with Britain (2013b: 20, drawing on Giesbers 2008 & de Vriend; Giesbers, van Hout & ten Bosch 2008) that it is necessary "to understand how people in the area move and have moved, the social meaning of that movement and how the mobile practices of the past help shape those of later times".

2.2.4 The sociolinguistics of mobility

Because of recent developments towards unprecedented levels of global mobility, researchers of different social science traditions "have been trying to fully come to terms with the implications of the mobile reality" (Britain 2013b: 15–16) that can be witnessed in today's globalized world. As a consequence, questions as to "how mobilities have been theorized and how they can be placed more centrally in the social science enterprise" (Britain 2013b: 15–16) have increasingly been focused on, in sociolinguistics with the emergence of the sociolinguistics of mobility as a theoretical framework (see, for instance, Britain 2010b, 2013a, b, and c; Chambers 2002). With the brief discussion of migration and mobility as backdrop, I review a number of key points which are outlined within this framework and which are relevant for the present study as well as linguistic outcomes which result from changing mobility/ies in people's everyday lives in the following section.

As has become evident above, mobility has been considered in a number of ways in dialectological and variationist sociolinguistic research to date. Britain (2006: 113) summarizes, for instance, that "much of the work on mobility-triggered dialect contact" – i.e. much of the work that I have reviewed in Section 2.1 above, as this form of contact is of particular relevance in the Bermudian setting – "aims to piece together both the social and linguistic characteristics of mobile peoples from previous centuries […], as well as the contact ecologies of their coming together many thousands of miles from where they set off". Such studies, however, have "tended to focus on (usually one-off) major life-changing forms of both voluntary and involuntary mobility" (Britain 2013c: 167, see also Britain 2010b: 87). While they thus provide a rich body of literature to investigate the distinctive linguistic ramifications of contact in such scenarios, such a focus has also meant that

"everyday mundane mobilities of human routine behaviour" (Britain 2013b: 17–18) and linguistic ramifications of contact in scenarios where such forms of mobilities are characteristic have not been investigated as extensively (as of yet).

Since it is exactly these more mundane mobilities which have dramatically increased in frequency and intensity in recent decades, Britain (2013c: 168, 2012b) argues that they have to be considered in linguistic research as well, because of "their scale, intensity and pervasiveness at the level of the community as a whole" and because of their "potential to trigger language change". Linguistic ramifications are considerable indeed when people interact "utterly routinely as part of [their] day-to-day lives" (Britain 2013a: 210), as, for instance, routine accommodation may become the norm, with a number of effects on speakers' linguistic behaviour, practices, and repertoires. One of these ramifications, which is of particular relevance in the present context, might be local dialect forms "losing ground to forms found across a wider geographical area" (Britain 2012a: 231).

One outcome of this "losing ground" might be a process that is variably referred to as "supra-localization", "regional dialect leveling" or "supraregionalization" (Milroy, Milroy & Hartley 1994; Kerswill 2003; and Hickey 2003a, respectively; all quoted in Britain 2013a: 213; compare also Chambers 2002: 117; Johnstone, Andrus & Danielson 2006: 79; Kerswill 2006): i.e. "highly local dialect forms [beginning] to be eroded, levelled away in favour of forms fulfilling the need for greater geographical scope" (Britain 2013a: 213, 2010a). In the present study, I adopt the term "dialect supra-localization", because I have used "regional dialect leveling" in more general contexts throughout Section 2.1, and follow Kerswill and Williams (2005: 1046), who use the term to refer to "the formation of leveled, 'supralocal' varieties, with few local differences within a region, resulting from social changes, particularly the increases in mobility".

In Hickey's (2003b, see also 2012) discussion of dialect supra-localization ("supraregionalization", in his terms), a number of important aspects are highlighted. First, stigma may be attached "to features which [are not] incorporated into the supraregional variety" (Hickey 2003b: 360), so that (non-)incorporation might have consequences with regard to the levels of prestige associated with certain local dialect features. Second, a supra-local variety may function in different ways: for instance, it may be used to "avoid the unwanted association of being too regionally bound", but also to "[delimit] a group or community from another much larger one", because some local dialect forms are nonetheless retained (Hickey 2003b: 368). Especially this latter point suggests that supra-local varieties "still fulfill an important identification function for their speakers" (Hickey 2003b: 372). Finally, the process of dialect supra-localization can be observed only after a variety has focused: "it cannot be seen in varieties which as yet have not achieved a clear linguistic profile" (Hickey 2003b: 371).

While dialect supra-localization was first observed by Milroy, Milroy and Hartley (1994, as discussed in Britain 2013c: 178), Britain (2009b: 152) lists a number of sources that have since provided "a good deal of variationist evidence that intra-regional mobility is breaking down local varieties […] in favor of larger supra-local ones, creating a smaller number of geographically expansive regiolects". Similar developments have also been identified in a number of studies that focus on settings across Europe, a list of which can be found in his (2010b: 80) article. In how far the present study points to such evidence being found in Bermuda as well is addressed in Chapters 5 and 6.

At this point, a fundamental question that remains, however, is how to integrate the concept, dimensions and patterns of mobility as well as individual mobility/ies into the theoretical framework of the present study: Cresswell (2006: 28, quoted in Britain 2013b: 18–19) stresses an important point in highlighting "that even 'when mobility has been at the center of geographical attention, it has been conceptualized through the lens of fixity as an ideal'". Such a lens of fixity is also evident in many existing studies within variationist sociolinguistics, as discussed above, and undoubtedly also in the present study, which has been developed based on more classic research traditions: this study too addresses "an idealised focused output of contact induced koineisation", "prioritise[s] optimal recording conditions over capturing human interaction in all its different mobile forms" and, to some degree at least, "analyse[s] [the] informants as 'representing' a place or geographically circumscribed group, rather than as speakers who, in 'being human,' move between important 'moorings' such as home, work, […] the local store […], and so on" (Britain 2013b: 18–19). I am aware of especially this last point and attempt to problematize such an idealization of fixity by tracing patterns of mobility where possible in the historical profile, by integrating insights of this historical profile into the discussion of the qualitative findings as well as by including individual levels of mobility/ies of informants in the methodological framework of the quantitative analyses, detailed in Chapter 4 and Section 5.3. Because contemporary Bermudian society is so effectively characterized by people on the move (Chapter 3), I argue that it would prove a significant oversight not to include such dimensions and patterns of mobility and individual mobility/ies of Bermudians as a factor of language variation and change as well as language practice and use in Bermuda.

2.3 Synthesis

As has become evident from this outline of the present study's theoretical backdrop, "the diachronic and synchronic development of a contact-derived variety" – such as BerE –

> depends on the interplay of linguistic, sociolinguistic, sociopsychological and demographic factors. As each contact setting has its own history, interaction of all these factors is multifaceted and in each case individual; their combination ultimately accounts for the linguistic outcome of language/dialect transplantation and contact. (Schreier 2008: 65)

For these reasons, I attempt to (1) reconstruct the formation period of BerE in as much detail as possible in order to (2) trace the historical development of the variety so as to account for potential typological relationships with varieties in the wider geographical region. I extensively focus on the formation phase, take the founding population and founder principle into consideration, and trace influences which must have played a role in the Bermudian contact ecology, as this sheds light on the evolution of the contact-derived variety that has emerged and on potential input varieties (Chapter 3).

Also, reconstructing the formation period and tracing typological relationships and structural affiliations may speak towards potentially shared development histories of BerE and other varieties. This approach echoes an argument put forth by Trudgill regarding the theoretical potential of his three-stage model of new-dialect formation, where a reconstruction of underlying, shared developmental processes in various Southern hemisphere varieties is used to account for noticeable similarities and differences in the linguistic make-up of these varieties. This is of course not to say that typological relationships are solely the result of shared development and contact histories of the varieties which are compared (see Section 5.2), but to account for a potential historical connection that can shed light on patterns of language diffusion which might be reflected in present-day structural affiliations.

As discussed above, the description and analysis of factors involved in language variation and change in BerE here is strongly relying on the more classical methods and theoretical approaches of variationist sociolinguistics; however, I want to move beyond these in taking more recent theorizations of space, spatiality, migration and mobility into account as well. Especially Britain's (2010b: 72) point that "[linguistic change] must also factor in a sensitivity towards the process of space too" is of relevance in this context: such a sensitivity is called for here, because of the importance of migration and mobility in Bermuda. The interplay between space/spatiality, time and other social factors, a conceptualization of space in its social context, as well as an integration of dimensions and patterns of mobility in the underlying sociolinguistic methodology need to be considered, in order to account for the idiosyncrasies that characterize the Bermudian speech community.

CHAPTER 3

Bermuda

400 years of history

The discussion of Bermuda's historical development and diverse societal structure, which provides the context for the historical and cross-dialectal profiles as well as the feature analyses, can be structured according to five time periods – the pre-settlement, settlement and colonization years; the "post-crown colony" period from 1684 onwards, and the Bermudian maritime age; the 19th century; the 20th century, with the rise of tourism and both World Wars; as well as contemporary Bermuda –, because Bermuda can be described to

> [reinvent] itself each century. The agricultural company colony developed into an eighteenth-century maritime hub, a fortified British imperial naval stronghold, a popular twentieth-century tourist destination, and presently is a major global offshore financial center. (Jarvis 2010a: 460)

For reasons outlined above, Section 3.1.2 is especially detailed in its focus on the Bermudian maritime age, relying largely on Jarvis' (2010a) book discussing the same time period. Shifts in the colony's economic focus, relations to locales in the wider geographical region and cross-migration patterns as well as increasing Atlantic mobility are outlined in as much detail as possible to account for the present study's focus on Bermudian contacts and mobility/ies. I further rely on Jarvis' (2010a: 7) approach in terms of slavery: slavery and its ramifications are not reviewed in isolation, but integrated at various points throughout the chapter, because of their importance in numerous contexts. I concentrate on aspects directly relevant for the present study, however, and refer the reader to Bernhard's (1999, 1985, 1988) texts, for instance, for more in-depth discussions.

3.1 The Bermudian social history: From shore to shore

Bermuda is an archipelago which consists of approximately 138 islands and lies in the middle of the North Atlantic Ocean, 570 miles from the geographically closest point: Cape Hatteras in North Carolina (see Map 1).

Map 1. Bermuda's location (Source: CIA World Factbook; <https://www.cia.gov/library/publications/the-world-factbook/graphics/locator/noa/bd_large_locator.gif>, 28 December 2015)

The seven main islands form a land area of approximately 20 square miles (rarely more than a mile wide; Bernhard 1999: 13) and the territory is divided into nine parishes: Devonshire, Hamilton, Paget, Pembroke (where Hamilton, the capital, lies), St. George's, Sandys, Smith's, Southampton, and Warwick. While Bermuda is still a British overseas territory and the head of state Queen Elizabeth II, represented by a Governor (for details, see CIA World Factbook), it is self-governed.

As of July 2020, an estimated 71,750 people live in the nine parishes (CIA World Factbook). Considering the available land area, Bermuda is densely populated (compare Baldacchino 2007: 12; Bermuda figures on his list of the most densely populated bounded territories). According to the CIA World Factbook, 100 percent of the total population live in an urban/urbanized environment; undeveloped space has indeed become somewhat of a luxury. Also, signs of suburban development can be seen, similarly as Barker (2011: 36) describes in the Caribbean: for instance "upscale housing for the affluent middle classes, which has spread to the [areas] overlooking the old colonial towns and contributed to urban sprawl".

The degree of urbanization in Bermuda, however, needs to be assessed in a more differentiated manner. The archipelago cannot be described as urban as a

metropolitan space like Singapore, for example, which displays the same percentage of urban population as Bermuda in the World Factbook. Bermuda's main urban area, Hamilton, is extremely small by comparison, with approximately 10,000 people living in town and its surrounding neighborhoods (compare also Barker 2011). It is not characterized by conspicuously urban architecture like skyscrapers, which remain a rare sight in the cityscape.

Also, there are still some corners in Bermuda that allow for privacy and that are less developed than other areas; some houses are even situated on smaller islands off the seven main islands. Such traces of a more rural character are further evident in the settlement structure of some of the more affluent areas, where interspersed houses and open space can still be seen (see Picture 1 for an impression), and in dense network ties throughout some of the parishes (which I address in more detail below). Nonetheless, population density and a lack of (affordable) space are some of the main characteristics of contemporary Bermuda (see also Section 3.1.5).

Picture 1. A panoramic shot of the Bermudian landscape, illustrating the state of development

3.1.1 The beginnings of settlement and the early years

The available land area is but one factor of Bermuda's archipelagic nature that has influenced the colony's development since discovery. Another is its dependence on the sea: "Bermuda ha[s] always been a maritime place, in the sense that the sea profoundly shaped island life" (Jarvis 2010a: 62).

While the exact date of discovery is not known, sources agree that the archipelago was discovered sometime between 1508 and 1511 (see for instance Zuill 1983: 3). Because no seafaring nation had any interest "in colonizing so small a place" (Bernhard 1999: 2), however, none claimed the territory immediately after discovery, even when maritime activities throughout the Atlantic increased. Bermuda had a predominantly negative reputation at that time, as storms and extensive coral reefs posed threats for passing ships and many vessels wrecked on its shores. This led sailors to fear the waters and to refer to Bermuda as *Ya de demonios*, the "Isle of devils" (Greene 1901: 222; see also Zuill 1983: 5). Thus, when

crossing the Atlantic, ship navigators used Bermuda's location as a landmark to avoid in order to guarantee safe passage, but also as a landmark to determine their ship's position or initiate a change in course towards their destination (Greene 1901: 222).

In 1609, it was one of these many shipwrecks, namely the wreck of the British *Sea Venture*, which led to colonization. Originally part of a fleet of three ships that had set out to transport supplies to colonies in Virginia, the *Sea Venture*, under the command of Sir George Somers, had lost the other ships of her convoy during a storm, been driven towards Bermuda and set aground on the coral reefs. When everyone on board got safely to shore, the sailors and passengers found that the islands defied their expectations of an evil and enchanted "Isle of Devils". Rather, Bermuda proved to be a hospitable place, with a mild climate and abundant natural supplies and resources. The passengers and crewmembers lived on island for nine months, salvaged the wreck of the *Sea Venture*, built a new ship called the *Deliverance*, and finally continued their voyage towards their original destination (see Greene 1901; Zuill 1983; or Jourdain, quoted in Graff & Phelan 2000: 124). Three men stayed behind; these three were the first permanent inhabitants and their staying behind marked the beginning of continuous settlement in Bermuda.

The colony's official founding year, however, is not 1609, but 1612, which makes Bermuda one of the oldest colonies within the British colonization context (see Jarvis 2010a: 5; compare also Bernhard 1985, 1999). This marks the point in time when the ship *Plough* brought the first larger number of approximately 60 settlers and the appointed governor over from England (compare Bernhard 1985: 57, 1999: 3; Zuill 1983: 51). After this first dispatch of settlers, the number of new arrivals continuously grew: within three years, the Virginia Company had sent six hundred more (Jarvis 2010a: 17). In 1615, "[a] separate joint-stock venture, the Somer Island Company […] assume[d] administration of the colony" and, during the next seven years, another substantial number of settlers was sent (Jarvis 2002: 588 mentions another thousand people).

Since the land available for cultivation was scarce, however, Richard Norwood was commissioned to survey the islands in 1615 and 1617, where he divided the land area into "tribes" (Bernhard 1985: 58) and identified shares which were allocated to investors or tenants (Zuill 1983: 76; see also Jarvis 2010a). Thus, "[a] mere five years after formal colonization began, every square inch of territory had been mapped and deeded over for public or private use" (Jarvis 2010a: 34). The colony rapidly developed and "in the decade after 1615, […] began to manifest a dense settlement pattern in which compact family farms predominated" (Jarvis 2010a: 23).

During these early years, Bermuda was a relatively stable and safe colony compared to others. The islands were *tabula rasa* territory and uninhabited prior to

colonization, so that the initial settler population did not move into or forcefully annex another group's territory (Thomason 2001a, 2001b; compare also Schreier, Eberle & Perez 2017). This "allowed [the settlers] to immediately begin clearing and farming the land" upon arrival (Jarvis 2010a: 17). The islands' ecosystem and climate made it possible to grow crops year-round, which provided ample supplies: starvation was not as immediate a threat as in colonies on the American mainland, for example (compare Jarvis 2010a: 33, for a more in-depth discussion of settler survival rates and conditions in Bermuda and Jamestown). This certainly contributed to Bermuda's rapid development and increase in settler numbers and is of relevance in terms of new-dialect formation, as discussed below.

Another factor that also had an impact on this increase in settler numbers is the importation of enslaved and indentured people, who were brought to Bermuda already from a very early date onwards, to complement the work force. The first black and native American (Indian) men and women arrived on the ship *Edwin* in 1616 (Zuill 1983: 51; Bernhard 1985: 63), three years earlier than in Virginia (Jarvis 2010a: 27). Bermuda was thus the "first English colony to import African labor [and] England's first multiracial colonial society" (Jarvis 2010a: 29, 2002: 588). The enslaved people "were subject to the control of company officials and landlords' […] local agents" and must have worked alongside indentured white servants and tenants who were controlled by the same authorities (Jarvis 2010a: 30). Thus, a community of enslaved and indentured people – deprived of their freedom – developed alongside the settler community, which meant that linguistic influences from a second principal population group would also be present in Bermuda from such an early date onwards (see Section 3.2).

Sources or records that provide detailed information considering the lives of enslaved people during these early years are scarce, however. Because the enslaved people in Bermuda hardly lived on their own, but with their white owner families (Jarvis 2002: 610), it is almost impossible to deduce facts about demographics, origins or the environment in which they lived – beyond sheer numbers. Insights that can be inferred, however, include the following: firstly, according to 1620 records discussed by Jarvis (2010a: 29), many enslaved people were women. Secondly, the enslaved people in Bermuda married, had children and formed families more commonly than in other colonies at the time: "[i]n contrast to the black populations of most other English colonies, Bermuda's seems to have been demographically stable (births equaling or exceeding deaths) and expansive from the start" (Jarvis 2010a: 29). Consequently, the Bermudian enslaved population also grew in numbers, which led to the emergence of a more tight-knit enslaved population than in other settings by the end of the 17th century (Jarvis 2002: 602; Bernhard 1999: 200). Because of this, comparatively few other enslaved people were brought to Bermuda at later stages (see also Jarvis 2002: 590).

With regard to origins, there seems to be consensus in the literature that most of the enslaved African people in Bermuda did not come directly from Africa (Bernhard 1999: 83). A certain – but small – number "could well have been Africans taken […] from West Africa by Spanish or Portuguese traders and later captured at sea by English or Dutch privateers" (Bernhard 1999: 23), yet it is difficult to trace how numerous this group might have been (Jarvis 2010a: 27 is one of the few who provides some exact numbers, when he mentions 29 Angolan Africans who were brought to Bermuda within the first five years after 1616). A group of people that Bernhard (1999: 23) refers to as "Atlantic creoles" is important in this context, since

> [s]ome of the blacks brought to Bermuda in the 1620s may have been [such] "Atlantic creoles", Africans who had developed a knowledge of trade and language skills from years of contact with Europeans in the coastal towns along Africa's west coast.

Most of the enslaved African people, however, seem to have been transported to Bermuda by English ships that had come via the Caribbean and had taken enslaved people in raids of Spanish locales (see Jarvis 2002: 588; Bernhard 1985: 63). As a consequence, the enslaved African population in Bermuda is generally described as more "acculturated" in the literature (Bernhard 1999). In contrast, the origins of the enslaved Native American population seem to be clearer: "[m]embers of the Pequot, Mohican, Wampanoag, and Narrangsett tribes from New England are the most likely to have been brought to Bermuda" (Bernhard 1999: 114).

The surviving sources or records also make it difficult to trace the exact origins and migratory movements of the British settler population and hence establish geographical links to the British mainland, because they are fragmented, incomplete and at times too unreliable for the present purpose (see Games 1997: 70, for instance, who describes that emigrants from Britain were not registered when leaving their places of origin). Only a number of clues can be gained from the documents that have survived and their discussion in the literature. First of all, anecdotal evidence cited by Ayres (1933) suggests that most of the early Bermudian settlers originated from London and Eastern Counties of London. Secondly, a statement in Jarvis (2010a: 40) allows insights into population demographics:

> Bermuda's early emigrants came from a broad cross-section of England. During the first decades of settlement, former dairymen and herders from the West Country mingled with Midlands and Yorkshire yeomen and urban weavers, tailors, shoemakers, and other craftsmen […].

Thirdly, it is more than likely that Jamestown and Bermuda (and other early colonies for that matter) "drew from the same pool of potential English emigrants, and [that] many of the ships that transported settlers to Jamestown also transported

settlers to Bermuda" (Jarvis 2010a: 32). Thus, the demographics of these early colonies must have been very similar. I revisit these aspects in the discussion of the formation phase of BerE in Section 3.2.

One of the few surviving records that documents more general British migratory movements during the 17th century provides further clues which are also of relevance regarding the Bermudian context. In Games' (1997: 51) discussion of the 1635 London Port Register, the trends discussed above are confirmed: the Register lists 218 people traveling to Bermuda in 1635, but their exact origins are not included. The emigrants came from diverse geographical backgrounds and passed through London: "London functioned as a filter for population moving into the city from all over England, and out of the city on ships" (Games 1997: 48). This echoes Ayres' (1933) statement above, but of course further masks emigrants' exact origins, which must have included Welsh, Scottish, or Irish locales: "[a] fact [that further] attests to the mobile nature of England's population" at that time (Games 1997: 58).

Regarding demographics, the Register suggests that an overwhelming majority of the travelers to the colonies were male and very young (see Table 2 in Games 1997: 53):

> [w]hat the overall data for the colonial voyagers attest to are youth. Most were concentrated between the ages of 15 and 24, with 59% of the passengers in this age category […]. Age profiles and sex ratios […] intimate that the bulk of voyagers in 1635 […] were precisely those most likely to be roaming England in search of employment. (Games 1997: 56; see also Games 2006a, 2006b for further discussions of transatlantic connections)

Based on Games' discussion of this particular historical document and based on the clues mentioned above, it can thus be inferred that emigrants traveling to all colonial destinations (including Bermuda) must have been mobile within Britain to a large degree and must have formed a heterogeneous group, combining different geographical, social, and economic backgrounds – a socio-demographic heterogeneity also outlined by Jarvis, noted above.

During these early years, Bermuda developed in a similar way as other British colonies, with an "agrarian economy based on tobacco cultivation" (Jarvis 2010a: 7). However, while vast landmasses were claimed, often through the use of force, for plantations in colonies on the American mainland and in selected Caribbean locales, land and crop sizes were limited in Bermuda. Consequently, land owning had to be regulated, according to the shares identified by Norwood (see also Bernhard 1999: 6, for instance). Additionally, conditions for agricultural endeavors were both promising and challenging: the Gulf Stream lead to a mild climate throughout the year, despite Bermuda's geographical latitude, and the soil was fertile, but also porous. No fresh water supplies exist in the islands and hurricanes posed a recurring

threat for crops. These aspects and "[t]he decline of tobacco, the rise of alternative enterprises, and the colony's distinct demography […] prevented a plantation system from developing in Bermuda" (Jarvis 2010a: 43).

By 1625, the islands had been surveyed, shares assigned, and private land established (Jarvis 2010a: 23). Bermuda quickly became crowded (Bernhard 1999: 103; see Table 1 for an overview of population numbers until roughly a century after colonization), with multiple consequences:

Table 1. Population numbers in Bermuda, from the colony's establishment to the beginning of the 18th century[a]

Year	Number of inhabitants	Number of enslaved people	Source and comment
1622	806	not specified	Bernhard (1985: 66)
1625	~1,500	not specified	Jarvis (2010a: 33)
1650s	~3,000	not specified	Bernhard (2010: 678); multiethnic society
1670s	~6,000	1,500 blacks	Bernhard (1999: 66)
1691	6,248	1,917 blacks	Bernhard (1999: 98)
1698	5,862	2,247 blacks	Bernhard (1985: 63)
1727	8,947	3,877; not specified according to ethnicity	Jarvis (2010a: 262)

[a] As with any classification along ethnic lines, it remains unclear who is counted as black and white in these sources (see also the discussion in Chapter 4); nevertheless the numbers listed provide a general idea regarding demographics

Firstly, since the settler and enslaved populations were "naturally increasing[,] [they] supplied most of the colony's labor needs" (Jarvis 2010a: 35). Immigration levels decreased between 1625 and 1684, and especially English immigration almost came to a stop.

Secondly, the settlers and enslaved people who were already in Bermuda lived in close proximity. They shared households and some of the tasks they had to complete (Jarvis 2010a: 32; Bernhard 1999: 44). Daily interaction between the two population groups was thus more common than elsewhere, a fact that is of importance for the formation of BerE (see below). Jarvis' (2010a: 29) description of the situation provides a succinct overview of the colony's state in 1620: the islands, up to this point,

> had become home to Europeans (mostly English, but there were Welsh, Dutch, and French settlers as well), Africans (and Hispanic American men and women of African descent), and native Americans from the Caribbean and Chesapeake. By 1620, the nonwhite population of Bermuda was both sizable and dispersed enough to ensure that white, black, and Indian residents regularly interacted with each

> other. And though English immigration virtually ceased by the mid 1620s after all the colony's available land became occupied, privateers calling at the island brought a steady trickle of black and Indian newcomers throughout the mid-seventeenth century.

Thirdly, because of this dense settlement structure, emigration levels started to increase from mid-century onwards. Many settlers chose to re-migrate to various places in the wider geographical region and Bermudian emigrants were among the founding population in many locales where British settlements were newly established (see Jarvis 2002: 591; Games 1997: 59). Two examples are Eleuthera and New Providence in the Bahamas, where settlements were founded in 1648 and 1666, respectively (see Hackert 2012, or Holm 1986), as well as Grand Turk in the Turks and Caicos Islands (see Cutler 2003). Accordingly, Jarvis (2010a: 5) argues that "the expansion of English America and the spread of Bermudians were linked" to some degree, a point I revisit below.

Because of the islands' position, however, these single acts of migration were by no means the only acts of mobility during the Company period. The colony had to rely on maritime connections and had established commercial links already at that time: to England, "from whence settlers came and tobacco went", and especially to America, which "loomed largest in Bermuda's development and Bermudians' mentality as a source of plants, Indian and Hispanic slaves, and English colonial traders and a destination for island-produced goods and thousands of Bermudian emigrants" (Jarvis 2010a: 62). While tobacco cultivation was the main staple of Bermuda's economy, trading was also vital, even though Bermudians mainly traded with visiting ships at this early stage, rather than engaging in large-scale trade ventures themselves. This limited, but steady form of trade "simultaneously cushioned the effects of continued tobacco price fluctuations, further encouraged agricultural pursuits, and established commercial and communication ties with each new North American and Caribbean colony that England founded" (Jarvis 2010a: 43). Hence, already during the Company period, the Bermudian network and presence within the Atlantic and Caribbean intensified.

While many Bermudians, as a consequence, started to make use of these ties and wanted to turn towards maritime trade for economic sustenance, the Somers Islands Company tried to uphold the colony's agricultural focus. The fact that many Bermudians oriented towards America especially alarmed the Company, as, "[o]ver time, Bermuda's multiplying American connections eclipsed those with England" (Jarvis 2010a: 62–63). Attempts at regulating and restricting trade as well as isolating an archipelago that was increasingly connected and strategically situated within the North Atlantic proved unsuccessful, however: "[i]n essence, the company tried to defy both maritime geography and colonial demography in closing off a centrally

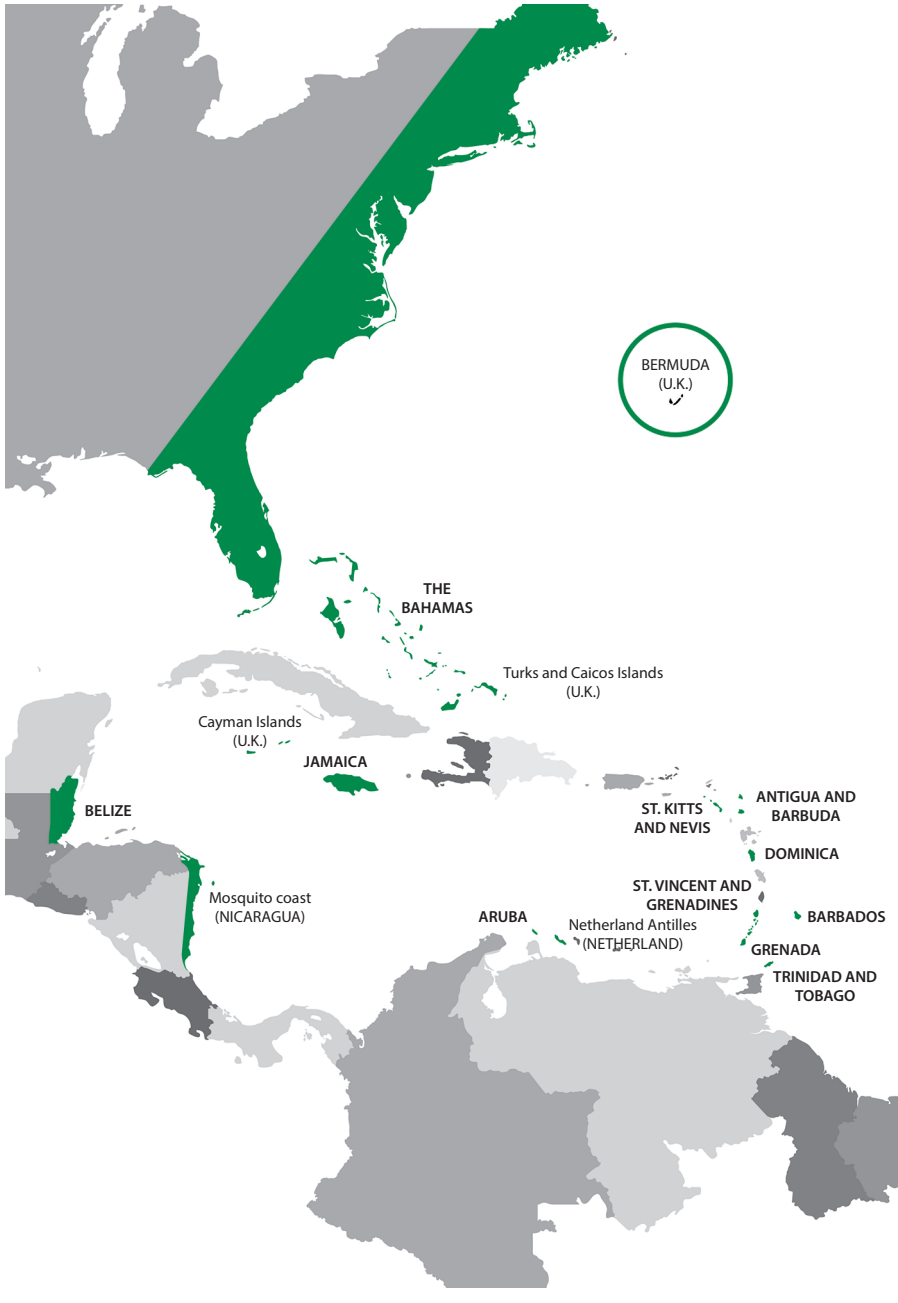
situated island overflowing with people" (Jarvis 2010a: 62–63). Ultimately, when the Somers Islands Company lost its claim on Bermuda in 1684 and the islands became a royal colony, the restrictions set in place began to be disregarded by Bermudians, who "abandoned tobacco agriculture and took to the sea in pursuit of commerce" (Jarvis 2002: 592; compare also Bernhard 1999: 177).

3.1.2 Navigating the waters during Bermuda's maritime age

While some trade routes had already been established in the mid-17th century, for instance to Massachusetts, Virginia, the Bahamas, Barbados, and the New Netherlands (among others, compare Jarvis 2010a: 42–43, 49), the colony's economic focus shifted to maritime pursuits from the beginning of the 18th century onwards. Turning to such enterprises as fishing, whaling, wrecking, privateering, and salt raking, as well as focusing on maritime trade, Bermudians expanded their fleet, which comprised between 60 and 150 vessels (Jarvis 2010a). "Most were owned by island families who pooled their various resources to build and operate them" (Jarvis 2010b: 83) and most sailors who manned them were island-born (Jarvis 2010a: 145). As a consequence, the levels of maritime mobility in Bermuda sky-rocketed: "[b]y 1700, the new maritime economy had radically expanded most Bermudians' world well beyond the island's rocky shores" (Jarvis 2010a: 7). This shift in economic focus had a decisive impact on the colony's communal and societal structure; Jarvis (2002: 592) even calls it a "maritime revolution".

At that time, Bermuda's position marked a "navigational crossroads" (Jarvis 2010a: 2–4, 2002: 587) with regard to British locales in the region and their alignment along the American coast as well as in the Caribbean. Lying at the center of almost every major shipping lane throughout the North Atlantic, the archipelago was far from isolated (Jarvis 2010a: 3) and Bermudian mariners profited from this centrality. Tracing their maritime movements reveals a dense and expanding interregional and intercolonial web of routes and contacts (visualized in Map 2; see also Jarvis' 2010a: 3 discussion of cartographic representations of the Atlantic world and Bermuda's place in it).

Significant links existed to British locales situated along the North American coast and in the Caribbean, such as New England, Virginia, Pennsylvania, South Carolina, Florida, the Bahamas, Belize, the Mosquito Coast, the Turks and Caicos Islands, the Cayman Islands, Jamaica, Grenada, Dominica, St. Vincent, as well as the Grenadines and Tobago (which are discussed in Jarvis 2010a: 377–378). Bermudians also frequented international ports: links with Dutch Curaçao, Dutch St. Eustatius, Monte Cristi, Cap François, and Danish St. Thomas can also be traced (Jarvis 2010a: 117). All these places were either regularly visited locales or locales with which Bermudians established trade activities or long-term contacts.



Map 2. Locales Bermudians frequently visited during the 18th century

Note: Locales marked in green; the denominations are modern ones to facilitate orientation

Such attempts at tracing Bermudian maritime movements are complicated by a number of factors, however. For one, Bermudian port records are incomplete, in part because an unknown number of incoming vessels were not registered by port officials. Returning from overseas ventures, many mariners landed at their homes first and followed official landing procedure only after, if at all (Jarvis 2010a: 133). Smuggling was widespread and the archipelagic nature of the islands made it possible to unload cargo undetected in many coves and inlets (Jarvis 2010a: 132; compare Gillis 2004: 94 for a more general discussion).

Secondly, Bermudian mariners adapted their routes, destinations and activities to the changing historical and economic circumstances: "[a]lthough the Caribbean generally was the site of the majority of Bermudian maritime activities, where Bermudians went and what they did within this diverse region varied considerably from season to season and from year to year" (Jarvis 2010a: 132, 130–132). Jarvis (2010a: 111), for instance, provides an example of one of their trade routes: starting in Spring,

> [they] carried winter wheat, corn, and timber from North America to the Caribbean and exchanged this for rum, sugar, and reexported European manufactured goods. These items […] found ready buyers in New England, Virginia, Pennsylvania, and New York, where Bermudian captains took on new cargoes of beef, pork, corn, flour, and bread.

Thus, so as to sustain their colony, which by then largely depended on other locales in terms of food and income (Jarvis 2010a: 109), Bermudians also traded intensely with the North American colonies, particularly in the Chesapeake region, the Carolinas, and Georgia. Within this expanding trade network, however, not all trade routes grew in importance. One that was increasingly less frequented was that to Great Britain. With no tobacco exports to be transported back, "most direct commercial links between Bermuda and England [were severed]" (Jarvis 2010a: 116).

Examples of locales in these regions where Bermudians stayed for longer periods of time include the Cayman Islands, the Campeche coast and the Turks and Caicos Islands. In the Caymans, Bermudians pursued turtling and wrecking (Jarvis 2010a: 234). At Campeche, some were involved in woodcutting or trading, as logwood was a valuable commodity and used as dyewoods (Jarvis 2010a: 223). The Turks and Caicos Islands were frequented because of a salt trade Bermudians had established already during the 17th century, linking Bermuda, the Caribbean (the Bahamas and the Turks and Caicos Islands especially) and North America (the Chesapeake, the Carolinas, and Georgia; Greene 1901: 230, Jarvis 2010a: 190–191). In subsequent years, this salt trade grew in importance, so that "[b]y the 1770s, most Bermudian vessels carried salt at some point during the year, and 'the greater part' of Bermudian men not employed in shipbuilding worked the salt pans of Grand

Turk and Salt Cay" (Jarvis 2010a: 194; compare also Bernhard 1999: 169). From the Turks and Caicos Islands, the salt was transported to the Chesapeake region, the Carolinas, and Georgia, and became such a crucial good in the Bermudian trade network that it "was a major staple of Bermuda's trade [in the century before the American Revolution]" (Jarvis 2010a: 210).

Especially in such settings as the Turks and Caicos Islands, where many Bermudians stayed seasonally, less transient settlements were established and "[t]he line between seasonal and permanent migration often blurred" (Jarvis 2010a: 360). This had an impact on emigration numbers, which continued to be high throughout the 18th century. Again, Bermudian emigrants chose destinations all over North America and the Caribbean; they settled in already established Bermudian emigrant communities, but also other locales (Jarvis 2010a: 208). Destinations included (but are not limited to): colonies and settlements along the entire North American coast, mainly the Chesapeake, Virginia, the Carolinas, Georgia, and East Florida, as well as in the Caribbean, such as the Bahamas, Jamaica, Grand Turk, Salt Cay, the Caymans, the Mosquito Coast, and St. Eustatius (Jarvis 2010a: 359).

The Bahamas, for instance, were a prime emigration site: "[s]imilar in climate and topography, easily reached by sea, close to the Turks and Caicos commons, and astride North American-Caribbean shipping lanes, [they] attracted hundreds of Bermudians" (Jarvis 2010a: 326). Similarly, many Bermudians chose the Cayman Islands and St. Eustatius as their new home; in Statia, for example, a quarter in Oranjestad was even called "Bermuda Quarter" (Jarvis 2010a: 173). Along the American coast, significant Bermudian settlements were located in South Carolina and Charlestown (modern Charleston), for instance: "dozens of Bermudian merchant mariners relocated to Charlestown […] and carried on much of South Carolina's intercolonial trade" (Jarvis 2010a: 336–337, 334, 326).

Jarvis (2010a: 44–47) describes these emigrant communities as Bermudian diaspora communities, since they displayed dense network structures and an orientation towards the homeland, two characteristics used to describe diaspora communities (Brubaker 2005: 5). Bermudian emigrants stayed in close contact "with Bermuda[,] each other and [with] the other colonies and commons where Bermudians settled" (Jarvis 2010a: 358). Since these settlements were mostly located along coasts or in locales Bermudian vessels frequented, contacts within this Bermudian transatlantic network must have been intense: according to Jarvis (2010a: 117), emigrants were "ready to exchange gossip, family news, local market information, and, often, cargoes with their seafaring kinsmen". Material and sentimental links were thus upheld, which is described as another characteristic of diaspora communities (Esman 1996: 316).

In contrast to the high levels of emigration, immigration almost ceased during the 18th century. Only a small number of immigrants were not discouraged by the conditions in the colony and took posts in or were sent to Bermuda:

> [m]ost were men who possessed special skills or connections or came as Crown appointees. London's Christ's Hospital sent a trickle of orphan boys to Bermuda and other Caribbean islands to apprentice under local merchants […].
>
> (Jarvis 2010a: 363)

In addition, a small number of Scottish immigrants arrived in 1722 (see Jarvis 2010a: 363) and a small number of immigrants from St. Eustatius also made Bermuda their home, because "[t]he movement of Bermudians to the Dutch Caribbean and the kinship connections they made there through intermarriage prompted" them to move (Jarvis 2010a: 354).

As it was only the men who engaged in maritime activities (at least 40 percent of the male population, according to Jarvis 2010a: 261) and who were facing the dangers of seafaring, the permanent population in the islands mainly consisted of women and children. The 18th-century shift towards maritime activities thus also impacted the "non-mobile" population in Bermuda, resulting in an "acute sex imbalance" (Jarvis 2010a: 299). This imbalance reached its high point in 1727 and persisted until the end of the century (Jarvis 2010a: 262 and 299), with consequences in terms of community structure and societal responsibilities:

> Bermudian society adjusted to seafaring separations and maritime losses by considerably expanding women's roles, tasking seafarers' wives with the duties of household production, education, child raising, family governance, and commercial dealings largely independent of male oversight. (Jarvis 2010a: 316–317)

Considering the high percentage of children in the islands (at least 40 percent and at times even higher, according to Jarvis 2010a: 266), the Bermudian society was thus home to "various categories of dependents, as defined by prevailing British common-law conceptions of family and households: women, children, and slaves" (Jarvis 2010a: 262).

The latter were also affected in their roles and responsibilities: "Bermuda's change from farming to seafaring [also] offered new roles for many of Bermuda's slaves and slaveholders, thus altering the nature of race relations as well as economic pursuits" (Bernhard 1999: 148). In 18th-century Bermuda, enslaved men were not working on plantations, but pursuing seafaring activities: many were highly skilled shipwrights or mariners and manned Bermudian ships alongside white seamen (Jarvis 2010b: 89–90). The fact that both white and enslaved populations shared tasks both on ships and on island "resulted in daily racial intermixing in workplace and residence" (Jarvis 2010a: 464), which is also reflected in the high percentage

of interethnic households that existed in the time period between 1690 and 1770, namely 87 percent (Jarvis 2010a: 267).

While many British colonies participated in the transatlantic slave trade at the time, Bermuda did not rely on it as heavily as other colonies:

> the nonagricultural and highly skilled needs of the maritime economy made African slaves a poor fit, while the colony's sizable and growing resident slave population made additional imports unnecessary. Bermudian masters prized skilled, acculturated, English-speaking slaves for their domestic and maritime economies […]. (Jarvis 2010a: 102)

As a consequence, only a very small number of non-native born enslaved people reached Bermuda (their arrivals were sporadic at best; see Jarvis 2010a: 102, 364), while the native-born community continued to grow. By 1770, 47 percent of the local population in Bermuda were of African descent, but born in Bermuda – and it was only until the early 1800s that the white population remained a majority (Bernhard 1999: 98–99).

The fact that many enslaved men went to sea led to "a female majority emerg[ing] in Bermuda's black population as well. A roughly five-to-four female-to-male ratio prevailed among adult slaves up until the American Revolution" (Jarvis 2010a: 263). The tight-knit community structure among enslaved Bermudians was an aspect that Bermudian slaveowners encouraged and "counted on […] to tie [mobile male slaves] more firmly to the island and discourage them from deserting abroad" (Jarvis 2010b: 86), despite the opportunities that seafaring provided. Indeed, desertion rates remained very low (Jarvis 2010b: 86) and the ensuing stability within the enslaved population led to the development of "a thriving creole, or native-born, acculturated slave population that was growing larger through natural increase" (Bernhard 1999: 94). This is especially relevant considering the Bermudian sociolinguistic development discussed below (Section 3.2).

During an extended period of political instability between 1689 and 1763 (Britain participated in numerous conflicts which "transformed the waters of the Atlantic into an international battleground" [Jarvis 2010a: 240]), some maritime routes were safer than others and hostile fleets repeatedly threatened sites of Bermudian activities, such as the Turks and Caicos Islands. One conflict especially – the American Revolution – decisively affected Bermudian trade networks and shipping routes, as it "disrupted intercolonial and international trade patterns" (Jarvis 2010a: 438). Its start led to an unraveling of "the tight interregional integration that Anglo-American mariners had worked hard to establish" (Jarvis 2010a: 393), with extensive consequences for Bermuda's maritime economy (see Jarvis 2010a: 382 for a more detailed discussion of various factors that had already complicated Bermudian maritime activities before the American Revolution).

Importing (and exporting) goods grew more problematic: the islands "especially struggled with food and timber shortages as embargoes, Royal Navy blockades, American privateering and, later, French and Spanish military involvement disrupted their import trade" (Jarvis 2010a: 393). Since wartime conditions also posed continuous threats to Bermudian mariners (Jarvis 2010a: 394), they started to concentrate more on privateering and smuggling as "alternative[s] or complement[s] to their […] peacetime intercolonial commerce" (Jarvis 2010a: 240, 395). Benefitting from decades of seafaring and trading and from their intimate knowledge of the waters and shipping routes, they managed to maintain their contact networks and trade relations, at least to some degree, despite the increasingly strenuous situation (Jarvis 2010a: 394–395).

While Bermudians thus continuously adapted to changing circumstances, they were caught in a conflict of loyalties, as both residents of a British colony and neighbors of North American colonies. Their dependency on supplies as well as their trade networks and family ties led many Bermudians to support the American colonies at first (Jarvis 2010a: 438): "Bermuda became [a] hub and gathering point for Americans […]. Up until 1779, Bermuda's West End offered a midatlantic refuge for American vessels and served as a way station for many American transatlantic travelers" (Jarvis 2010a: 408).

Around 1780, however, the general climate in Bermuda began to change. The arrival of American loyalist refugees in 1776 had a decisive impact (Jarvis 2010a: 423). Even though most refugees had chosen destinations other than Bermuda and even though only few of those who had come chose to stay,

> those who did […] formed a tight, influential community that challenged the colony's status quo and transformed Bermuda's ongoing relationship with the United States. The first loyalists to reach Bermuda came from the Chesapeake and were a mixture of liberty-seeking runaway American slaves, returning Bermudian emigrants who rejected the Patriot cause, and pro-British Virginians who had been driven from their homes. (Jarvis 2010a: 424)

Since countless vessels fell prey to hostile ships (see Jarvis 2010a: 438), Bermudian maritime trips grew less profitable; together with the loss of the Turks Islands and St. Eustatius, this further contributed to a Bermudian change in allegiance, to a "new pro-British tack" (Jarvis 2010a: 438). Their change in loyalties allowed Bermudians to survive and prosper in some ways, but the American Revolution also changed the geopolitical situation to such a degree that the Bermudian "maritime world would never be the same" (Jarvis 2010a: 376).

3.1.3 A new orientation in 19th-century Bermuda

With the changing political situation at the turn of the 19th century, Bermudian maritime activities became increasingly untenable. Even though mariners had initially diverted their efforts to whaling and fishing cod (starting in 1785 and 1787, respectively; Jarvis 2010a: 452–453), they soon had to abandon these pursuits again. Their entrance into Newfoundland fishing territory was not well taken by their direct competition (Wilkinson 1973: 32–33) and "renewed war and large influx of British and U.S. whalers in the mid-1790s increased risks and depressed oil prices, forcing Bermudians out" (Jarvis 2010a: 452–453). The pressure to develop a different economic mainstay grew further, so that Bermudians oriented towards the British military (see Jarvis 2010a: 460).

In 1783, Bermuda's strategic position was recognized by Great Britain: "[t]acticians […] began to take seriously the threat that a U.S.- or French-held Bermuda would pose to British shipping" (Jarvis 2010a: 454). Fortification plans were initiated and Ireland Island, at the far western end of Bermuda (i.e. *up the country*), was chosen as the location where a naval stronghold was to be built. Construction work on the Naval Dockyard started in 1810 (Jackson 1988: 39) and was mainly carried out by black workers (locals and others from North America; Brockman 2009: 30) as well as convicts (again locals and others from West Indian locales; Brockman 2009: 64). This decade-long development of military infrastructure had a profound impact on the Bermudian economy: "[b]y the 1820s British military spending had eclipsed seafaring as the mainstay of the colonial economy" (Jarvis 2010a: 457–458, see also Brockmann 2009) and "Bermuda was refashioned as 'the Gibraltar of the West,' a naval outpost well positioned for strikes against the United States" (Jarvis 2010a: 9).

From a 19th-century geopolitical perspective, such a naval outpost proved to be crucial for Great Britain, especially since another major conflict erupted: the American Civil War, lasting from 1861 to 1865. Similar to earlier conflicts, the Civil War put Bermudians into a position of conflicting loyalties: while "Queen Victoria forbade her subjects to be involved" (Jackson 1988: 41), many Bermudians still maintained family ties to and networks in different U.S. locales. Because of this, many also continued to trade with and transport supplies to the Confederate states, despite the fact that Confederate ports were blocked during the war (Royal Naval Dockyard, January 2014):[8] "[a]lthough officially neutral, Bermuda became a key player in blockade-running, in large part because of its strategic position relative

8. These sources refer to commemorative or informative displays at museums, outdoor museums or historical sights in Bermuda, which were recorded in November 2012 or January 2014.

to such important Southern ports as Wilmington, N.C. and Charleston, S.C." (St. George's Historical Society Museum, January 2014).

Despite the fact that Bermuda was officially an uninvolved third party, repercussions of renewed political turmoil affected the islands on various levels. Firstly, blockade running was a dangerous and risky business, but – if completed successfully – also very lucrative. A number of Bermudian families took the risk, benefitted from successful runs and became increasingly wealthy. St. George's in particular thrived because of these activities: the town re-gained some of the importance it had lost when the capital had been moved to Hamilton in 1815 (Royal Naval Dockyard Museum, November 2012). Secondly, "[t]he American Civil War also brought in thousands of transients – from Northern invalids, […] [to] blockade-runners and political agents" (Royal Naval Dockyard Museum, November 2012). As with earlier groups of immigrants, however, it is difficult to specify where exactly these came from, how long they stayed, to what degree they interacted with the local population, and which social and linguistic traces they left. What we do know, however, is that a high number did not stay permanently. Their long-term impact is thus likely to have been limited.

Another group of immigrants who had also started to arrive earlier in the century stayed permanently and formed a sizable community, however: the Portuguese. Because efforts to "rekindle Bermudians' interest in farming" in order to make Bermuda more self-sufficient (Royal Naval Dockyard Museum, November 2012) had limited success, agricultural workers from Portugal were brought to the islands, most of which originated from Madeira and the Azores (Royal Naval Dockyard Museum, November 2012). "They concentrated on growing potatoes, onions, and tomatoes for export to the United States" (Jackson 1988: 42); export which became a second important branch of Bermuda's economy at that time, in addition to British military spending (Paul 1983: 10). Portuguese immigration continued throughout the 19th and 20th centuries – and still continues up until the present day, albeit to a lesser degree (see Paul 1983: 10 and Section 3.1.5).

When Bermuda's agricultural exports started to suffer from American competition towards the end of the 19th century (Royal Naval Dockyard Museum, November 2012), agriculture was for the second time replaced as one of Bermuda's main economic branches. Bermudians again re-oriented, at this point towards tourism. Because the introduction of steamer services had resulted in shorter sea travel times, the islands became more attractive as a tourist destination: they "[were] one of the closest warm spots which could be reached easily from Canada and the northern part of the United States" (Zuill 1983: 144). In 1906, the Bermuda Tourist Association was founded and, in subsequent years, hotels and infrastructure were developed (see Jackson 1988: 131), so that "[b]y the early 20th century, Bermuda was being promoted as a 'lotus land' for urban, wealthy Americans".

Also towards the end of the 19th century, a second major immigration movement started: originating from various islands, a high number of West Indians arrived in Bermuda from 1894 onwards (Royal Naval Dockyard Museum, November 2012). Most were engaged in a renovation project at the Royal Naval Dockyard, which "lasted five years and demanded scores of skilled carpenters, masons and other labourers" (Royal Naval Dockyard Museum, November 2012). They formed a sizable community with dense network structures: 3,000 had arrived by 1901, making up a fifth of the entire Bermudian population at the time (17,535 inhabitants; Royal Naval Dockyard Museum, November 2012). However, many did not stay permanently in Bermuda, but "had to return home after the project ended" (Royal Naval Dockyard Museum, November 2012), so that this migratory pattern mirrors earlier 18th-century links, albeit in a more transient way.

At this point I want to turn to a crucial historical moment, because it shaped 19th-century Bermuda in many ways: on 1st August 1834, slavery was abolished in all British colonies. While an "apprenticeship scheme" was set in place in many locales, the Bermudian parliament rejected this, so that the 4,200 people who were still enslaved in Bermuda (i.e. almost half the population) became free (Zuill 1999: 124; Royal Naval Dockyard Museum, November 2012; see also Salih's 2004 edition of *The History of Mary Prince* for an account of Mary Prince, an enslaved woman). However, new additional laws that were passed simultaneously with the local emancipation act "restricted voting rights based on property, preventing blacks from gaining political power" (Royal Naval Dockyard Museum, November 2012; see also Zuill 1999 for a discussion of the laws and acts that were passed). Segregation continued, and Hall (2019: 225), for instance, outlines that "Bermuda was a site of […] extreme segregation over the last two centuries" (see also Zuill's 1999: 123–124, 147, 199 account of how it would take many more years, until the 1950s, for black political representation to increase, for instance). In the decades to follow, then, the consequences of slavery continued to remain pronounced and extensively influence Bermudian society.

3.1.4 20th-century Bermuda and the heyday of tourism

The rise in tourist numbers and the beginnings of institutionalized tourism, which had started at the turn of the century, considerably slowed down during the First World War, since "visitors [were] kept away by restricted wartime shipping" (Royal Naval Dockyard Museum, November 2012). It was only after the war that the tourist industry was revived and became Bermuda's main economic focus (Zuill 1983: 156), partly also because Bermudians partnered with the passenger line Furness Withy, which considerably invested in Bermuda (Royal Naval Dockyard Museum, November 2012). Thanks to direct steamer connections to

the U.S., it became easier and more comfortable to reach the islands for the main target group: 85 percent of arrivals came from the American East Coast (Royal Naval Dockyard Museum, November 2012) and Bermuda "became both a winter and summer resort, advertised as 'only two days from New York'" (Royal Naval Dockyard Museum, November 2012). At that time, the tourist industry flourished, but only until the Second World War, when visitor numbers again declined.

During the Second World War, the U.S. were assigned land rights in Bermuda, based on a 99-year lease, so as to establish a military base: in the east end, "islands in Castle Harbour were joined, creating an airport, an army base and 760 acres of new land [and] [i]n the West End, a naval base was created" (Royal Naval Dockyard Museum, November 2012; see also Zuill 1983: 168–169). Especially in the east end, additional land areas were needed and annexed by the government: in St. Davids, many decade-long residents were forced to re-settle – a government policy with quite a traumatic impact on some of the local population. While Bermuda had already been one of the most densely populated territories prior to WWII (with a rate of 1,600 people per square mile), the ensuing influx of American military personnel (and, on occasion, their families) further increased population numbers. During the 1940s, the islands' population grew by 20 percent (Royal Naval Dockyard Museum, November 2012).

Despite the fact that the U.S. military base constituted an independent and autonomous area within Bermuda, "contain[ing] a community, with schools, medical clinics, theatres, [and] gyms" (Royal Naval Dockyard Museum, November 2012), contacts between stationed personnel and the local population were intense. This significantly influenced Bermudians' everyday life, especially with regard to their orientations towards the U.S. mainland, both culturally and linguistically (see below): "[t]he Americans brought their way of life to Bermuda. They introduced new technology, including radio and, later, television", for instance (Royal Naval Dockyard Museum, November 2012). One of my informants even recalled a time when Bermudians would watch movies at the American cinema, which was situated on military territory. In addition, a number of Americans married Bermudians and "after being demobilized, remained on the Island as civilians" (Royal Naval Dockyard Museum, November 2012).

After the war, the base was converted into a civilian airport. Bermuda was now also accessible by air and, as traveling became easier and more affordable, visitor numbers grew beyond records (Royal Naval Dockyard Museum, November 2012). "Throughout the 1970s to mid-'80s, the industry's golden years, [they] climbed to an annual peak of 630,000 in 1985" (Royal Naval Dockyard Museum, November 2012); numbers which are extremely high especially in relation to the local population (around 50,000 at the time) and which mark the heyday of tourism in Bermuda. Jackson (1988: 133) outlines where these tourists came from, in a detailed

overview of percentages from the years 1973 and 1985: the overwhelming majority arrived from the U.S., followed by the UK and other countries. Percentages of 86.8 and 89.2 percent of tourists visiting from the U.S. in 1973 and 1985, respectively, illustrate the importance of the American market and are, again, indicative of an orientation towards U.S. tourists as the main target group. It was only in the 1990s that "competing destinations and rising costs took a toll" on these numbers (Royal Naval Dockyard Museum, November 2012), so that tourism could no longer be considered Bermuda's economic mainstay.

Not only tourist numbers grew during the period after WWII, but also population numbers: "[they] soared from 30,000 people in 1940 to 53,000 people in 1970" (Zuill 1983: 179). Continued West Indian (cross-)migration contributed to this increase, as people originating from islands in the Caribbean came to Bermuda "to pursue careers as teachers, police officers, doctors and lawyers" (Royal Naval Dockyard Museum, November 2012). Especially the fact that many of these West Indian teachers had to take positions in black schools warrants closer attention in the present context:

> [u]nder the Island's segregation system lasting until the late 1960s, Caribbean educators were restricted to teaching in all-black schools […]. Their influence was felt by generations of Bermudian students, including the growing number of Caribbean descent. (Royal Naval Dockyard Museum, November 2012; this resonates with the point discussed in the Introduction)

In these educational settings, daily interactions between black Bermudian students and teachers with a Caribbean background would provide the backdrop for intense contact, with potential linguistic consequences (see Section 3.2 below).

3.1.5 A snapshot of contemporary life in Bermuda

The fact that, throughout Bermuda's history, the possibilities in the islands have hardly ever allowed a self-sustaining population is especially consequential in contemporary Bermuda. The majority of consumer goods and industrial products available today have to be imported (groceries, fashion, electronics, etc.), which has a major effect on price levels. The living costs are extremely high, which is particularly problematic for low-income population groups.

According to estimates from 2016, only 2 and 13 percent of the Bermudian workforce work in the agricultural and industrial sectors, respectively (at the time of writing; CIA World Factbook, July 2020). 85 percent, i.e. the vast majority, are employed in the services sector (CIA World Factbook, July 2020). Apart from tourism, which is still one of the major branches in this sector, its main branch is "[i]nternational business, which consists primarily of insurance and other financial services"

and which "is the real bedrock of Bermuda's economy [today], consistently accounting for about 85% of the island's GDP" (CIA World Factbook, July 2020). Indeed, many exempted companies have their formal headquarters in Bermuda, which is in part due to the fact that the archipelago "has also developed into a highly successful offshore financial center" (CIA World Factbook, July 2020) – a development fostered by the Bermudian government's economic policies (Jackson 1988: 125).

Over the last couple of years, however, the economic situation has worsened: "[u]nemployment reached 7% in 2016 and 2017, public debt is growing and exceeds $2.4 billion, and the government continues to work on attracting foreign investment" (CIA World Factbook, July 2020). Yet, despite a tenser job market and the impact of the financial crisis of 2008, "Bermuda [still] enjoys one of the highest per capita incomes in the world" (CIA World Factbook, July 2020).

One consequence of this focus on international business is the fact that a significant number of employees in insurance and financial services companies are expatriates who have come to Bermuda on a work permit, for a limited time period only (note that non-Bermudians are also prominently employed in the services industry, in retail and in market sales; Census of Population and Housing 2010: 30–31). While contemporary Bermudian immigration laws are quite complex and while the issuing of work permits has become more strictly regulated in recent years (as the Bermudian government launched efforts to fight unemployment amongst Bermudians), data from the 2010 Census nonetheless suggest that 26 percent of the working population in Bermuda are non-Bermudian.[9] Also, the islands' net migration rate is quite high: in 2020, it was estimated at 1.6 migrant(s) per 1,000 people, a rate that ranks 53 by country (CIA World Factbook, July 2020).

As a consequence of this, and as a consequence of Bermuda's century-long (cross-)migration history, Bermudian contemporary society unites people of multiple ancestries. According to the 2010 Census (4), 46 percent of the population are "associated with Bermudian ancestry", 11 percent with British ancestry, 13 percent with West Indian ancestry, and 7 percent with Portuguese ancestry (the remaining are associated with other ancestries). The Portuguese form one of the most visible migrant communities, along with the Filipinos. In contrast to the former community, which started to form in the course of the 20th century (as discussed above), the latter started to form only more recently (the Census 2010: 7–8, for instance,

9. The most permanent legal status, i.e. Bermudian status, can be applied for (see Conyers Dill & Pearman 2013: 4, 10); in 2010, 79 percent of Bermudian residents had Bermudian status (Census of Population and Housing 2010: 6). Because status is not acquired by birth, however, there are Bermuda-born people who do not have it: "[a]n analysis of the population by nativity and Bermudian status indicates that 97% of the Bermuda-born population and 34% of the foreign-born population have Bermudian status" (Census of Population and Housing 2010: 7).

notes a significant increase, compared to the Census conducted ten years earlier, "in the number of persons born in the African and Asian countries"). While both represent minority populations within the Bermudian societal structure, they account for a historically unprecedented level of multilingualism in Bermuda (see Section 3.2).

These levels of ancestral diversity are also mirrored in statistics concerning ethnic groups present in Bermuda. The following percentages are recorded in the CIA World Factbook, as of July 2020 (estimates stem from 2010, however): 53.8 percent of the population are of African descent, 31 percent white, 7.5 percent mixed, 7.1 percent other, and 0.6 percent unspecified; these rates roughly correspond to Census rates (2010: 42), where 4 percent Asian and 4 percent other are noted, however, rather than 7.1 percent other and 0.6 percent unspecified.

While these percentages are based on self-reported numbers that result from a classification provided in the Census, Hall (2019: 226) outlines that three "locally meaningful racialized categories […] are entrenched" in Bermuda, namely black, white, and Portuguese. She (2019: 226) further describes that

> [o]nly 9% of Bermudians identified as mixed-race in the most recent census, and Bermudians of mixed heritage are typically racialized as black. Portuguese Bermudians were for many years treated as a separate underclass, but have come to be racialized as white (Winfield, 2014), and the central political and cultural distinction today is between black and white groups.

Her (2018) and (2019) studies provide further comprehensive discussions of these aspects, including insights into how such categories play into (racialized) linguistic practices and performances of "Bermudian-ness" (as briefly outlined in the Introduction).

As in previous centuries, however, Bermuda is not only a site of immigration. With modern means of transportation, mobility levels of Bermudians have further increased; they are in general highly mobile. For one, they travel extensively because of what they call "rock fever". Speaker 46 describes this as follows:

> we call it uhm getting off the rock. Yeah rock fever. You hanging around here too long, you know, […] and it's always lovely to come back to, but it's also nice to get off. You know, go somewhere else. Cause we are confined, you know. Out in the middle of nowhere, yeah, and we are confined […].

To reduce the effects of this feeling of confinement, they leave regularly for trips to vacation destinations all around the world; favorites seem to include destinations in the Caribbean (many Bermudians visit family on Caribbean islands), the East Coast of the U.S., Canada and the UK, i.e. destinations which reflect historical (cross-) migration patterns outlined in the sections above.

A second reason for Bermudians' high levels of mobility relates to residents' higher education. The highest level of education that can be completed in Bermuda is college level. Students who want to pursue a university degree have to leave the islands and attend university abroad; an educational option that is taken up by many Bermudians, provided their financial situation allows such a prolonged stay abroad. In 2010, "[a] total of 29% of the population had attended university" (Census of Population and Housing 2010: 21), though this percentage refers to the entire resident population.

Some Bermudians also leave for a longer period of time each year, a longer time span over a couple of years, or permanently settle abroad. While a number of my informants have vacation homes in various places, for example in the U.S. or Canada, and spend a couple of weeks per year in these locales, others have relocated for a longer period of time and returned. Also, a number of informants related that some Bermudians emigrate to settle close to relatives who have previously left for various destinations in the wider geographical region. S41, for instance, describes "pockets of Bermudians" living in London and Atlanta, which echoes Jarvis' argument of Bermudian diaspora communities discussed above. All of these more permanent emigrants leave Bermuda for various reasons – economic, social, or individual; again both push and pull factors tend to be involved.

While inter-island mobility levels are thus substantial, intra-island mobility levels are by no means less extensive. Hardly any of my informants have not changed places of residence at least once in their lives, either within or between parishes (S6, however, raised an important point in this context: he mentioned that such mobility might be restricted in some families, as they live in and pass on their family homes, because renting and buying property is increasingly expensive). Also, almost all are highly mobile on a daily basis, as short-term acts of mobility abound: commuting to work, shopping for groceries or other goods in Hamilton and other places, going out for leisure activities or visiting markets (among other things).

Only two communities in Bermuda are described as more sedentary by both residents and non-residents. The first is St. Davids, where "[many] present members claim Indian ancestry" (i.e. Native American ancestry; Bernhard 1999: 62). In many of my interviews, the community is portrayed as more close-knit and more "clannish"; the comment of S53, herself from St. Davids, serves as an illustration:

> St. Davids was isolated. For years they was a separate island, they didn't have the bridge. And if you didn't have a boat you didn't get off. […] So they always claim we were different. St. Davids islanders were different. We were very, I mean you couldn't get off the island and a lot of them were related so they always, rest of the island used to say oh St. Davids, they're different, they're strange, they're very clannish. And that's, that's how, you know, we were considered to be different. Which

> I'm very proud, we are really different. I would, I would never say we were that different, we're just that we were very family-oriented and we were very clannish. And stuck together so to speak. Isolated.

While St. Davids is thus certainly seen as the most sedentary community in Bermuda, with many members staying throughout their lives, a number of my informants also expressed similar views with regard to the community in Somerset: S36, for instance, describes Somerset as a counterpart to St. Davids, because it is similar in its network structure and geographically situated at the other end of Bermuda.

It seems safe to say that the patterns of mobility just outlined also influence the age structure of contemporary Bermudian society. The CIA World Factbook lists the following numbers for five age groups (estimates from 2020; Table 2):

Table 2. Bermuda's age structure (CIA World Factbook, July 2020)

Period	Percentage	Ratio male/female (absolute numbers)
0–14 years	16.7	6,053 / 5,928
15–24 years	11.88	4,290 / 4,235
25–54 years	35.31	12,758 / 12,575
55–64 years	16.37	5,560 / 6,185
65 years and over	19.74	6,032 / 8,134

Especially the drop in percentages in the age period of 15 to 24 years is noticeable; this might well be due to the fact that the highest level of education which can be obtained in Bermuda is college-level. I revisit this age structure in more detail in Chapter 4 below, however, as it is relevant with regard to the present study's sample of informants.

To conclude this overview of Bermuda's social history and contemporary society, I want to particularly highlight an aspect that has become evident throughout the 400 years of Bermuda's development. Baldacchino (2007: 5–6) outlines in general terms what I would argue is also true considering Bermuda: "[i]sland geography tends towards isolation; island history, on the other hand, tends towards contact". Constant movement and cross-migration of Bermudians have resulted in contacts and exchanges on multiple levels, extensive cross-Atlantic networks, ties to diverse locales, and the establishment of diaspora communities in the wider geographical region, ever since the 18th century (compare also Jarvis 2010a: 372). Since the high levels of historical mobility find a counterpart in the continuously high levels of inter- and intra-island mobility in later centuries and in contemporary Bermuda, I argue that acts of mobility have shaped and continue to shape daily life in Bermuda in a fundamental way.

3.2 The Bermudian sociolinguistic situation

Considering the British colonial and Bermudian social history, BerE formed relatively early and is thus also a relatively old nativized variety of English, in comparison to other (post-)colonial varieties.[10] As in similar settings where communities were newly forming, the situation in Bermuda "g[a]ve rise to unprecedented interactions between members of different strata of a society" and different geographical backgrounds, which led "to linguistic contact processes that are typically unforeseen, ad hoc, and spontaneous" (Schreier 2017: 348; see also Trudgill 2004a). Compared to many other colonial settings, however, these contact processes did not involve language contact between the colonizers' language(s) and indigenous languages during the formation phase of BerE, because of the *tabula rasa* situation discussed above (Trudgill 2004a, 2004b). Rather, the new variety that formed in Bermuda is a consequence of dialect contact and mixture as well as accommodation processes and koinéization (see also, for instance, Sudbury 2001 and her discussion of the Falklands, which present a similar scenario).

3.2.1 The formation and historical development of Bermudian English

Already before departing to Bermuda, prospective settlers of different backgrounds must have interacted, both in port cities and on the ships that brought them to Bermuda (compare Trudgill 2004a: 89–90). Upon arrival, contacts between these settlers must have continued to be intense because of the emerging settlement structure, dominated by compact family farms situated in close proximity. "In these situations, certain limited types of accommodation by adult speakers to one another in face-to-face interaction […] [must] have occurred" (Trudgill 2004a: 89). As one consequence of such types of accommodation, some degree of dialect leveling must also have occurred, which in Bermuda's case must have been fostered by the colony's settlement structure promoting daily interaction and by a steady flow of newcomers bringing new linguistic input. These factors in combination would provide fruitful ground for koinéization and new-dialect formation during the establishment of the colony.

In an attempt to reconstruct the origins of BerE, then, the following questions need to be raised:

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10. The first British colony in the Caribbean for instance, in St. Kitts (according to Baker [1998, quoted in Schneider 2013: 480] "an important early point of dispersal" of linguistic forms), was established later, in 1624. Also, it is important to note that labeling contemporary BerE as either a colonial or post-colonial variety is a complex issue, because historical, social and political factors play into this question (see above and compare Meyerhoff 2006b: 175 or Hall 2019: 225).

– Where exactly did the initial settlers come from and which input varieties were transplanted to Bermuda?
– Which linguistic subsystems were mixed in the early Bermudian contact scenario (compare Siegel 1985: 375–376, quoted in Schreier 2017)?

This is especially relevant with regard to potential founder effects, i.e. questions as to who influenced the formation of the variety, and with regard to feature selection, i.e. questions as to which features were available and selected out of the feature pool during the early Bermudian contact scenario. However, in line with Schreier's (2002: 79) note of caution, the following paragraphs must remain speculative to some degree; a more in-depth study with a particular historical focus would be necessary to establish in more detail whether more reliable information on early demographics, input varieties, and, consequently, the early contact scenario exists in the Bermudian context (many of the complicating factors Schreier 2008: 95 lists as playing a role in determining settlers' origins in the St. Helenian context are also relevant here). Nonetheless, from new-dialect formation theories, as outlined in Section 2.1.2, and from Bermuda's social history, as outlined above, a number of aspects can be deduced.

With British settlers as the principal settler group, there is no question that British English varieties were the most influential input varieties. Southern or Southeastern English varieties are the most likely candidates, because of Ayres' (1933) list of settler origins and because other studies have also identified these as likely input varieties for other (post-)colonial English varieties (compare Hickey 2004, who discusses British inputs in connection to various Caribbean varieties; Winford 2009, who states that most settlers in Barbados came from the Southwest of England; and Britain 2008, who outlines that most New Zealand settlers came from southern counties of England, albeit during the 19th century). Irish and Scottish varieties might also have contributed features, again because other studies have identified comparable settings where these varieties played a role (compare again Hickey 2004, who discusses different Caribbean varieties; and Paddock 1982 and Kirwin 2001, quoted in Trudgill 2004a: 7, who describe Newfoundland English as derived from English southwestern or Irish southeastern varieties). Here, it remains unclear, however, how influential these inputs might have been.

Further, the founder population must have been a very heterogeneous group of settlers in terms of social and economic backgrounds. Considering the colony's early focus on an agrarian economy, agricultural workers were definitely among the early emigrants (compare Trudgill's 2004a: 91 discussion of New Zealand) and considering Jarvis' (2010a: 40) statement mentioned above, various other craftsmen and emigrants of different social backgrounds were also part of the founder population. Hence, the feature pool must have consisted of features from different regional dialects as well as sociolects.

The second principal group that was instrumental in forming the variety, i.e. enslaved men and women, started to arrive in Bermuda while the first generation of settlers was still establishing the colony and community. Since most enslaved men and women were taken from other European colonies in the Caribbean, they must have already been multilingual to some degree and "well acquainted with European culture" (Jarvis 2010a: 29). This acculturation, as discussed above (compare also Winford 1997: 234), must have meant that "they had more exposure to and better opportunities for gradually adjusting to the speech forms used by whites" (similarly as Schneider 2013: 480 outlines for Caribbean locales), both in their original locales and upon arrival in Bermuda.

Two points raised above corroborate this. Firstly, Bermudian enslaved men and women were living in settings that promoted daily interaction with the settler community and were thus continuously exposed to the settlers' varieties. Secondly, they were working in an environment that differed from environments in more classical plantation economies, which would provide the sociolinguistic context for the development of pidgin and/or creole languages. A similar situation as Hackert (2010: 42; compare also Mufwene's 2000: 239 discussion of the situation in St. Kitts) outlines with regard to the Bahamas must have characterized Bermuda as well:

> the Bahamian economy never turned into the kind of plantation economy typical of other […] territories. This means linguistically that, despite possible local restructuring processes, the likelihood that a full-fledged creole was in general use among blacks […] at the time seems small.

In the Bermudian scenario, where a local, native-born enslaved population formed from the start, language shift to some restructured form of English must have taken place quite rapidly, similarly as Schreier (2008: 227; see also Mufwene 2000: 235) argues with regard to St. Helena: "a social integration of this kind […] would have favoured access and a general functioning in an English-speaking environment, arguably leading to rapid language shift and attrition". Consequently, rather than pidginization and/or creolization processes, language and/or dialect transmission must have happened in the enslaved speech community from a very early stage onwards (compare Hickey 2004: 328). While second-generation enslaved children might still have acquired a multilingual linguistic repertoire, the acquisitional target might have been a less restructured contact variety than a pidgin or creole in this generation already. The question that remains in this context, however, concerns the degree of restructuring and contact effects of typologically different linguistic systems, i.e. in how far such contact effects would have shaped the newly forming variety (the analysis of CCR provides some clues in this regard; see Section 5.3.1).

At this stage, processes of accommodation within and between the settler and enslaved population groups and, consequently, a certain degree of leveling must

have happened. As outlined above, the enslaved population must have had more access to settlers' dialects and sociolects than enslaved people elsewhere (compare Hackert 2012: 180), i.e. most likely to nonstandard varieties which were also shaped by dialect mixture, (limited?) accommodation and leveling (see Mufwene 2001: 34–35). Yet, they also contributed features to the feature pool, as some of the forms "would have been communicatively successful [as well and] thus strengthened, maintained, and integrated into the local linguistic repertoire of the speech community", similarly as Schneider (2013: 487) argues with regard to the Jamaican setting. "[T]he relative strength of the respective input factors […], determined by demographic proportions, interaction habits, and other components of the communicative settings", however, would be crucial "in shaping or at least influencing the local linguistic repertoire", as Schneider adds (2013: 487).

In the Bermudian scenario, it is safe to say that the input factors of the settler population would exhibit more strength during BerE's early formation phase, for three reasons:

1. the white population was a majority – and remained a majority for almost two centuries after colonization;
2. interaction between the population groups was intense and fostered by the communal structure and dense settlement structure, which would favor acculturation processes as discussed above; and
3. the social implications of the population groups' status would render the settler population the dominant group for centuries.

Since immigration rates dropped in both populations between 1625 and 1684, a more stable situation must have emerged in Bermuda during this time period. The limited amount of new linguistic input must have meant that children born to the first generation of settlers and enslaved people "selected from among the smaller array of variants they were confronted with" (Trudgill 2004a: 115) and accommodated towards their peers, thus contributing to the formation of a more stable variety of BerE.[11] If Trudgill's (2004a: 23) statement that a stable, crystallized variety usually emerges within fifty years in such situations is taken into account, it seems likely that BerE must have become more focused by 1684 (even with potential colonial lag). This early colonial dialect must then have been transmitted to the next generation of children born in the islands, in both the settler and enslaved populations.

11. The question remains in how far such a more stable situation emerged already within the second generation. Mufwene's (2000: 240) argument of increased variation because of a diverse feature pool, which might lead to a more diverse range of choices, complicates the situation.

This is not to say, however, that contact and change processes would have stopped at this point. On the contrary, similarly as Trudgill (2004a: 129) argues with regard to the development of New Zealand English, "linguistic change must have continued to take place in the normal way during that fifty-year period, over and above the new-dialect formation processes at work during that time".

After 1684, the Bermudian turn towards the sea must have provided further contexts and settings for contact and change processes to happen, which must have influenced the subsequent development of BerE in multiple ways. Bermudian sloops, for instance, would provide an environment which must have been something of a linguistic biotope, providing a month-long contact setting with constant (and interethnic) interaction between the crew members and only sporadic new linguistic input (compare Mufwene 2001: 34–35; Siegel 1985). Such an environment must have fostered processes of dialect mixing and leveling among the entire male population, as the ships were manned by locals and as enslaved men were working alongside free men on the same tasks. These processes, in turn, might have "resulted in […] relatively higher degrees of linguistic homogeneity" in the speech of this particular population group and in these particular settings (Schneider 2004: 248; compare also Siegel's 1985: 373 discussion of the linguistic situation on 16th-century British ships).

In contrast to the male population, the female population was more sedentary, taking over educational and communal duties while the men were at sea. Considering the resulting gender imbalance in the islands described above, I would argue that the target variety providing norms for Bermudian children during this period must have been that of the female population more so than in other locales (see also Trudgill 2004a: 101 for a discussion of the role of adults in such contact situations). This variety must also have been influenced by linguistic processes resulting from intense day-to-day interactions that would be involved in regulating community affairs in Bermuda, yet arguably to a lesser degree than the speech of Bermudian men. Since hardly any newcomers reached Bermuda at that time (and those who did must have been of similar backgrounds as earlier immigrants), the community and population must have been quite stable, with limited new linguistic influences coming into play.

Seafaring, however, led to unprecedented levels of contact with other communities all over the Atlantic. The trade networks which were established by Bermudians during this period promoted repeated interaction, regular communication, as well as a partial societal opening up, i.e. a continuation of the de-isolation processes that had already begun during the 17th century. Mutual linguistic influences must have resulted from these contacts and interactions, which might have counteracted the potentially higher degrees of linguistic homogeneity that must have characterized the speech community in the islands (following Schneider's 2004 argument discussed above).

Further, one-off acts of migration must also have led to the transportation and diffusion of an early Bermudian colonial koiné or contact variety (i.e. a more focused variety that had formed during the 17th and early 18th centuries) to other locales, when Bermudians re-emigrated (see Eberle & Schreier 2013 and below). Consequently, BerE can be considered as an input variety in settings in the Caribbean and along the American East Coast: Cutler (2003) and Hackert (2010) as well as Reaser and Torbert (2004: 391), for instance, outline that BerE was transported to the Turks and Caicos Islands and Eleuthera as well as the Bahamas more generally. The same must have been the case in settings such as St. Eustatius, with its Bermuda Quarter, South Carolina, the Campeche coast, or the Caymans, to varying degrees. A question that remains in this context, however, concerns the degree of vernacular/dialect maintenance, i.e. in how far Bermudian emigrants and their children might have accommodated to varieties spoken in already established communities and in settings described in terms of a Bermudian diaspora.

While Bermudian emigration continued during the 19th century, a number of immigrants also found their way to the islands, staying for limited time periods only. As a consequence, the degree of interaction with the local population remains difficult to gauge: it is unclear whether it was possible for the West Indian blacks and convicts working on the Royal Naval dockyard construction sites to interact with Bermudians or whether the American Civil War fugitives stayed long enough to leave linguistic traces. It seems safe to say, however, that the linguistic influences of these temporary residents must have been limited.

What is documented in the literature, however, is a growing cultural and linguistic orientation towards the U.S., which began during Bermuda's maritime age and continued during the 19th century. With the arrival of American military personnel and a growing number of American tourists during the 20th century, this intensified even more as a result of continuous interaction, regular and daily contact, as well as cultural influences which were brought to Bermuda. The ramifications are not to be underestimated, especially in terms of repeated dialect mixing and accommodation processes as well as norm-orientation. Hall (2019: 225) provides a succinct summary of this last aspect, describing norm-orientation in Bermuda over the centuries as follows:

> as a British dependency that is located much closer to the North American mainland than to the British Isles, Bermuda has been subject to influences from both sides of the Atlantic, with their relative dominance fluctuating over the centuries (Jarvis, 2010); this has resulted in a mixed set of cultural and linguistic norms, although today the supralocal norm is decidedly North American owing to increased numbers of permanently settled American businesses and residents in the last century.

I return to this point again below.

Because the hospitality sector and visitor numbers massively grew from the early 20th century onwards, a large part of the Bermudian work force interacted and continues to interact with tourists and non-Bermudians on a daily basis. It is safe to say that this crucially affected and continues to affect Bermudians' linguistic repertoires with regard to style and audience design effects. The tendency to shift between styles and registers (also reported in Eberle & Schreier 2013) is indeed one of the most noticeable linguistic phenomena in contemporary BerE and many of my informants self-report that they adapt their speech style according to situation and addressee: S10, for instance, referred to this as the Bermudian ability to "switch gears". I re-address this in Chapter 4.

3.2.2 The contemporary linguistic context of Bermudian English

Considering the multitude of linguistic influences which have contributed to BerE's development, the question needs to be raised as to what degree the diverse ancestral backgrounds of the speakers are reflected in distinct ethnic varieties in Bermuda's contemporary linguistic context. Trudgill (1986, 2002), Eberle and Schreier (2013) and Hall (2018, 2019) argue that significant linguistic differences exist between the varieties spoken by Bermuda's ethnic populations. While this certainly reflects the reality of the speech community, the issue is multifaceted and accordingly complex, as Hall (2019: 225) outlines:

> [t]he question of whether black and white Bermudians speak different varieties of BerE is complex. Bermuda was a site of close dialect contact in early colonial settings, but extreme segregation over the last two centuries, and a significant proportion of Bermuda's white speakers arrived on the island relatively recently from North America and the UK following the international business boom. This means that black and white Bermudian Englishes are likely to be diverging rather than converging over time […]. Ultimately, it may be best to characterize Black Bermudian English (BBerE) and White Bermudian English (WBerE) as overlapping subvarieties of BerE, while recognizing the limitations and risks associated with such labels.

Further research and description are needed, especially considering this last point, so as to further unravel the complexities at play.

Complicating the situation further, Bermuda's contemporary linguistic situation is undoubtedly characterized by a continuum of varieties: factors such as the degree of restructuring and class, style, age, or the degree of isolation of speakers need to be considered as well (among other factors; depending on which linguistic or extralinguistic factor is in focus, one might even argue for continua of varieties). On the one end of this continuum lies a more standard variety of BerE, similarly as

Patrick (2004: 409) outlines with regard to Jamaica and Standard Jamaican English, which "is recognized as an English dialect, descended by […] transmission from 17th- and 18th-century British input dialects". This variety is associated with the Anglo-Bermudian community, higher social classes and more formal situations. The continuum then gradually transitions into the most restructured variety, which lies on the other end. This variety is mainly associated with speakers of African descent, working class speakers, informal situations, or speakers who live in isolated locations (compare also Hackert 2010: 45 or 2012: 181 and her discussion of the situation in the Bahamas, as well as Werkin 1977: 91, who notes that BerE "may only be spoken in the broadest form by those who have never been off island"). Since additional levels of variability also exist (compare Winford 1997: 240), the situation is complicated to such a degree that it is challenging indeed to demarcate varieties. Questions to be raised in this context, such as which parameters and factors condition variation in BerE and to what degree, are discussed in the quantitative analyses below and need further empirical study in future research.

In terms of regional dialect variation, the speech communities that are primarily described as speaking a noticeable regional dialect by both community and non-community members are the St. Davids community and the community in Somerset. Since the St. Davids community seems to have been historically more secluded, seems to be considered a more rural area and seems to be characterized by denser network structures than other communities, it is not surprising that a higher concentration of distinct linguistic features is associated with this particular island (compare Hickey 2012: 2–3). These are factors that have been found to work towards the development of locally salient features or norms as well as dialect maintenance (see, for instance, Wolfram & Schilling-Estes 1997, Schilling-Estes & Wolfram 1999, Schilling-Estes 2002; or Milroy 1987). In the particular case of St. Davids, the long period without bridge access mentioned in S53's quote above (i.e. topography) must also have contributed to higher levels of dialect maintenance.

The question in how far other regions and the speech community as a whole are characterized by low levels of internal differentiation in regional terms needs further empirical study (compare, for instance, Hickey 2012: 2–3). Such a hypothesis, however, is plausible for a number of reasons: for one, Bermuda's history of dialect mixture and leveling must have contributed to some levels of homogenization, because living conditions have promoted proximity, contact and interaction throughout the centuries. Secondly, both historical and contemporary levels of intra-island mobility have led to a de-isolation of many previously secluded areas. Regular acts of mobility lead many Bermudians out of their community area, which results in a situation that Britain (2013a: 208) describes in more general terms, namely

> that, as they go about their routine, mundane, day-to-day […] people move and they often do so for the purposes of interaction, interaction which brings them into contact with people who necessarily will speak (often subtly, often not) different language varieties.

This might lead to processes of short-term accommodation and leveling, which in turn might account for higher levels of regional homogeneity in Bermuda. Whether this is empirically traceable and whether regional background conditions linguistic variation in the particular feature analyses is addressed below (see Chapter 4; it is also noteworthy in this context that Hickey 2003a discusses how high levels of regional homogeneity in New Zealand might be due to dialect supra-regionalization).

Inter-island mobility has also had an impact on the language situation in Bermuda. Bermudians who are mobile for recreational or educational purposes are exposed to different varieties for different periods of time and come into contact and interact with speakers of other dialect backgrounds. Potential consequences of such contact might be processes of accommodation and dialect shift. In my interviews, especially younger Bermudians commented on this: after spending their university years abroad, they realized upon their return that they had shifted towards the variety spoken in the respective settings and adapted their linguistic repertoire to their environment to some degree. One might argue that the university years off island are particularly formative in this regard.

While such speakers are often excluded from variationist sociolinguistic studies exactly because of these longer periods of absence, I included them in the present study. An attempt to describe the language situation in Bermuda would not be representative of the speech community if such a vital part were excluded on the basis of their acts of mobility, which are an important characteristic of the Bermudian speech community in general and the younger generations in particular (see Chapter 4).

A further question that needs to be raised at this point is in how far more recent immigration movements have influenced the contemporary linguistic situation in Bermuda. With the arrival of the Portuguese, multilingualism has become a linguistic reality for a significant part of the population (though Portuguese is not officially recognized in Bermuda). While it is difficult to assess in how far this has had and continues to have an effect on BerE, one might assume that the transfer and adoption of Portuguese features into BerE as a consequence of contact-induced change have been limited, because the Portuguese community has been stigmatized and socially isolated for a long period of time (especially during the 20th century, Portuguese immigrants faced discrimination, as a "job-category restriction", which was in place until 1982, meant that they could only work in "farming, cleaning and gardening jobs"; Royal Naval Dockyard Museum, November 2012).

Linguistic consequences have likely affected the Portuguese speech community: i.e. Portuguese immigrants shifting to English, acquiring it as a second language, and locally-born children acquiring English as a first language. An in-depth study of the Portuguese and their language practices would be necessary, however, to shed light on such questions of language maintenance, shift and loss in the Portuguese speech community. Compared to the Portuguese, the Filipino community, who has started to arrive more recently, is less visible in the linguistic landscape of Bermuda; it remains to be seen in how far this community influences the local linguistic situation, as more time passes.

To summarize, the contemporary linguistic context in Bermuda seems to be characterized by both linguistic homogeneity (in regional terms) and linguistic diversity (in terms of other extralinguistic dimensions; compare Reaser & Torbert 2004: 391 and their description of the Bahamas). Factors such as extensive individual variation, diverse ancestries, high levels of interaction and mobility, as well as more recent processes of language contact complicate the situation to such a degree that classifying the variety remains challenging, as also highlighted in Section 2.2.2.

CHAPTER 4

Methodology and data

I begin this chapter in Section 4.1 with a discussion of methodological considerations that have informed the data collection process, because fieldwork methodology has had a significant impact on the nature of the present study's dataset. The structure and meta-data as well as caveats of this dataset are then addressed in Section 4.2. While the analyses are based on a combination of qualitative and quantitative approaches, I detail the methodological background for each individual analysis in the respective sections below (Section 5.2.1 focuses on the typological analyses, Section 5.3.1.1 on CCR, and Section 5.3.2.1 on past *be* leveling) and only address more global, overarching methodological aspects in this chapter.

4.1 Fieldwork methodology

The first fieldtrip to Bermuda in November 2012, when I was accompanied by Danae Perez and her two children, was essentially devised to tackle the under-researched nature of BerE. We aimed to familiarize ourselves with the language situation, the societal structure and contemporary social, economic, and political contexts and approached the data collection process from a more open and broader angle compared to the second fieldtrip in January 2014, when I alone returned to Bermuda. On the basis of the insights gained and the data collected during this first trip, the pilot study was devised (Eberle & Schreier 2013) and the definite research questions and methodological foci for the second fieldtrip were established, so as to account for the particularities of the locale.

Prior to the first departure, I extensively reviewed existing literature on the Bermudian language situation and a broad range of topics connected to Bermuda: among others, Bermuda's historical development and society (Greene 1901; Strode 1932; Craven 1937a and b, 1938; Tucker 1975; Zuill 1983; Rich & Ives 1984; Jarvis 2002, 2010a, 2010b; Tucker 2011), slavery (Bernhard 1985, 1999; Packwood 1975) and U.S.-Bermudian relations (Slayton 2009). I also consulted web sources, such as government, tourism and newspaper websites, blogs and social media platforms for further information. Simultaneously, I contacted a number of people who would qualify as "professional stranger-handlers" (Agar 1996: 135): i.e "natural public

relations experts" who habitually deal with outsiders. I had pre-identified such members of the community, affiliated with different government, cultural or academic institutions, as well as key figures in the private sector. Almost all agreed to a meeting and/or suggested further people to contact.

In liaising extensively with a pre-selected number of people and in contacting Bermudians they had suggested in snow-ball fashion (see Wolfram 2011), I followed a more classical friend-of-a-friend approach than Perez during the first fieldtrip. She focused more on taking part in family-oriented activities, going to playgrounds, visiting day care facilities with her children and conducting impromptu interviews. Thus, we came into contact with people of diverse backgrounds and different strata of Bermudian society.

During the second fieldtrip, I again heavily relied on the friend-of-a-friend approach in order to expand an already existing network of personal contacts. Visiting in January, during off-season, turned out to be an advantage: first, fewer tourists travel to Bermuda at this time of year and services in the hospitality sector slow down considerably. The general pace of life was thus more relaxed, which resulted in Bermudians having more time to participate in my study. Second, my presence sparked more interest in January than in November and many Bermudians were curious to find out why I was visiting, which started many conversations.

In the context of the present setting, I deemed it especially crucial not to reiterate previously established conceptualizations and representations which characterize and popularize Bermuda as an island paradise during the semi-structured sociolinguistic interviews, unless they were brought up by informants themselves. Because such representations and descriptions "work to produce a very particular picture" of the islands (similarly as Fletcher 2008: 63 argues with regard to Pitcairn), they influenced both the way I initially approached the locale and the way Bermudians interact with outsiders (for instance the notions they invoke when discussing the islands; compare Schneider 2011: 90); an aspect I took into account when I devised the interview forms.

I prepared two different versions on which I relied during the interviews, one for professional stranger-handlers and one for informants. The first centered on meta-linguistic questions about language structure and use in Bermuda as well as historical and social aspects. The second was designed to limit effects of the "observer's paradox" as much as possible (Labov 1972) and to create a relaxed atmosphere for conversations based on topics that informants would feel comfortable discussing on tape. It included questions to elicit speakers' meta-data and details on their occupational history as well as questions on topics such as life in Bermuda, traditions, oral histories, food and cooking, or other leisure activities: i.e. "topics within the parameters of the spontaneous natural conversation interview in sociolinguistics" (Mallinson & Wolfram 2002: 749, relying on Labov 1966 and Wolfram & Fasold

1974). Structured interview schemes were not used (compare Schreier 2003: 82, drawing on Labov 1984 and also Wolfram & Fasold 1974).

Because I was introduced to many informants as a linguist studying the local variety, many of my interviews also include meta-linguistic aspects, however: such a framing led to numerous comments on the informants' parts. Accordingly, I decided to adjust the interview form where necessary and appropriate, integrating questions of such a nature in a similar way as I integrated new insights of previous conversations to ensure that informants would feel comfortable. These meta-linguistic comments would warrant further in-depth research, for instance in a study on indexicality.

The nature of the interviews was also influenced by my status as an outsider. Firstly, while I was able to ask questions and discuss topics that would not have been discussed amongst Bermudians, it proved more difficult to enter the community (just as Schreier 2003: 76 outlines with regard to Tristan da Cunha). Secondly, many informants knew that English or indeed BerE was not my first language, which had a considerable effect on the communicative situation: they made use of "comprehensibility strategies" (Coupland & Giles 1988: 179) and being understood became one of their priorities. As a consequence, the recordings are influenced by notable addressee effects. S48, for instance, explicitly addressed this: "right, but you're not gon hear that [how she would speak with her friends] if you're interview me because I wanna make sure […] that you understand it". Thirdly, my recordings thus undoubtedly also reflect the Bermudian tendency to style shift (see Section 3.2), as the context was not too favorable in terms of eliciting casual, vernacular speech (see below; compare Schreier 2003: 74). Further research focusing on short-term accommodation and style shifting is needed in order to determine how influential these phenomena are; a comparative study combining data collected by a Bermudian and outside researcher would shed light on such effects.

Once I had grasped the extent to which these aspects influenced the situation on site, I adjusted the overall data collection process again. While a diverse set of elicitation methods was initially envisaged, with sociolinguistic interviews and a complementary reading passage and word list, to also collect data on realizations of phonological features, such a combined approach lost importance, because the primary aim was to elicit as casual speech samples as possible. So as not to render the atmosphere during the interviews even more formal, the reading passage and word list were only used when informants themselves discussed such issues or offered to read a passage (which only happened in one interview with S60, who read a different passage though).

The interviews, then, were conducted either individually or in groups of up to five people, with the fieldworker(s) present. In an attempt to minimize the effects of style shifting and the observer's paradox, I tried to record more speakers in groups

or else focused extensively on informants feeling comfortable during the second fieldtrip. I took into account that this might lead to "lengthy periods of silence on tape, or 'role reversal'" (Schreier 2003: 81–82) and not only hoped that informants would share their stories, but also contributed to the conversations. As a result, there are multiple interview excerpts where informants repeatedly direct questions at me. In addition, and similar to Schreier (2003: 81), I highlighted that the dialect was my focus, i.e. how my informants spoke rather than what they were speaking of, so as to reduce their levels of anxiety.

While I also made use of some ethnographic field methods, such as taking as extensive fieldnotes as possible, a longer stay in Bermuda would be necessary to avoid a particular danger discussed by Bowern (2013: 347): "[a] superficial familiarity with the community is bound to result in bad generalizations". I am aware of this and take it into consideration especially in the typological analyses, where it is necessary to fall back on generalizations of some sort.

4.2 The corpus and potential caveats

The historical profile and diachronic parts of the typological analyses addressed in Chapters 3 and 5, respectively, are based on literature that was retrieved from an extensive (web) search for historical sources in multiple sites. Especially in Bermuda, many relevant sources were found at local institutions, such as the Bermuda National Library, Bermuda Archives, Bermuda National Museum, smaller museums scattered over the islands, libraries of schools and the Bermuda College, as well as local bookstores. In addition, I interviewed a number of historians and people affiliated with these institutions and inquired into the state of sources that deal with Bermuda's history and/or the language situation during BerE's early formation period. As these resources and interviews also provided glimpses into the community's history and development, social practices and the general discourse surrounding the islands, this process also informed the choice of topics in the sociolinguistic interviews, as outlined above.

One of the main caveats with regard to these historical sources concerns their nature: since Bermuda is a comparatively old settlement in British colonization history, many sources remain fragmentary or discuss issues that may be relevant, but not reviewed in detail. Especially sources covering aspects of the early settler population and the enslaved population as well as their exact origins are scarce. The historical parts of the present study reflect this, as an in-depth study with a decidedly historical focus would be necessary to unearth further clues that might be found in registers of names, certificates of land ownership, or wills, for instance.

The description of BerE morphosyntax and the synchronic analyses, then, are based on the sociolinguistic interview data collected during both fieldtrips. The interviews amount to a corpus of contemporary BerE which consists of approximately 46 hours of conversation with 69 Bermudians.[12] While the duration of the sociolinguistic interviews varies considerably (for different reasons; the longest lasting about two hours and the shortest seven minutes, which was cut short for technical reasons) and speakers in group interviews sometimes only participate with sporadic comments (compare Schreier 2016b), Table A1 in Appendix 1 provides an overview of the informants' characteristics. All informants were informed about the purpose of the study before the interviews and assured anonymity, which is why they are referred to by number throughout the book.

The speaker sample is quite balanced regarding informants' places of residence, as it includes speakers from most parishes. In terms of gender, however, there is a bit of a bias towards male speakers, with 40 male and 29 female speakers. Information regarding the informants' age, ethnicity, education level and levels of mobility is provided where possible; in the following, I address considerations that have influenced the categorization of speakers according to these extralinguistic factors, which are used in the quantitative analyses, and review certain selected cross-sections of the speaker sample.

The speakers, who range in age from 13 to 92, are divided into four age groups according to important sociohistorical landmarks in Bermuda's recent history (similarly as Schreier 2003: 89 categorized the speakers of his Tristan da Cunha sample). The first group of oldest speakers, group 1, is comprised of informants who were born before or in 1941, i.e. before WWII and the arrival of U.S. military forces. Group 2 includes speakers who were born after the outbreak of the war and before segregation started to formally come to an end in Bermuda. During the early 1960s, Bermuda's society slowly started to integrate, which affected many dimensions of Bermudian life (for example the educational, political and economic system; Bermuda National Museum, November 2012). Speakers born between 1961 and 1979 form group 3, as these years mark the increase in tourist numbers, which peaked in 1985. Group 4, finally, includes the youngest speakers born in or after 1980, into a period when Bermuda's economic focus started to shift to exempted companies. This results in the following speaker numbers according to age group and gender (Table 3):

12. Because one speaker was raised in the U.S. until the age of seven, I decided to only include the data of 68 informants, so as to base the analyses on data of speakers with as similar language acquisition backgrounds as possible.

Table 3. Number of speakers according to age group and gender

	Age group 1	**Age group 2**	**Age group 3**	**Age group 4**	**Total speaker numbers per gender**
Male speakers	S8, S11, S34, S40	S1, S2, S3, S5, S6, S9, S10, S12, S14, S15, S17, S19, S22, S23, S24, S28, S33, S35, S37	S4, S7, S13, S18, S21, S25, S26, S36, S38	S16, S20, S27, S29, S30, S31, S32, S39	40
Total male speakers per age group	4	19	9	8	
Female speakers	S45, S49, S51, S52	S42, S44, S46, S47, S48, S53, S55, S56, S64, S67, S69	S41, S43, S50, S57, S68	S54, S59, S60, S61, S62, S63, S65, S66	28
Total female speakers per age group	4	11	5	8	
Total speaker numbers per age group	**8 (11.76%)**	**30 (44.12%)**	**14 (20.59%)**	**16 (23.53%)**	**68**

While all cells are filled, group 2 is somewhat overrepresented, with 44.12 percent of all speakers, and group 1 somewhat underrepresented, with 11.76 percent (see below for a discussion of potential reasons).

The decision to integrate age as a social variable is based on an apparent time approach, as outlined by Wolfram, Childs and Torbert in their (2000: 24–25) study, for instance: the oldest speakers of the sample are assumed to "give a picture of what the dialect may have been like" in earlier time periods, whereas the youngest speakers "will provide a picture of the current state of the dialect", in relation to the linguistic variables under analysis.

A second social factor that is also taken into account here is ethnicity. As outlined in Chapter 3, the Bermudian community is very diverse in this regard, owing to Bermuda's historical development and current situation; consequently, a categorization of speakers into ethnic groups is complex indeed.[13] While the Bermudian

13. For this reason, I adopt Mallinson and Wolfram's (2002: 746) point of view, which they formulate in connection to their community under investigation (a "bi-ethnic enclave community in the mountains of western North Carolina", 2002: 743): I want to avoid specifically emphasizing parts of people's ethnicities "while excluding other[s]".

Census of Population and Housing (2010: 42) includes a section on "race" which provides different categorizations (Black, White, Asian, Black and White, Black and Other, White and Other, Other racial groups, and Not stated), I refrained from adopting this categorization, because a number of informants addressed it in differing ways during the interviews, agreeing with or opposing the categories. Implementing categories based on self-identification proved challenging as well, however, because many Bermudians indicated that ethnic ancestries are one of the important factors governing language use in Bermuda, yet stressed the complexity of the situation (see also Hall 2018 and 2019).

Accordingly, taking into consideration the present study's foci, the particularities of the community, the varying statements of informants, the complexity of the situation as well as the division along ethnic lines suggested in previous literature, I adopted the following procedure: I classified people into three groups, so as to examine in how far the three main ancestral links might be traced in BerE morphosyntactic variation, i.e. into speakers of mainly European descent, speakers of (in part/recent) African descent (a term suggested by Edward Harris, pc. January 2014) as well as speakers of (in part) Native American descent. Because my sample does not include speakers of Filipino descent, the Census' Asian category is not reflected in the present study. This results in the following numbers for each ancestral link which was implemented in the analyses, cross-referenced with age group and gender (Table 4):

Table 4. Number of speakers according to age group, gender and ethnicity

	Age group 1	**Age group 2**	**Age group 3**	**Age group 4**	**Total speaker numbers per gender and ethnicity**
Male speakers of (in part/recent) African descent	S8, S11	S1, S6, S9, S10, S14, S17, S19, S22, S23, S33	S4, S13, S18, S21, S26, S36	S16, S30, S32	21
Female speakers of (in part/recent) African descent	S45, S49, S51	S42, S44, S46, S48, S53, S55, S64, S67, S69	S41, S50, S57	S60, S65, S66	18
Total number of speakers of (in part/recent) African descent per age group	5	19	9	6	

(*continued*)

Table 4. (*continued*)

	Age group 1	**Age group 2**	**Age group 3**	**Age group 4**	**Total speaker numbers per gender and ethnicity**
Male speakers of European descent	S40	S2, S3, S5, S12, S15, S24, S28, S37	S7, S25, S38	S20, S27, S29, S31, S39	17
Female speakers of European descent	S52	S56	S43, S68	S54, S59, S61, S62, S63	9
Total number of speakers of European descent per age group	2	9	5	10	
Male speakers of (in part) Native American descent	S34	S35	–	–	2
Female speakers of (in part) Native American descent	–	S47	–	–	1
Total number of speakers of (in part) Native American descent per age group	1	2	–	–	
Total speaker numbers per age group	**8**	**30**	**14**	**16**	**68**

As can be seen in Table 4, some cells remain empty when the speakers are classified according to such a three-fold categorization; I re-address methodological considerations and procedural adjustments which result from data sparsity in the individual analyses below (see Section 5.3).

At this point, however, I want to highlight that the complexities which characterize the Bermudian context warrant a much more in-depth discussion than is possible within the scope of the present study, including a critical discussion of conceptualizations of race and ethnicity and the labels that are used to refer to these conceptualizations as well as social practices and identity constructions (compare Hall 2018 and 2019; similarly as Hall 2019: 226 highlights in her article, I also wish

to maintain that I do not use the terms I have decided to adopt here uncritically, but within the specific context of this study's foci and aims).

The third social factor which is taken into account is level of education. This was also mentioned numerous times during the interviews: in response to my metalinguistic questions, many informants made reference to the fact that attendance of public or private school as well as overall level of education are influential aspects governing language use in Bermuda. To test for this, I classified speakers on the basis of the available details into four groups: namely (1) Bermudians who had not finished the obligatory school years (group 1); (2) Bermudians who had completed secondary school in Bermuda (group 2); (3) Bermudians who went to high school and college in Bermuda (group 3); as well as (4) Bermudians who went to college and/or university off-island (group 4). Speakers for whom no information was available were categorized into a separate group (group 5), even though a tentative classification might have been possible based on their references to their work life. Table 5 provides an overview of the speaker sample according to gender and education level:

Table 5. Number of speakers according to gender and education level

	Group 1	**Group 2**	**Group 3**	**Group 4**	**Unknown**	**Total speaker numbers per gender**
Male speakers	S22, S40	–	S1, S10, S14, S21, S24, S32	S2, S3, S5, S6, S13, S15, S20, S23, S25, S27, S28, S29, S30, S31, S36, S37, S38, S39	S4, S7, S8, S9, S11, S12, S16, S17, S18, S19, S26, S33, S34, S35	40
Total male speakers per education level	2	–	6	18	14	
Female speakers	S47	S65, S66	S46, S52, S53, S69	S41, S43, S45, S48, S50, S54, S55, S56, S57, S59, S61, S62, S63, S64, S68	S42, S44, S49, S51, S60, S67	28
Total female speakers per education level	1	2	4	15	6	
Total speaker numbers per education level	**3 (4.41%)**	**2 (2.94%)**	**10 (14.71%)**	**33 (48.53%)**	**20 (29.41%)**	**68**

Here too, some of the cells remain empty, especially those of groups with lower education levels (I re-address certain levels of homogeneity in the speaker sample more generally below).

In this respect, two additional aspects need to be taken into consideration. First, Bermudians in older age groups might have attended segregated schools. Since segregation was abolished comparatively late, this might have influenced language acquisition and language use of a number of informants, for instance in terms of acquisitional targets as well as peer orientation and interaction. Second, as discussed in Section 3.1.5, pursuing tertiary education on university level is not possible in the local context. Since moving off-island for a certain period of time is a prerequisite for attending university, I differentiated between groups 3 and 4, i.e. Bermudians who attended college in Bermuda and off-island, respectively. As a consequence, however, the social variables education and mobility are connected (see also Chapter 5.3).

At this point, I want to zoom in on this last extralinguistic factor, i.e. levels of mobility. While speaker samples in more classical dialectological research tend to mainly include informants who have geographically stable biographies (see Eckert 2000), it is my impression that only very few Bermudians would fit such a description, especially among the younger generations (as discussed above). A similar choice to focus on data from non-mobile informants only would consequently not reflect the Bermudian speech community very well. For this reason, I also interviewed speakers with mobile biographies – and asked about their levels and acts of mobility particularly during the second fieldtrip – in an attempt to shed light on communal and individual patterns of mobility (see Kerswill & Williams 2005: 1037 for a more general discussion).

Including mobility as a social variable in variationist sociolinguistic analyses, however, is not without its challenges, especially when it comes to adequately representing a community which "is not equally well-stratified in terms of individual mobility" (similarly as Schreier 2003: 80 highlights in the Tristanian context). In an attempt to account for this, I have discussed mobility more generally and particularly within the Bermudian context in Chapters 2 and 3 in as much detail as the present study's scope allows.

The fact that "mobility has rarely been studied as an independent extralinguistic variable *per se*" (Schreier 2003: 89, italics in the original) further complicates the inclusion and quanitification of mobility as a social variable. One example where it is included is Schreier's (2003) study (compare also studies within diaspora communities and transnationalism frameworks, which address questions of a similar nature, for instance Sharma 2014); a study I focus on here, because Schreier proposes a "mobility index" which I have adopted and adapt for the present purpose, in

order to implement mobility within the variationist framework of the quantitative analyses (see below). This index is based on a number of criteria deemed

> crucial in the assessment of [mobility] effects: (1) the length of stay outside the community; (2) the place of stay […]; (3) the motivation for leaving the community (holidays, medical vacation, further training/education); and (4) the individual's age at the time of departure. (Schreier 2003: 89)

Taking these criteria into account, Schreier (2003: 90) categorizes the speakers of his Tristanian sample into three mobility groups, namely "ranging from no or very little mobility (group 1) to some moderate mobility (group 2) to high mobility, often in connection with off-island education (group 3)".

Such an index is subject to a number of caveats, however. For one, "it is not easy to devise an objective index of mobility strength" (Schreier 2003: 89) when it is based on subjective and impressionistic assessments of the dimensions outlined above to classify speakers. Indeed, a quantification of mobility based on such a classification is still qualitative in nature; an aspect that needs to be considered here and warrants further discussion in future research. Secondly, any attempt at a quantification is simplistic by nature, no matter how many factors are taken into consideration, because of the complexities of mobility as a theoretical concept outlined in Chapter 2. An adequate representation of the intricacies of space, spatiality and mobility is challenging and would also need further discussion, beyond what is possible within the scope of the present study. Thirdly, the general assumption that increasing levels of mobility "equal an increase in standard forms" (Schreier 2003: 90) is not necessarily adequate in all contexts: Schreier (2003: 90; compare also Hundt 2014) highlights that "individual and psychological aspects, such as the preservation of a distinctive local identity, are crucial factors in the rate of dialect levelling and change as well", an argument which is corroborated by insights gained by Labov (1963) or Wolfram, Hazen and Schilling-Estes (1999), for instance.

Nevertheless, Schreier's index provides a baseline for the categorization of speakers that I have adopted for the present purpose. Based on the theoretical discussion in Chapter 2, I have additionally implemented the dimensions of duration (i.e. short-term or long-term acts of mobility) as well as distance (intra-island or international acts of mobility). In terms of distance, however, a point raised in Section 2.2.3 is of particular importance here: namely that diverse conceptualizations of distance may result in different assessments of what is considered short- or long-distance, also in the Bermudian context. To provide but one example: informants repeatedly made reference to the fact that they consider New York to be very close to Bermuda, even though they have to fly out to reach this destination. While this is indicative of perceptions of distance, such a trip would be considered

a long-distance act of mobility in my classification below, because it takes the informant in question into international territory (as it is a cross-border movement). As a consequence, the conceptualizations and implementation of distance here might very well differ from informants' conceptualizations, which in turn might differ from individual to individual; a point which again warrants further discussion in future studies (for instance with regard to questions as to how perceptions of distance and psychological distance influence informants' mobility levels).

Accordingly, the speakers in the present sample were classified into five groups. Group 1 includes informants who display high levels of intra-island mobility, i.e. engage in more mundane and short-term acts of mobility within Bermuda. They may have left the islands, but only a limited number of times, for holidays for instance. Group 2 consists of speakers who engage in more long-term acts of mobility within Bermuda, moving permanently across administrative boundaries and changing parishes for example, and who might also have left the islands for short periods of time. The next group I subdivided into groups 3.1 and 3.2: informants who display high-levels of intra-island mobility (both short- or long-term) and also often travel overseas for shorter periods of time were classified into group 3.1, whereas those who travel overseas for longer periods of time were classified into group 3.2 (for example, Bermudians who have vacation homes). Similarly, group 4 was divided into three sub-groups: speakers who display high-levels of intra-island mobility, left the islands to obtain tertiary education during a linguistically formative period and stayed in Bermuda after their return (for most parts) were classified into group 4.1. Those who returned, but continued to travel extensively for shorter periods of time were classified into group 4.2 and those who, after their return, again spent extensive periods of time abroad were classified into group 4.3. Group 5, finally, includes informants for whom no information was available. Where details were incomplete and classifications, as a result, problematic, I assigned speakers to the highest possible mobility group according to known facts: S2, for instance, attended university abroad, but no further details that concern his individual levels of mobility are available, so that I included him in group 4.1, to account for the fact that he had spent some formative years abroad. This approach results in the speaker numbers per mobility group and gender outlined in Table 6.

An important caveat which has not yet been raised and which needs to be taken into account in connection to such a classification concerns the fact that, for now, people coming to Bermuda (both tourists and more permanent immigrants) are not considered. As a consequence, in how far Bermudians habitually interact with non-Bermudians in the islands, which significantly influences language use because of exposure to other local varieties of English (and other language varieties, of course), does not factor into the present classification. Such a dimension is extremely influential in Bermuda, however, and also warrants further research.

Table 6. Number of speakers according to mobility group and gender

	Male speakers	Female speakers	Total speaker numbers per mobility group
Group 1	S7	S52	**2**
Group 2	S14	–	**1**
Group 3			
3.1	S9, S22, S24, S33, S34, S40	S42, S46, S47, S51, S53, S69	**12**
3.2	–	–	
Group 4			
4.1	S2, S3, S6, S16, S30	S43, S48	**7**
4.2	S19, S20, S23, S27, S29, S32, S39	S50, S54, S55, S62, S63, S64, S65, S66	**15**
4.3	S1, S5, S13, S15, S25, S28, S31, S36, S37, S38	S41, S45, S56, S57, S59, S61, S68	**17**
Group 5	S4, S8, S10, S11, S12, S17, S18, S21, S26, S35	S44, S49, S60, S67	**14**

To sum up, the social variables which are implemented in the present study thus largely reflect the variables investigated in previous variationist sociolinguistic studies and include an additional variable specifically chosen because of the present setting, i.e. levels of mobility. One variable that is excluded, however, is social class. While the Bermudian speech community is certainly socially stratified, a number of reasons led to this decision: firstly, social class is such a complex concept that a classification of speakers based on information gathered in the context of the present study would most likely result in too much of a generalization, which would not be reflective of the intricacies of the Bermudian situation. Secondly, implementing a more substantiated approach to the reality of social class in Bermuda would also make a much more substantiated discussion of sociological approaches to the concept of social class necessary than can be provided here because of the present study's foci. Thirdly, the speaker sample here is more homogeneous in terms of the informants' social stratification compared to the Bermudian speech community as a whole, so that an inclusion of social class as a variable would not be sensible.

A certain degree of homogeneity in the speaker sample has also become evident above, with regard to a number of the social factors that are included: indeed, the speaker sample in the present dataset is in some ways more homogeneous than a sample based on random sampling. With certain subsets of informants, for instance, one or more of the social factors may be less balanced: for example, in age group 4, the educational level is similar, as many of the informants of that group went to university off-island. This is certainly in parts a consequence of the

friend-of-a-friend approach adopted during data collection, since most informants suggested contacts with similar socio-demographic backgrounds as potential participants, naturally relying on their own network structures. I re-address questions as to how such issues affect the analyses and types of conclusions that can be drawn where necessary in the following sections and return to more in-depth methodological discussions in the individual analyses below (see Chapter 5 and, specifically, Sections 5.3.1.1 and 5.3.2.1). With regard to the aims of the present study, however, the nature of the dataset allows the identification of certain trends and patterns of morphosyntactic variation, as discussed in the next chapter.

CHAPTER 5

Bermudian English morphosyntax

Qualitative and quantitative analyses

Building on the Chapters 1–4, I first focus on the qualitative analyses in the present chapter. In Section 5.1, I provide a description of variation in BerE morphosyntax, which mirrors similar descriptive profiles of under-researched varieties, for instance put forth in Schreier (2008), Schreier, Trudgill, Schneider and Williams (2010) and Williams, Schneider, Trudgill and Schreier (2015). I then turn to a discussion of typological similarities and differences between BerE and English (-based) varieties in the wider geographical region in Section 5.2. Based on comparative analyses which rely on the *eWave*, I outline more global structural trends than in the quantitative analyses, where I zoom in and examine more fine-grained patterns of variation from a quantitative perspective, i.e. global rates and constraint rankings. In this section, Section 5.3, CCR (Section 5.3.1) and past *be* leveling (Section 5.3.2) are analyzed: I first focus on a description of the general outset, before reviewing (variable-)specific methodological considerations and caveats in more depth and discussing the findings.

5.1 A first descriptive profile of Bermudian English morphosyntax

The present profile of variation in BerE morphosyntax builds on and expands the preliminary profile outlined in Eberle and Schreier (2013), which focused on ABerE morphosyntax only. Based on the complete dataset of recordings and fieldnotes, I qualitatively review a selection of variable features according to similar categorizations as those put forth in Eberle and Schreier (2013), Schreier (2008), or in the *Lesser-Known Varieties of English* series (since BerE qualifies as such a variety and lacks description; i.e. noun phrase, adjective phrase, prepositional phrase, as well as verb morphology and syntax; compare also Schreier's 2008: 174 discussion of the selection process that governs such descriptions).

For each feature, I provide examples and additional details where possible (for example how informants [self-]reported or discussed usage) as well as indicate whether the feature in question is also part of the *eWave* feature list (note that I do not use quotation marks when referring to the *eWave* features; all are discussed

using the *eWave* terminology). Similarly as Schreier (2008: 174–175) does in his description of StHE morphosyntax, I also do not represent phonological characteristics to facilitate reading and draw examples from the present study's dataset, so that we can deduce only that some of my informants use the features in question during the interviews. Hence, the following profile provides a first glimpse into BerE's structure, which is to be refined in future research.

5.1.1 Noun phrase

First of all, the BerE noun phrase is occasionally characterized by absent definite and indefinite articles (Examples [2]–[7] and *eWave* feature 62 as well as [8]–[11] and feature 63, respectively). It is noticeable that definite articles are frequently absent before place names or in connection to the Portuguese Bermudians, as in Examples (4) and (7), respectively:

(2) and Ø Senior Islanders Club is located at Admiralty House (S3, Smith's Parish)

(3) that was only in <pause> Ø early 1990s (S5, Bermuda Islands)

(4) but there was still an influx of of them from uh Ø Azores and Portugal (S15, Pembroke Parish)

(5) put them into Ø government system (S38, Bermuda Islands)

(6) he died Ø year after I was married (S52, St. George's Parish)

(7) Ø Portuguese in Bermuda are like all scattered (S62, Pembroke Parish)

(8) they would be <pause> in prison I don't know Ø couple of years for I don't know theft or something in the UK (S37, St. George's Parish)

(9) you must be Ø St. Davids islander (S41, Bermuda Islands)

(10) so it's Ø very difficult situation (S43, Bermuda Islands)

(11) there was not much when I was Ø kid (S54, Pembroke Parish)

Further, definite articles might also be present where it might be unusual. This corresponds to both feature 64 (use of definite article where StE favors zero; see Examples [12]–[13]) and feature 60 (use of definite article where StE has indefinite article; see Example [14]) in the *eWave*:

(12) in **the** winter it's a bit gloomy (S27, Smith's Parish)

(13) go and work in in **the** Europe under the EU (S38, Bermuda Islands)

(14) now our kids are coming along and they're doing **the** similar thing (S69, Bermuda Islands)

The same can be said for indefinite articles, i.e. they might also be present where it might be unusual (feature 65):[14]

(15) when I went to work in **a** construction I was with Bermudian workers (S38, Bermuda Islands)

(16) as the the ones who have been here **a** generations (S48, Sandys Parish)

We also find invariant indefinite articles, i.e. *a* occurring before vowels, indicating that context (following environment) does not work as a conditioning factor (compare Schreier 2008: 178):

(17) coz I didn't think I had **a** accent <pause> until I went away (S18, Pembroke Parish)

(18) we have uh <pause> **a** annual egg show […] **a** exhibition (S32, Southampton Parish)

(19) she looked just like **a** Indian (S35, St. George's Parish)

(20) that's the thing about living on **a** island (S57, Sandys Parish)

While *these* and *those* are predominantly used as demonstratives in BerE, *them* is also sometimes found (feature 68):

(21) that they wanted **them** mineral bottles (S46, Southampton Parish)

(22) **them** girls will tell you (S34, St. George's Parish)

S36 discussed this feature as common and provided additional examples, namely *them lots*, *them boys* and *them girls*. Furthermore, in one instance, an informant used *they* instead of demonstrative *those*, but Example (23) is the only instance of this in my dataset:

(23) but **they** two are very good friends (S15, Pembroke Parish)

While the distinction between *this* and *that* is generally made, there might be no number distinction in these demonstratives (feature 71), as Example (24) illustrates:

(24) **this** 21 square miles was it (S3, Smith's Parish)[15]

A further prominent characteristic of the BerE noun phrase is variable pluralization. In most cases, plural nouns are marked; yet, we also often find noun phrases

14. This might also be an issue of concord rather than article use, as pointed out by Hundt (p.c., December 2017).

15. Based on an impressionistic assessment, a clear short vowel /ɪ/ is produced.

without *-s* suffixation, illustrated in Examples (25)–(28) (features 57 and 58, i.e. plural marking generally optional: for nouns with human referents and for nouns with non-human referents, respectively):

(25) deal with a lot of foreignerØ coming here to live (S7, Bermuda Islands)

(26) but all pictures of Bermuda sceneØ (S11, St. George's Parish)

(27) everyone we met <pause> spoke a minimum of five languageØ (S23, Warwick Parish)

(28) we had loads of touristØ here (S45, Bermuda Islands)

In my dataset, plural nouns of measurement generally take the *-s* suffix; only very few instances of unmarked nouns of measurement are found, as in Examples (29)–(30):

(29) it weighs 25 poundØ <pause> (S22, Southampton Parish)

(30) and they go up to about a 120 poundØ <pause> (S8, Pembroke Parish)

It is noticeable that these instances correspond to feature 56 in the *eWave*, i.e. absence of plural marking only after quantifiers. Instances of feature 52, i.e. associative plural marked by postposed *and them*/*them all*/*dem*, do not occur in my dataset – somewhat contrary to expectation, as S57 and S68 report formulations such as *my dad and them lot* as common. A final noticeable characteristic of BerE pluralization is that *-s* suffixation is sometimes extended to irregular plurals, as in Examples (31)–(32) (feature 48) and to non-count nouns, which might not occur with *-s* suffixation elsewhere, as in Example (33):[16]

(31) these are organic **chickens** (S1, Smith's Parish)

(32) and they had like **chickens** in it (S66, Sandys Parish)[17]

(33) they've had solid **foods** <pause> (S69, Bermuda Islands)

Most examples of the extension of plural suffixation to irregular plurals, however, seem to occur when informants address children:

(34) look at those two little **teethies** <pause> (S7, Bermuda Islands)

Regarding pronouns, the most common pattern of subject personal pronouns in BerE follows that of many other English varieties: *I* for first person singular, *you* for

16. An extension of the bisegmental plural *-s* allomorph is found in two examples in my dataset: *we mainly depend on* ***touristses*** (S11, St. George's Parish) as well as *a lot of* ***seniorses*** *around ask if* […] (S49, Southampton Parish).

17. Hundt (p.c., December 2017) points out that *chickens* is quite regularly used in other English-speaking communities, as a search in COCA for instance demonstrates.

second person singular, *he*/*she*/*it* for third person singular, *we* for first person plural, *you* for second person plural, and *they* for third person plural. The second person plural pronoun may occasionally be *y'all* (rarely) or *you lot* (more frequently), as in Example (35) (feature 34):

(35) **you lot** are just chicken (S22, Southampton Parish)

S36 discussed subject personal pronoun usage during our interview and reported a pattern of subject personal pronouns used with *be* (*um* 'I am', *ya* 'you are', *he's* 'he is', *she's* 'she is', *wah* 'we are', *you lots*, *them lots*), which suggests that the third person plural pronoun may also be *them lots* (this does not occur in my dataset, however). In a similar vein, S46 related that subjects such as *all we lot* and *none of we lot* also occur, as in Examples (36) and (37):

(36) **all we lot**'s going that means all of us are going (S46, Southampton Parish)

(37) **none of we lot** stayed around when they started their fullishness (S46, Southampton Parish)[18]

In coordinate subjects, we sometimes find *me* or *myself* instead of *I* as well as *him* instead of *he* (Examples [38]–[40] and features 7 and 8, *me* and *myself*/*meself* instead of *I* in coordinate subjects, respectively):

(38) that **their mother and myself** <pause> is not gonna be listening to all of those rata tat tat you know (S10, Bermuda Islands)

(39) **me and my friends** will go out (S20, Devonshire Parish)

(40) **me and him** we was kinda close (S22, Southampton Parish)

Similarly, but very rarely, feature 28 also occurs, i.e. the use of *us* plus noun phrase in subject function (Example [41]):

(41) **us as Bermudians** <pause> we do have the same accent (S62, Pembroke Parish)

A prominent feature regarding subject personal pronouns is that they are quite frequently dropped (features 43 and 44, i.e. subject pronoun drop: referential pronouns and dummy pronouns, respectively). Absent subject personal pronouns, as illustrated in Examples (42)–(46), occur in the interviews of almost all informants:

(42) I can be as Bermudian as you want, Ø depends who I am talking to (S3, Smith's Parish)

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18. *Fullishness* is one of the examples of a Bermudian expression which has most commonly been mentioned in my interviews. It has been described as spelled this way: it does not refer to 'foolishness', but rather to a more insane state of mind (see also Smith & Barritt 2005).

(43) and then **Ø** went to uh <pause> yeah **Ø** went to Zurich
(S29, Devonshire Parish)

(44) **Ø** don't know if he told you (S39, Devonshire Parish)

(45) **Ø** went to boarding school right after that in upstate New York
(S61, Devonshire Parish)

(46) and **Ø** just takes me directly to school (S65, Sandys Parish)

Object personal pronouns also follow the patterns found in other varieties, similar to subject personal pronouns above: *me* for first person singular, *you* for second person singular, *him*/*her*/*it* for third person singular, *us* for first person plural, *you* for second person plural, and *them* for third person plural. What can be found are the *eWave* features 1 and 2: *she*/*her* or *he*/*him* are sometimes used for inanimate referents. In Example (47), *she* refers to an airplane and in Example (48), to a boat:

(47) you see how high **she** is (S1, Smith's Parish)

(48) as fast as **she** goes (S16, Pembroke Parish)[19]

Regarding possessive pronouns, my dataset exhibits a very standard-like pattern (this corresponds to features 18–21 as well as 23–27 in the *eWave*: subject pronoun forms as [modifying] possessive pronouns: first person singular, first person plural, third person singular, third person plural; as well as second person pronoun forms other than you as [modifying] possessive pronoun, object pronoun forms as [modifying] possessive pronouns: third person singular, third person plural, first person singular, first person plural). The only variable feature that can be found is that possessive pronouns might sometimes be absent, as in Example (49):

(49) **Ø** wife and daughter won't let me go anywhere in a boat again anymore
(S40, Southampton Parish)

Possessive noun phrases generally display genitive *-s* suffixation; this suffix is categorically present in my dataset (feature 77).

As for reflexive pronouns, we generally find the same paradigms as in many other varieties of English, but some regularized forms, such as *hisself* or *theirselves* in Examples (50)–(51) (feature 11), occasionally also occur. Further, some reflexive pronouns lack number distinction (feature 14), as Example (52) illustrates:

(50) he never repeated **hisself** (S34, St. George's Parish)

(51) some certain ways they carry **theirselves** uh (S7, Bermuda Islands)

19. This is very common in other English-speaking communities.

(52) I feel that we can govern **ourself** as Bermudians and stuff, but can't we can't defend **ourself** <pause> (S30, Warwick Parish)

In terms of the quantifiers *many* and *much*, a few instances of *much* occurring in contexts where *many* would be expected can be observed (see Examples [53]–[54]):

(53) as **much** times as I'm driven [the boat] to there and I can see the dock (S16, Pembroke Parish)

(54) with that **much** riches in there (S32, Southampton Parish)

Finally, as Examples (55)–(57) illustrate, auxiliary *has* is found to occur with plural noun phrases in BerE present perfect:

(55) but a lot of bottles that'**s** been in the ocean (S8, Pembroke Parish)

(56) few people that'**s** been around all these old timers (S34, St. George's Parish)

(57) because my eyes **has** weakened <pause> (S49, Southampton Parish)

5.1.2 Adjective phrase

BerE comparison strategies mirror those of other English varieties: an analytic strategy expresses comparatives with *more*/*most* plus adjective and a synthetic with *-er* and *-est* as suffixes. While the latter is generally used with monosyllabic adjectives, we also rarely find analytic comparison strategies used in such contexts (feature 80), as in Example (58):

(58) you talk **more fast** (S30, Warwick Parish)

Synthetic marking is occasionally also extended to adjectives with three or more syllables (feature 79). Example (59) illustrates this regularization process, while also exemplifying a mixing of the two comparison strategies. Such double comparatives can also be found in my dataset (feature 78), as Examples (60) and (61) illustrate:

(59) the **most beautifullest** beads you can find (S49, Southampton Parish)

(60) that's probably the **most scariest** (S32, Southampton Parish)

(61) siblings, they should be much **more closer** (S64, Warwick Parish)

Common in BerE are adverbs displaying the same form as adjectives (feature 221), as in Examples (62)–(66):

(62) some came **direct** from Africa (S5, Bermuda Islands)

(63) which ended up being cheaper I think than flying **direct** (S31, Smith's Parish)[20]

(64) it's gonna come out **real** fast (S44, Pembroke Parish)

(65) we might say the word a little **different** (S50, Bermuda Islands)

(66) and nobody would say any **different** (S68, Pembroke Parish)

As becomes evident from Example (64), degree modifier adverbs also occur without the adverbial suffix (feature 220). S46 reported this as very common and provided four examples of *real* + adjective/adverb as typical BerE expressions in our interview (for instance, *real ignorant* or *real fullish*).

Less commonly we find the opposite, i.e. an adjective which is marked with the adverbial suffix, as in Example (67) below:

(67) I feel that it's a trait very **uniquely** to Bermuda (S30, Warwick Parish)

5.1.3 Prepositional phrase

One of the most common features of variable BerE morphosyntax is that prepositions are frequently absent (feature 216). This occurs in the speech sample of almost every informant I interviewed. Considering Examples (68)–(72), it becomes evident that absence of prepositions is particularly frequent with locatives:

(68) going **Ø** town shopping (S4, Bermuda Islands)

(69) I went **Ø** Switzerland uhm uhm about a year about a year and a half ago (S17, Pembroke Parish)

(70) yeah I went **Ø** school in many places, actually went **Ø** school in Florida (S36, Southampton Parish)

(71) they've been **Ø** Germany, been **Ø** Switzerland <pause> (S42, Bermuda Islands)

(72) the fish cakes which we do **Ø** Easter (S55, Pembroke Parish)

Indeed, Example (68), i.e. *going Ø town*, was most reported as a typical Bermudian expression during my interviews, together with the hesitation marker *uhm uhm* or *um um* illustrated in Example (69); these two features are very salient.

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20. *Direct* as an unmarked adverb is quite commonly found to collocate with *flying* in my dataset; it might very well be that this is in the process of becoming lexicalized. Hundt (p.c., December 2017) highlights that it is also quite commonly used with motion verbs in other varieties, as a search in COCA demonstrates.

Further, prepositions are frequently absent in connection to spatial reference in Bermuda. Especially examples such as (73) and (74) are common:

(73) down **Ø** St. George's (S40, Southampton Parish)

(74) have you been **Ø** Dockyard? (S44, Pembroke Parish)

Example (73) also illustrates one aspect of the Bermudian system of spatial relations, since St. George's is usually referred to as *down island* and Somerset and Dockyard as *up island* (as discussed in Example [1] in the Introduction).

In this context, another noteworthy characteristic is that Bermudians predominantly use *in* rather than *on* when referring to Bermuda. Example (75) illustrates this:

(75) how long are you **in** the island for? (S3, Smith's Parish)

Such prepositional usage is indicative of spatial conceptualizations and positional and orientational metaphors in Bermuda (compare Ronström 2011). The argument Ronström (2011: 241) raises in connection to similar systems of reference in comparable island settings is particularly insightful in this regard: "what the informants in places like Jersey, the Isle of Man, Shetland and Norwegian Sandnes, [sic] underline is the sense of identity and belonging in a society that comes with 'in'". In how far this can be argued in the Bermudian context as well would warrant a separate study (for instance in line with Ronström's 2011 case studies).

Another feature that is noticeable in my dataset is the usage of the suffix *-time* to form an adverb (feature 219), as in Examples (76)–(78):

(76) cup match is **summer-time** right? (S14, Southampton Parish)

(77) Bermuda's tourism was was **winter-time** (S40, Southampton Parish)

(78) we normally have that **Christmas-time** (S64, Warwick Parish)

These might, however, also be instances of reduced prepositional phrases.

Finally, usage of prepositions in contexts where these particular prepositions would not be expected (such as *it consistØ **on** ribbon* [S49, Southampton Parish]) is speaker-specific in my dataset.

5.1.4 Verb morphology and syntax

To begin with, existential constructions with *there* are frequently found in my dataset. Sometimes *there* might be absent, as in Examples (79)–(80):

(79) I think **Ø** was only one day I had on gloves (S42, Bermuda Islands)

(80) **Ø** is so much language just around that (S48, Sandys Parish)

Existential or presentational *there's*, *there is* or *there was* used with plural subjects is also very commonly found (Examples [81]–[86], feature 172; note that Schreier 2008: 197 discusses *there is* and *there was* as cases of present and past *be* leveling). This characteristic occurs in almost every speaker sample:

(81) but **there's** these one or two things that Bermudians can't get away from (S10, Bermuda Islands)

(82) **there's** two other stops in Somerset Village (S20, Devonshire Parish)

(83) when I was coming up then **there was** a lot of elderly people around (S47, Pembroke Parish)

(84) **there's** my grandchildren there (S51, Pembroke Parish)

(85) **there's** a few Caribbean restaurants (S55, Pembroke Parish)

(86) I think **there's** a lot of things that are in the works to sort of revive tourism (S63, St. George's Parish)

Also, existential constructions with *it* are not uncommon and *it* may be absent, similar to *there* above, in both referential and non-referential constructions (feature 46 and 47, deletion of *it* in referential and non-referential *it is*-constructions, respectively). Examples (87)–(88) serve as an illustration:

(87) **it's** a book here if you can get it (S33, Pembroke Parish)

(88) **it wasn't** no Internet (S30, Warwick Parish)

Again similar to above, *it's*, *it is* or *it was* may sometimes occur with plural subjects, as in Examples (89)–(92):

(89) **it's** a lot a jokes that go on about them (S19, Southampton Parish)

(90) they thought **it was** two bikes coming (S21, Pembroke Parish)

(91) and when I looked **it was** these doll houses (S47, Pembroke Parish)

(92) **it's** not a lot of Bermudian teachers (S48, Sandys Parish)

Before infinitives, *to* might be deleted (feature 208), though this is rarely the case in my dataset (Examples [93]–[94]):

(93) you want somebody **Ø** talk back to you (S34, St. George's Parish)

(94) tell your husband **Ø** come (S44, Pembroke Parish)

With regard to verbal morphology, two of the more prominent features are variable realization of third person singular present tense *-s* (feature 170) as well as invariant present tense forms resulting from a generalization of the *-s* suffix in that it is realized with other grammatical persons (feature 171). Both regularization processes are not uncommon in my dataset (Examples [95]–[98]):

(95) what he's seen in Bermuda is not <pause> I couldn't even say truly **existØ** anymore (S26, Pembroke Parish)

(96) he **soundØ** very different from me (S56, Bermuda Islands)

(97) because it's a lot of uhm non-St. Davids islanders that **lives** on St. Davids (S47, Pembroke Parish)

(98) my brother and a sister **lives** in Hamilton parish (S64, Warwick Parish)

An additional aspect that is noticeable in this context is that the generalization of the *-s* suffix often co-occurs with the verb *say* in a quotative context. Example (99) illustrates this:

(99) I **says** what? […] I **says** that's unusual (S69, Bermuda Islands)

It would be interesting to investigate whether this particular construction has been reanalyzed and lexicalized as a quotative in future research.

As for past tense affixation, regular verbs often lack *-ed* suffixation (feature 132); hence, it is necessary to rely on context for interpretation (Examples [100]–[103]):

(100) I **stopØ** playing when I was about […] (S13, St. George's Parish)

(101) they **ownØ** some land down where the airport is now (S28, Warwick Parish)

(102) so we **walkØ** past and I said […] (S42, Bermuda Islands)

(103) and so then I **realizeØ** I have done something different (S60, Bermuda Islands)

Similarly, present perfect participles (Examples [104]–[105]) and passive constructions (Examples [106]–[107]) are variably realized without the *-ed* suffix:

(104) people would have **useØ** <pause> (S10, Bermuda Islands)

(105) so I've **moveØ** from there (S21, Pembroke Parish)

(106) the city is **closeØ**, stores are **closeØ** <pause> (S32, Southampton Parish)

(107) one school **callØ** Clearwater (S65, Sandys Parish)

In all these instances, however, it remains unclear whether we are dealing with a grammatical regularization process or a phonological process of reduction (reducing articulatory complexity; in Examples [100]–[107], the lack of *-ed* suffixation might be a result of both processes).[21] I re-address this in more detail in the quantitative analysis of CCR in Section 5.3.1.

21. Similarly, variable realization of third person singular present tense *-s* (as in Example [95] for instance) might also be due to a phonological process of reduction.

Past tense marking of irregular verbs is also variable in BerE. For one, we find evidence that infinitives are used to refer to the past, i.e. that they "undergo bare root extension" (Schreier 2008: 192). Examples (108) and (109) illustrate this:

(108) we're not too far gone from how we originally **speak**, but we're not where we used to be (S30, Warwick Parish)

(109) they couldn't let their masters know what they lookØ like so they **keep** their whole complete body hidden (S49, Southampton Parish)

Secondly, regularized past tense forms also occur (feature 128), for instance in Example (110):

(110) so then I had to switch back when I **goed** home (S60, Bermuda Islands)

To express futurity, *will* and *won't* are generally used; yet present tense is also sometimes used for future reference (feature 117), as in Example (111):

(111) so Thursday when I **fly** up […] next week Wednesday we **have** a meeting (S1, Smith's Parish)

While this corresponds to standard usage, evidence of *go*-based or *come*-based future markers (feature 114 and 116, respectively) is not found in the present dataset.

Various types of negation make up the BerE negation system. While the standard type, i.e. *do* support, is generally used, we also find evidence of a merging of *am not*, *is not* and *are not* to *ain't* as well as *ain't* as a negated form of *have* (features 155 and 156, respectively). This seems to be very common, both according to my dataset and my informants' self-reporting: S7 related that *ain't* is frequently used and S28 used it in one of his examples of typical Bermudian features. A range of different variants is provided in Examples (112)–(115):

(112) but she **ain't** family (S15, Pembroke Parish)

(113) and we **ain't** even that far apart in age (S26, Pembroke Parish)

(114) we **ain't** got time to say ok ya of Portuguese descent (S30, Warwick Parish)

(115) he **ain't** come pick you up (S34, St. George's Parish)

Multiple negation is also common (feature 154). Examples (116)–(119) illustrate a range of different instances:

(116) I **don't** play football **no more** (S4, Bermuda Islands)

(117) you know I **don't** like **no** water <pause> […] Ø don't like fish and nothing (S12, St. George's Parish)

(118) **nobody can't** see me (S26, Pembroke Parish)

(119) I **don't** let **none** of them play with them (S51, Pembroke Parish)

Finally, we also occasionally find invariant *don't* occurring with all grammatical persons in the present tense (feature 158), as in Examples (120)–(121):

(120) he **don't** wanna stop talking (S67, St. George's Parish)

(121) if California **don't** have bananas you can get them from <pause> say Florida (S42, Bermuda Islands)

While *do* in pre-verbal position is generally stressed and functions as a marker of emphasis and habituality in the present tense (Examples [122]–[123]; feature 91, *do* as habitual marker), it also occurs in its unstressed form in my dataset, though very rarely (Example [124]):

(122) and I **do** have Ø couple of English friends (S62, Pembroke Parish)

(123) what I **do** do, because I am involved a little bit with the Club (S13, St. George's Parish)

(124) a lot of English people now **do** drink coffee instead of tea (S42, Bermuda Islands)[22]

We also find the participle *done* being used as a preterite of *do*, as illustrated in Examples (125)–(127):

(125) I **done** it back in the sixties (S14, Southampton Parish)

(126) after he learnt how to build boats he just <pause> **done** it on the side (S22, Southampton Parish)

(127) we **done** quite a quite a number of things together (S33, Pembroke Parish)

In Example (126), it is noticeable that the sequence of tenses is not observed, which corresponds to feature 113 in the *eWave* (loosening of sequence of tenses rule). This occurs in my dataset, though rarely.

Regarding completive *done*, we reported in the pilot study that it was not common at all (Eberle & Schreier 2013: 294; feature 104). The same can be said based on the present dataset, as pre-verbal *done* in combination with a past tense verb is extremely infrequent. It occurs only once (Example [128]):

(128) I **done** laid out the steel work for [name] company in town (S22, Southampton Parish)

As discussed in Eberle and Schreier (2013), this might be due to the formal nature of the dataset and the Bermudian tendency to style shift, addressed above.

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22. The speaker stresses the /o/ in *coffee*, which leads to *do* being unstressed, even though it displays habitual function in this example.

As regards progressives, BerE displays considerable variation. While present tense progressives generally take the *-ing* suffix, the suffix is also sometimes absent, as illustrated in Example (129):

(129) I'm I'm forget**Ø** if it's Tuesdays or Wednesdays (S46, Southampton Parish)

The auxiliary may also be absent (feature 174), i.e. the participle may stand alone, as in Examples (130)–(131):

(130) the same sun **Ø** shining (S8, Pembroke Parish)

(131) if you **Ø** going out for dinner, being like 45 miles away and driving for an hour and a half on dirt roads, and they're like that's just down the corner (S25, Warwick Parish)

We also sometimes find progressives being used in unusual contexts, for instance with stative verbs or in habitual contexts (Examples [132]–[134]; features 88 and 89, wider range of uses of progressive *be* + V-*ing* than in StE: extension to stative verbs, extension to habitual contexts, respectively):

(132) **I'm hearing** this for the first time (S23, Warwick Parish)

(133) **they're liking** cold (S57, Sandys Parish)

(134) if **you're** not <pause> really **liking** where you are (S62, Pembroke Parish)

In terms of concord and agreement patterns, both present and past *be* leveling occur in the present dataset (the latter is one of the two variables selected for the quantitative analysis, see Section 5.3.2): i.e. leveling to *is* (the first and second person singular as well as all plural persons agreeing with *is*) and leveling to *was* (the second person singular and all plural persons agreeing with *was*; compare Eberle & Schreier 2013: 297). Examples (135)–(138) illustrate present and Examples (139)–(142) past *be* leveling (feature 180, *was*/*were* generalization), respectively:

(135) the people that have a very old English dialect […] **is** the people from St. Davids (S33, Pembroke Parish)

(136) the teachers **is** amazed (S51, Pembroke Parish)

(137) and these […] **is** the Governor's letters (S56, Bermuda Islands)

(138) just phrases that we say here that I know **is** linked to Bermuda (S62, Pembroke Parish)

(139) some of the things we have in here **was** put on display (S27, Smith's Parish)

(140) and they <pause> **was** looking for something to eat (S34, St. George's Parish)

(141) the Caribbean Sea and the Atlantic **was** really really beautiful (S42, Bermuda Islands)

(142) they **was** basically saying the same thing I was saying (S50, Bermuda Islands)

It is noticeable in this context that many instances of present *be* leveling occur with third person plural noun phrases or pronouns.

Leveling to *were* or *weren't* can also be found in my corpus (again, feature 180); instances of this are extremely rare, however (Example [143]; see Section 5.3.2 for a more detailed discussion):

(143) but she **weren't** there (S16, Pembroke Parish)

Another feature which does occur, though surprisingly infrequently compared to reported rates in other varieties (for instance rates reported for the Bahamas, see Reaser 2004), is copula absence. We find evidence in different environments (features 176, 177, and 178, deletion of copula *be*: before NPs, AdjPs, and locatives, respectively), as illustrated in Examples (144)–(146):

(144) but she Ø dead now (S5, Bermuda Islands)

(145) Bermuda cedar Ø dark (S22, Southampton Parish)

(146) I don't know if you Ø <pause> familiar with English history (S40, Southampton Parish)

This feature especially warrants further research, as it would be insightful for instance to compare frequencies of copula absence based on the present dataset with frequencies based on a dataset consisting of more basilectal speech samples, to shed light on effects of style shifting.

As regards the present perfect, two prominent variable features can be found in BerE. First, in present perfect simple and present perfect continuous, the auxiliary *have* is variably absent (feature 179), as illustrated in Examples (147)–(149). This is not uncommon:

(147) no one knows a Bermudian [accent] unless, unless they Ø been, been here (S3, Smith's Parish)

(148) I Ø never seen anybody quite catch theirselves so fast (S22, Southampton Parish)

(149) Bailey's Bay people Ø been living there (S46, Southampton Parish)

Second, there is evidence of perfective *be* (feature 102): indeed, *be* is quite frequently used as an auxiliary in present perfect simple and present perfect continuous in my dataset. Examples (150)–(153) illustrate this:

(150) see **I'm hit** his mute button (S21, Pembroke Parish)

(151) **we're been doing** that since the beginning of time (S30, Warwick Parish)

(152) **we're been** on [X] (S32, Southampton Parish)

(153) **I'm** never **heard** of them either (S57, Sandys Parish)

S68 also discussed this feature: she related that a typical response to the question *when are you leaving school?* would be *they're not left yet*. Perfective *be* is thus also noticed by Bermudians as a typical feature.

On a clause-level, we find variable features in both conditional and relative clauses. First, instances where *was* is used instead of conditional *were* (Example [154]; feature 147) and where *would* is used in *if*-clauses (Example [155]; feature 120) occur in my dataset:

(154) imagine if you **was** younger tryna sneak home (S32, Southampton Parish)

(155) if they **would** comment they would say it's a very neutral accent (S38, Bermuda Islands)

Second, evidence of *what* or *which* being used as relative pronouns can also be found (feature 185, relativizer *that* or *what* in non-restrictive contexts; feature 186, *which* for '*who*'; and feature 190, relativizer *what* or a form derived from *what*), as illustrated in Examples (156)–(157):

(156) I have a sister […] **which which** has passed on (S19, Southampton Parish)

(157) I appreciate all **what** we have down here (S42, Bermuda Islands)

Third, subject relative pronouns are also occasionally absent (feature 193), as in Examples (158)–(159):

(158) I'm not the only one Ø does that (S14, Southampton Parish)

(159) there's people Ø like it more than others (S64, Warwick Parish)

Finally, to conclude this overview, a very prominent characteristic of BerE morphosyntax is that *do*-support and auxiliaries are frequently absent in questions (features 228 and 229, no inversion/no auxiliaries in wh-questions and in main clause yes/no questions, respectively). Examples (160)–(164) illustrate this (Example [161] serves as an illustration of no inversion):

(160) how you get down here? (S12, St. George's Parish)

(161) that's your whole name? (S17, Pembroke Parish)

(162) see that on the outside? (S22, Southampton Parish)

(163) yes you want a ride? (S24, Pembroke Parish)

(164) what they call it (S33, Pembroke Parish)

5.1.5 First insights into Bermudian English morphosyntax

Similar to the pilot study, one of the main insights that can be gained from this description of variable BerE morphosyntax is that affixation can be quite rare (see Eberle & Schreier 2013). For instance, with regard to the noun phrase, the plural *-s* suffix might variably be absent, though only rarely with nouns of measurement; this is somewhat unexpected considering reports of variable pluralization in previous studies, which often describe zero plural marking in these contexts in varieties with similar contact histories (compare Schreier 2008 for example). With regard to the adjective/adverbial phrase, the adverbial suffix *-ly* might also variably be absent and we find instances of unmarked degree modifier adverbs. With regard to the verb phrase, then, some of the main patterns which emerge are variable absence of the third person singular present tense *-s* suffix, the past tense *-ed* suffix in regular verbs as well as the present perfect participle and passive *-ed* suffixes. In these cases, non-marking results in the fact that one has to rely on context for an interpretation of which suffix is absent (see also Eberle & Schreier 2013).

Patterns of regularization are a second prominent aspect. With regard to pluralization, evidence of an extension of the plural *-s* suffix to irregular plurals can be found. Reflexive pronouns are also regularized in some instances; especially *hisself* and *theirselves* occur in the present dataset. With regard to regularization patterns in the verb phrase, the extension of existential and presentational *there's*, *there is* and *there was* to plural subjects is frequent. Invariant present tense forms can also be found, because the third person singular *-s* suffix is sometimes extended to other grammatical persons. There is also evidence of present and past *be* leveling as well as regularized past tense forms of irregular verbs, though the latter is somewhat rare in the present dataset.

One of the most salient aspects of variation in BerE morphosyntax is variable absence of prepositions, quite generally and particularly in *going Ø town*. This expression was not only frequently used in conversations and interviews, but also very often cited as an exemplary Bermudian expression. Only very few other variable morphosyntactic features were similarly commented on (and when mentioned at all, they were discussed in terms of nonstandard and incorrect language use), as pronunciation features seem to index a Bermudian way of speaking much more prominently: many informants pointed out vowel quality, /r/ realization, or other phonological features during our interviews. The following statement of S48 (Sandys Parish) illustrates this: "and the /o/s, we make our /o/ sound really different".

While these are some of the more prominent features, the features copula absence, completive *done*, invariant *be* and past tense/anterior marker *been* do not or only very rarely occur in the present dataset, contrary to expectations based on previous research which focused on varieties with similar contact histories.

Whether these features are genuinely absent or would occur (more often) when specifically elicited or when the data collection process were adapted remains to be established in future studies.

In terms of potential input varieties or dialectal affiliations, then, some first general conclusions can be drawn, because certain variable features can be found in BerE morphosyntax (compare Schreier's 2008: 199–200 discussion of parallels between StHE and a number of different varieties). Features which might be traced to British varieties, for instance, include *them* instead of demonstrative *those*, regularized forms of reflexive pronouns, merging of *am not*, *is not*, and *are not* to *ain't*, past *be* leveling, and *what* being used as relative pronoun, since Schreier (2008: 199) outlines that these are attested in varieties of Southern British English. It is noteworthy that perfective *be* is now archaic in Britain (Schreier 2008: 199), a feature that is among the more prominent in BerE. Also, a number of features are frequently reported to occur in English-based creoles (and in varieties such as Indian English, Singapore English, or other ESL varieties; Hundt, p.c., December 2017), namely absent definite and indefinite articles, plural suffixation, prepositions, existentials, third person singular present tense *-s* or past tense *-ed*, as well as infinitives of irregular verbs expressing the past (see Schreier 2008: 199). This is insightful in terms of BerE's degree of restructuring or contact-derived nature, re-addressed below.

5.2 Typological affiliations of Bermudian English: Cross-dialectal profiles

This descriptive profile of variable BerE morphosyntax provides the baseline for an assessment of further structural parallels to other varieties in the wider geographical region. To test arguments of varying typological affiliations which might be attributed to similar input varieties, contact scenarios or sociohistorical developments in specific settings, I now turn to a comparative analysis of such affiliations based on data from the *eWave*.

First, I rate all 235 features listed in the *eWave* on the basis of the same rating system and on the basis of the present dataset and compare my ratings for BerE to those reported for a number of different types of varieties, to assess structural relationships from a synchronic perspective. Then, I implement a diachronic perspective as well, based on an argument raised by Schreier (2016a: 152), namely that "it is imperative to include [such a] perspective" in order to draw conclusions on "long-term effects of contact situations" – and in my case, in order to find traces of potential donor varieties and historical transfer patterns across the North Atlantic and the Caribbean. Since no diachronic data are available for BerE as of yet, I extrapolate from synchronic evidence by cross-referencing the *eWave* feature list with lists from Baker and Huber (2001) and by comparing the ratings of the resulting

number of features to those reported for the same varieties as above. Here too, I follow the same approach as in the pilot study (Eberle & Schreier 2013: 287; see Section 5.2.1), but significantly expand the scope so as to a arrive at a more global picture of typological affiliations.

As these cross-dialectal analyses are situated within a dialect typological framework (Section 2.2.1), they are subject to a caveat I have briefly discussed above, but want to specifically re-address at this point: namely the fact that such an approach "glosses over" various dimensions of variation, in assuming a certain degree of homogeneity characterizing the varieties to be compared (see Kortmann & Lunkenheimer, <http://ewave-atlas.org/introduction>, last accessed 29 May 2015). Since external correlating parameters and internal or intra-speaker variation are not considered (see Eberle & Schreier 2013: 287), rating varieties *in globo* masks much more complex sociolinguistic, sociohistorical and contemporary realities. It is thus important to take Kortmann's (2004: 9; italics in the original) cautionary remark into account, namely that "[t]he risks arising from this myth [i.e. the assumption of the homogeneity of a language community] should be recognized and more attention be paid to the question *whose* language is studied in typological research". For this reason, I discuss the methodological ramifications of exactly this question in more detail below. Nonetheless, such generalizations provide an idealization (Kortmann 2004: 9) which renders a comparison of structural parallels on a more global level possible (see also Eberle & Schreier 2013: 287).

5.2.1 Methodology

As outlined above, the present analyses rely on data from the *eWave*, an interactive electronic atlas which provides ratings for 235 morphosyntactic features in 76 varieties of English (as of July 2017).[23] For each of the varieties documented, experts assigned a value to each feature, based on a common rating system: "A" denotes cases where a "feature is pervasive or obligatory"; "B" cases where a "feature is neither pervasive nor extremely rare"; "C" cases where a "feature exists, but is extremely rare"; "D" stands for "attested absence of feature"; "X" for "feature is not applicable"; and a question mark indicates that no information is available.

The 235 features are classified into different categories, namely pronouns, noun phrase, verb phrase, negation, agreement, relativization, complementation, adverbial subordination, adverbs and prepositions, as well as discourse and word order.

23. The *eWave* was first released in 2011 and is an open-access resource (<ewave-atlas.org>, last accessed August 2017; for simplicity's sake, I refer to the online atlas by providing the URL only, without the access date). Kortmann and Lunkenheimer describe how the database focuses on "morphosyntactic variation in spontaneous spoken English" on the website.

Similarly, the varieties are also grouped into traditional L1 varieties (ten varieties), high-contact L1 varieties (22 varieties), indigenized L2 varieties (18 varieties), English-based Pidgins (seven varieties), and English-based Creoles (19 varieties).[24] Finally, the 76 varieties are further categorized according to "eight Anglophone world regions" (<http://ewave-atlas.org>), namely Africa, America, South and Southeast Asia, Australia, the British Isles, the Caribbean, the Pacific, and the South Atlantic. As such, the *eWave* presents one of "the most comprehensive approach[es] to varieties of English around the world" (Eberle & Schreier 2013: 288–289), documenting morphosyntactic variation and adopting typological parameters.

In the *eWave*'s classification of varieties, which is based on historical time depth, sociohistorical developments, degree of contact, and functional considerations, BerE can be grouped with high-contact L1 varieties (for an overview of the characteristics of each group and for examples, see <http://ewave-atlas.org/introduction> and Table 7): it is a transplanted variety which has predominantly emerged out of a dialect contact scenario and has subsequently been characterized by high degrees of contact. Since settlers of diverse regional and linguistic backgrounds established the colony and interacted on a regular basis as well as since the transmission of a koiné must have happened from an early period onwards, BerE meets Kortmann and Lunkenheimer's criteria of such a variety (see also Section 3.2).

In the present analyses, then, I included most varieties which are classified as contact-derived and which are spoken in a world region where cross-migration patterns can be traced to. I focused especially on varieties spoken in the Caribbean, America and the British Isles, because of the differing statements regarding typological affiliations outlined in the Introduction, as well as varieties spoken in the South Atlantic, because of Bermuda's location. Table 7 provides an overview of the varieties which were selected:

Table 7. Overview of varieties (<http://ewave-atlas.org>)

Variety	Status	Rating	World region
Bahamian English	High-contact L1	Jeffrey Reaser and Benjamin Torbert	Caribbean
Bahamian Creole	English-based Creole	Stephanie Hackert	Caribbean
Jamaican English	Indigenized L2	Andrea Sand	Caribbean
Jamaican Creole	English-based Creole	Peter Patrick	Caribbean

24. While the inclusion of pidgins and creoles is debatable for similar reasons as discussed in Section 2.2.1, such a decision considerably broadens the range of varieties that can be compared (similarly as argued by Szmrecsanyi & Kortmann 2009a: 1644 in connection to the *Handbook of Varieties of English*).

Table 7. (*continued*)

Variety	Status	Rating	World region
Vincentian Creole	English-based Creole	Paula Prescod	Caribbean
Trinidadian Creole	English-based Creole	Dagmar Deuber and Valerie Youssef	Caribbean
Barbadian Creole	English-based Creole	Korah Belgrave and Stacy Denny	Caribbean
Belizean Creole	English-based Creole	Geneviève Escure	Caribbean
San Andrés Creole	English-based Creole	Angela Bartens	Caribbean
Guyanese Creole	English-based Creole	Hubert Devonish and Dahlia Thompson	Caribbean
Earlier AAVE	High-contact L1	Alexander Kautzsch	America
Rural AAVE	High-contact L1	Walt Wolfram	America
Urban AAVE	High-contact L1	Walt Wolfram	America
Appalachian English	Traditional L1	Michael Montgomery	America
Southeast American Enclave dialects	Traditional L1	Walt Wolfram	America
Colloquial American English	High-contact L1	Beth Lee Simon	America
Gullah	English-based Creole	Salikoko Mufwene	America
Newfoundland English	Traditional L1	Sandra Clarke	America
Falkland Islands English	High-contact L1	David Britain and Andrea Sudbury	South Atlantic
St. Helena English	High-contact L1	Daniel Schreier	South Atlantic
Tristan da Cunha English	High-contact L1	Daniel Schreier	South Atlantic
Southwest of England	Traditional L1	Susanne Wagner	British Isles
Southeast of England	Traditional L1	Lieselotte Anderwald	British Isles
North of England	Traditional L1	Graeme Trousdale	British Isles
East Anglian English	Traditional L1	Peter Trudgill	British Isles
Welsh English	High-contact L1	Robert Penhallurick	British Isles
Scottish English	Traditional L1	Jennifer Smith	British Isles
Irish English	High-contact L1	Markku Filppula	British Isles
Manx English	High-contact L1	Jennifer Kewley Draskau	British Isles
Orkney and Shetland English	Traditional L1	Gunnel Melchers	British Isles
Maltese English	High-contact L1	Lisa Bonnici, Michaela Hilbert and Manfred Krug	British Isles
British Creole	English-based Creole	Mark Sebba	British Isles
Norfolk Island/Pitcairn English	English-based Pidgins	Peter Mühlhäusler	Pacific

While I included most varieties for which the *eWave* provides ratings in these world regions so as to ground the assessment of structural affiliations on a broad comparative basis, I also excluded some varieties: in the Caribbean, Eastern Maroon Creole, Saramaccan and Sranan, because they are spoken in Suriname and French Guyana, i.e. locales which share no sociohistorical connection with Bermuda; in America, Ozark English, also because it is spoken in a very particular locale with no connection to Bermuda (<http://ewave-atlas.org/languages/18>), and Chicano English, because it is highly "influenced by its Mexican Spanish substrate" (<http://ewave-atlas.org/languages/22>); and in the British Isles, Channel Islands English, because it is "regarded as a French-speaking area in traditional dialectology" (<http://ewave-atlas.org/languages/10>).

Because of the nature of the research questions which lie at the outset of the present analyses, I excluded all Pacific varieties and did not consider first attestations of Pacific features listed in Baker and Huber (2001) in the diachronic analyses (see below). While this exclusion is reflective of the analyses' aims, it might lead to a certain circularity which influences the results, as, based on this methodological decision, structural parallels and typological affiliations can only be found with varieties that are spoken in world regions where historical ties have been pre-identified. In order to check for this, I included one Pacific variety which has developed in a similar setting that does not share any historical relationships with Bermuda, i.e. Norfolk Island/Pitcairn English. This provides a benchmark for comparison based on functional/non-regional grounds.

In this context, a further point needs to be raised: not all varieties which have developed in similar sociohistorical or sociolinguistic situations in the world regions investigated or which might have (been) influenced (by) feature transfer are attested in the *eWave*. Especially in the Caribbean, blank spots exist: varieties spoken in the Turks and Caicos Islands, the Cayman Islands, or St. Kitts and Nevis are not documented, for instance. It was thus not possible to systematically include them, even though a review of Bermuda's social history identified these locales as prime cross-migration destinations and even though sources exist which document different linguistic aspects of these varieties, because comparability had to be ensured (see Chapter 3; Eberle & Schreier 2013: 288–290; Cutler 2003; Baker & Bruyn 1999).[25]

25. I refrain from systematically including qualitative findings from other studies that address morphosyntactic variation in these varieties and indeed other varieties here, for different reasons. For one, these comparisons would warrant a separate study because of the wealth of material that focuses on different English(-based) contact varieties. Secondly, such comparisons would also need to involve detailed discussions and comparisons of methodologies and datasets of each individual study, in order to make sure that the comparative basis is given. Because of the

A number of additional, general limitations, but also advantages of the *eWave* as a database and analytical tool are also of importance with regard to the present analyses. A first limitation is the fact that the actual rating process remains individualistic. Kortmann and Lunkenheimer (<http://ewave-atlas.org/introduction>) discuss this as follows:

> [s]ince the eWAVE contributors did not all use exactly the same strategies in deciding when to give a feature an A- vs. a B- or a C- vs. a B-rating, it is very difficult to translate the ratings into numerical values that adequately reflect the differences between A-, B- and C-ratings.

The ratings are thus still qualitative in nature (see also Kortmann & Szmrecsanyi 2004: 1142–1143, who discuss this with regard to the *Handbook of Varieties of English*), even though they provide more detailed insights into how pervasive a feature is – rather than only indicating attestation.

A second limitation that affects the rating system results from the caveat discussed above, namely that such a typological approach glosses over various dimensions of variation. Kortmann and Szmrecsanyi (2004: 1142–1143; see also Kortmann & Lunkenheimer, <http://ewave-atlas.org/introduction>) outline "contextual, lexical, stylistic, [or] age-group restrictions on the [frequency of] use of individual features", which cannot be represented by the adopted rating system. A feature might, for instance, be rated A in one and C in another context in a given variety, which raises the question as to which value to assign for the variety overall. According to Kortmann and Szmrecsanyi (2004: 1142–1143), who again raise this point in connection to the *Handbook of Varieties of English*, some contributors "felt happier to give in-between judgments like 'A/B' or 'B/C'" to account for this fact, which is, however, not possible in the *eWave*.

A third and related limitation, finally, concerns the nature of the data reported in atlas databases: "atlas signals" – such as the *eWave* ratings – are "non-naturalistic and, basically, meta-linguistic in nature" (Szmrecsanyi 2011: 48). As such, they are "analytically twice removed (through fieldworkers and atlas compilers) from the analyst" (Szmrecsanyi 2011: 48; see also Bisang 2004: 20–21). This needs to be taken into account when working with the *eWave* (compare the website's introduction for further information on data collection and assessment procedure; <http://ewave-atlas.org/introduction>), especially because the ratings may vary considerably, depending

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sociohistorical and sociolinguistic contexts of St. Kitts and Nevis and its importance regarding the spread of English in the Caribbean (compare Schneider 2013: 480), however, a comparison with the variety spoken in St. Kitts and Nevis might provide particularly important insights, once documentation in the *eWave* is available.

on the datasets individual ratings are based on, expert status of the researchers providing the ratings and their familiarity with a given community.

Despite these limitations, the *eWave* is an invaluable resource which "facilitates the investigation of global-scale patterns of morphosyntactic variation" (<http://ewave-atlas.org>) in an unprecedented number of English(-based) varieties. Up until now, adopting such a large-scale, cross-dialectal perspective has been more challenging, because hardly any common frameworks for comparison have been available. Working with the *eWave* and its common rating system, not only presence or absence of features can be traced, but also pervasiveness of features as well as potential structural parallels, typological relationships and distributional patterns – on a much larger scale, based on one of the most comprehensive compilations that are available to date (similarly as Kortmann & Szmrecsanyi 2004: 1144 outline in connection to the *Handbook of Varieties of English;* see also Szmrecsanyi & Kortmann 2009a: 1658).

Taking these considerations into account, then, the following exact procedure was adopted in the synchronic analyses: I first rated all 235 features for BerE, according to the *eWave*'s rating system (see Table A4 in Appendix 2). I then compared my values to information I had collected in two interviews with Bermudian informants during the second fieldtrip, when I had gone through the *eWave* feature list with S57 and S68, inquiring into presence or absence and pervasiveness of almost all the features documented.[26] In a next step, I merged all available information into one global rating for BerE (see Appendix 2)[27] and compared the results to all values provided for the varieties listed in Table 7. Subsequently, in order to take differing rating systems per contributor into account, I collapsed feature ratings A and B into

26. The interview with S68 was a group interview with her and her husband (a speaker of a different variety than BerE) and both contributing details to the assessments, so that an outsider's perspective was added as well. It is noteworthy in this context that the nature of the communicative situations had an impact on the information provided by the informants: previous to the interview with S57, the notion of speaking "properly" in a Bermudian context had repeatedly been brought up, which must have influenced her reporting more so than that of the other two informants.

27. An originally envisaged sub-division into Euro BerE and ABerE in the typological analyses (so as to arrive at a more fine-grained picture of structural parallels based on the claims put forth in previous work and discussed in the Introduction; especially Trudgill 2002) was not maintained for different reasons: first, a division along ethnic lines is by no means straightforward in the Bermudian context, as discussed in Chapter 4. It would raise the question as to where to align speakers of mixed ancestry and ethnicity, and especially speakers of Native American background. Second, the interviews with speakers of European ancestry are in large parts of such a formal nature that they are to be situated closer to standard-like speech on a formality continuum. Thus, the current dataset is not balanced enough to allow confident ratings for sub-varieties.

one group, compared these against C ratings and repeated the same procedure as above so as to broaden the fine-grained nature of the comparison again and include feature groups of more pervasive and less pervasive features.

As in the pilot study (Eberle & Schreier 2013: 295–296), I assigned values very tentatively. For instance, I was hesitant with A ratings, since it is not possible to ascertain that a feature is pervasive in all possible contexts on the basis of the present dataset. Also, I opted for not rating features where I would have assigned a D (instead assigning a "?"), because it is not possible to argue for attested absence of a feature at the moment. Features which do not occur in my dataset might potentially do so when elicited in a different way (Eberle & Schreier 2013: 296; compare also Hackert 2012: 182). Since these features were excluded in the comparisons, the final count of features for which ratings are available amounts to 94 and 104, with A and B ratings distinct and collapsed, respectively.[28]

The diachronic analyses also rely on the *eWave* feature list, but in combination with lists compiled by Baker and Huber (2001: 157), who analyze "the earliest known attestations of 302 lexical, functional, and grammatical features in 13 English-lexicon contact languages in the Atlantic and Pacific" (compare also Baker 1999; Huber 1999; or Schreier 2008: 236). As in the pilot study (Eberle & Schreier 2013: 288–290), I reviewed the morphosyntactic features provided in their "Atlantic" and "World-wide" lists (excluding the "Pacific" list as mentioned above) and then checked which of these features were also accounted for in the *eWave*, "in order to obtain a more comprehensive picture of the presence, frequency and areal diffusion of features" (Eberle & Schreier 2013: 288–290). The overlapping 24 features were again rated based on the *eWave* rating system and compared. This approach complements the synchronic analyses discussed above, as it should enable me "to check for historical origins and donor varieties of [BerE] features [as well as] speculate on frequency and typological affiliations" (Eberle & Schreier 2013: 295–296).

Baker and Huber's (2001) approach is also subject to certain limitations and advantages. The main limitation which is particularly relevant in the present context is the fact that Baker and Huber account for "first mentions of features only" (Eberle & Schreier 2013: 289), but do not provide any details on how frequent these features might have been. Accounting for "**earliest** rather than just synchronic attestations", however, is also connected to one of the main advantages, namely that their approach "takes into account features that were present in earlier stages of the varieties but which have been lost in the course of time" (Baker & Huber 2001: 159,

28. Note that the second count is somewhat higher as I included features rated "? [C or D]" here, i.e. features where I was unsure what to rate based on the available evidence. Also, an analysis of parallels based on features which are not shared would certainly be insightful, once D ratings can be included.

emphasis in the original). Since one of the aims of the present analyses is to check for potential input varieties as well as historical and contemporary affiliations, this point is especially relevant: a typological approach combining both synchronic and diachronic dimensions provides a baseline so as to speculate on present and past relationships, without purely relying on reportings of features which are present in contemporary varieties of English only.

5.2.2 Results and discussion of findings

The first synchronic analysis of the 94 features rated for BerE reveals that the number of shared features ranges from 45, with TdCE, to as few as four, with Belizean Creole. Table 8 lists the eleven varieties with most ratings corresponding to the BerE ratings (Table A5 in Appendix 2 provides an overview of shared features including all varieties):

Table 8. Varieties with most shared features, as rated in the *eWave*

Variety ranking	Absolute number of shared features (total feature number = 235/94)
Tristan da Cunha English	45
St. Helena English	41
Bahamian Creole	34
Jamaican English	32
Rural African American Vernacular English	32
Maltese English	30
Bahamian English	29
Earlier African American Vernacular English	28
Urban African American Vernacular English	26
North of England	25
Trinidadian Creole	24

These absolute numbers indicate close affiliations of contemporary BerE with varieties spoken in three of the four world regions: South Atlantic varieties (TdCE and StHE with 45 and 41 features, respectively), Caribbean varieties (Bahamian Creole, Jamaican English, Bahamian English and Trinidadian Creole, with 34, 32, 29 and 24 features, respectively) as well as (North) American varieties (Rural, Earlier and Urban African American Vernacular English [AAVE] with 32, 28 and 26 features, respectively). Affiliations with British varieties do not emerge as dominantly, as the only two varieties which are spoken in different parts of the world and which share a significant number of ratings are Maltese English, namely 30 features, and varieties in the North of England, namely 25 features.

In terms of structural parallels, affiliations are very much feature- and variety-specific (see also Eberle & Schreier 2013): no common frequency rating for any feature can be observed across all of these varieties. There are noticeable parallels in the range of features that are shared between BerE and individual varieties spoken in the three world regions identified above, however, and emerging patterns especially point to simplification and regularization processes. The South Atlantic varieties, for one, share ratings for a wide range of features, such as regularized reflexives paradigm, double comparatives and superlatives, some leveling features (simple past for StE present perfect, regularization of irregular verb paradigms), deletion of auxiliary *have* and features associated with relativization (*what* or a form derived from *what* as relativizer, *which* for *who*).[29] Also, ratings for sentence structure features are shared, namely negative inversion and inverted word order in indirect questions. By contrast, the Caribbean varieties listed above only have one feature rating in common: namely object pronoun forms as [modifying] possessive pronouns for the third person singular. A second feature which is shared across three varieties is double comparatives and superlatives; note, however, that this feature is rated as "don't know" in Jamaican English. This lower number of common ratings is not too surprising considering the different varietal statuses and degrees of restructuring of the four Caribbean varieties identified above: two are classified as English-based Creoles (Bahamian Creole and Trinidadian Creole), one as high-contact L1 (Bahamian English) and one as indigenized L2 (Jamaican English; I re-address this below). With regard to the varieties spoken in America, ratings across a wider range of features are shared again, for instance *would* in *if*-clauses, reduction of past tense forms of regular verbs, multiple negation as well as *was*/*were* generalization, among others.

In terms of varietal status, then, all varieties but one (i.e. a group of dialects in the North of England) are classified as contact-derived to some degree. Most of the eleven varieties with which BerE shares the highest numbers of ratings are of the same status as BerE, i.e. high-contact L1s, namely TdCE, StHE, Bahamian English, Rural, Earlier and Urban AAVE as well as Maltese English. Two English-based Creoles (both mentioned above) and one indigenized L2 (also mentioned above) complement this set of varieties. Hence, in this first analysis, the closest structural resemblances particularly emerge between BerE and varieties of the same status.

A similar picture emerges in the second synchronic analysis, once the feature ratings A and B are collapsed and "? [C or D]" taken into account. Table 9 again lists the varieties with the highest numbers of shared ratings out of a total of 104

29. Note that the feature denominations correspond to those listed in the *eWave*. I have used these throughout the course of this chapter without direct quotes, for readability purposes.

Table 9. Varieties with most shared features, as rated in the *eWave*: collapsed feature groups

Variety ranking	Absolute number of shared features (total feature number = 235/94)	Absolute number of shared features with feature groups A and B collapsed (total feature number = 235/104)	Variety ranking
Tristan da Cunha English	45	54	Tristan da Cunha English
St. Helena English	41	50	St. Helena English
Bahamian Creole	34	46	Rural African American Vernacular English
Jamaican English	32	44	Bahamian Creole
Rural African American Vernacular English	32		
Maltese English	30	43	Urban African American Vernacular English
Bahamian English	29	40	Bahamian English
Earlier African American Vernacular English	28	38	Southeast American Enclave dialects
Urban African American Vernacular English	26	37	Earlier African American Vernacular English
North of England	25	36	Trinidadian Creole
Trinidadian Creole	24	34	Jamaican English
		34	Vincentian Creole
		34	Newfoundland English
		34	North of England
		34	Maltese English

features for which details are currently available and also provides the results of the first analysis for comparative purposes on the left (see Table A6 in Appendix 2, which again provides an overview of shared features including all varieties).

While the total numbers of shared ratings result in some shifts in rankings, the strongest affiliations again emerge between BerE and TdCE, with 54 corresponding values, and StHE, with 50 corresponding values. As becomes evident, the varieties with most shared ratings are again predominantly spoken in the three world regions

discussed above, i.e. the South Atlantic, the Caribbean as well as (North) America, and the three additional varieties are spoken in the Caribbean (Vincentian Creole) and in (North) America (Southeast American Enclave dialects and Newfoundland English). With no prominent affiliations with British varieties emerging, the findings of the second analysis closely match those of the first.

The same can be said in terms of structural parallels. These range again across a variety of features, yet, with collapsed feature groups, certain features are attested in all of the varieties discussed above: namely, *me* instead of *I* in coordinate subjects as well as degree modifier adverbs and other adverbs having the same form as adjectives. We also find features for which attestation is given, yet frequency ratings vary, as some varieties display a C rating: forms or phrases for the second person plural pronoun other than *you* (C ratings in Trinidadian Creole and Maltese English), *them* instead of demonstrative *those* (Jamaican English; and a "don't know" in Maltese English), double comparatives and superlatives (Earlier AAVE; and again a "don't know" in Jamaican English), *was* for conditional *were* (Bahamian Creole and Jamaican English), multiple negation (Maltese English) as well as invariant *don't* for all persons in the present tense (Jamaican English).

As above, structural parallels can also be traced in the varieties spoken in the three world regions: in addition to the features with the same values in all highest-ranking varieties, TdCE and StHE also share ratings for the three features existential/presentational *there's*/*there is*/*there was* with plural subjects, no inversion/no auxiliaries in wh-questions and no inversion in main clause yes/no questions with BerE. With regard to the varieties spoken in the Caribbean, collapsing feature groups and adding Vincentian Creole (yet another English-based Creole) leads to a slightly higher number of corresponding ratings, namely for the features shared by all varieties discussed above as well as for zero past tense forms of regular verbs. The fact that two of the additional varieties which emerge in this analysis form part of the group of varieties spoken in America (Southeast American Enclave dialects and Newfoundland English, both traditional L1s) does not significantly change the number of features for which the collapsed ratings match: the same ratings can be observed for the features regularized reflexives paradigm, variant forms of dummy subject *there* in existential clauses as well as *ain't* as the negated form of *be* and *have*, among others and in addition to those listed above. In this context, it is noticeable, however, that the additional varieties are traditional L1 varieties, which results in more varieties of a different status than BerE sharing a higher number of common ratings once the feature groups are collapsed.

To provide a first brief summary of insights gained in these synchronic cross-dialectal analyses, the most noticeable structural resemblances emerge between BerE and two varieties spoken in the South Atlantic, namely TdCE and StHE. While a selection of varieties spoken in the Caribbean and in (North) America

also share high numbers of common ratings, varieties spoken in the British Isles do not emerge as prominently. In both analyses, these structural resemblances are particularly noticeable with varieties of the same status as BerE: out of the 11 and 14 which share most frequency ratings, only one and three are varieties which are characterized by a relatively lower degree of contact according to their classification in the *eWave*. Parallels across a wide range of morphosyntactic features become evident, but most emerging patterns are indicative of extensive degrees of simplification and regularization, particularly "in what regards inflectional morphology", similarly as we (Eberle & Schreier 2013: 299) report in the pilot study. Differences in ratings are mostly noticeable in terms of features which are rated as occurring very frequently in these varieties, but not in BerE (for the moment at least): for instance, I assigned a C for invariant present tense forms due to zero marking for the third person singular, while StHE, Jamaican English, Bahamian English, Rural as well as Earlier AAVE have a B rating and Bahamian Creole, Trinidadian Creole as well as Urban AAVE an A rating. This is exemplary for other feature ratings as well and might potentially be attributed to differing datasets or methodological considerations (as discussed above). Because explanation attempts for these findings very much correlate with a discussion of the diachronic results, however, I first present these results and then return to potential explanations below.

Indeed, the diachronic analyses mirror the synchronic ones. Based on ratings for the 24 features which are both listed in Baker and Huber (2001) and the *eWave*, affiliations with selected South Atlantic, Caribbean and American varieties again appear to be strongest. Table 10 lists the seven varieties which share the highest numbers of ratings with BerE; note that here the total number for which I assigned an A, B, or C rating amounts to 12 (excluding those rated as "? don't know").

TdCE shares ratings for seven features, again a very high number. Bahamian Creole and Bahamian English rank second and third: this partly reflects findings reported in the pilot study, where the strongest affiliations were observed between

Table 10. Varieties with most shared features (adapted from Baker & Huber 2001 and the *eWave*), as rated in the *eWave*

Variety ranking	**Absolute number of shared features (total feature number = 24/12)**
Tristan da Cunha English	7
Bahamian Creole	6
Bahamian English	5
St. Helena English	5
Jamaican English	4
Earlier African American Vernacular English	4
Gullah	4

ABerE and Bahamian English. Jamaican English, Earlier AAVE and Gullah share four values, a number which still indicates a close relationship considering the total number of features for which ratings were assigned (Table A7 in Appendix 2 again provides an overview of shared features including all varieties).

In the second diachronic analysis, the overall picture remains similar too, once the feature groups are collapsed (see also Table A8 in Appendix 2). The highest number of shared ratings is again observed between BerE and TdCE, which indicates the strongest parallels between these varieties, closely followed by parallels between BerE and Bahamian Creole, Bahamian English, StHE and Earlier AAVE. As can be seen in Table 11, the only major change is the fact that more American varieties share higher numbers of ratings with BerE:

Table 11. Varieties with most shared features (adapted from Baker & Huber 2001 and the *eWave*), as rated in the *eWave*: collapsed feature groups

Variety ranking	**Absolute number of shared features (total feature number = 24/12)**	**Absolute number of shared features with feature groups A and B collapsed (total feature number = 24/13)**	**Variety ranking**
Tristan da Cunha English	7	10	Tristan da Cunha English
Bahamian Creole	6	8	Bahamian Creole
Bahamian English	5	7	Bahamian English
St. Helena English	5	7	St. Helena English
Jamaican English	4	6	Earlier African American Vernacular English
Earlier African American Vernacular English	4	6	Urban African American Vernacular English
Gullah	4	6	Gullah
		6	Southeast American Enclave dialects

Urban AAVE, Gullah and Southeast American Enclave dialects, all varieties which have emerged in the synchronic analyses as well, share six features with BerE, a fourth of all ratings and almost half of the 13 for which values were assigned.

A closer look at these structural parallels also reveals similar findings as discussed above. Tables 12 and 13 provide overviews of the ratings for the "Atlantic" feature list, with distinct and collapsed feature groups, respectively (Tables 12 and 13 as well as 14 and 15 are adapted from Eberle & Schreier 2013):

Table 12. "Atlantic" creole features (Baker & Huber 2001), as rated in the *eWave* (all examples are taken from the *eWave*)

Feature	Variety and *eWave* rating							
	BerE	**TdCE**	**BahCr**	**BahE**	**StHE**	**JamE**	**Earlier AAVE**	**Gullah**
Forms or phrases for the second person plural pronoun other than *you* (*y'all*, *all of you*, *etc.*)	B	A	B	B	B	C	B	A
Them instead of demonstrative *those*[a] ("in them days")	B	B	A	B	A	C	A	A
Plural marking via postposed elements (*e.g. an(d) them / dem*; *-mob*) ("Some a di woman dem single woman")	?	C	A	C	B	C	C	A
Associative plural marked by postposed *and them / them all / dem* ("I have a picture of my dad and them working their own road")	C	B	A	B	B	C	D	A
Plural marking via preposed elements ("*e.g.* ol, olgeta; *etc.*")	?	D	A	B	C	D	D	D
Object pronoun forms as (modifying) possessive pronouns: third person plural ("them book" for "their book")	C	D	C	C	D	C	D	C
Completive/perfect done ("He done go fishing")	C	C	C	A	C	C	A	A
Say-based complementizers ("We hear say you gone to da city" for "We heard that you [were] gone to the city")	?	D	A	D	B	C	D	A
Subject pronoun forms as (modifying) possessive pronouns: first person plural ("When we done make we farm")	?	D	B	D	D	C	D	B

[a] In the *eWave*, a more fine-grained distinction of demonstrative features is provided than by Baker and Huber (2001). For this reason, the category here is extended and follows the *eWave*, as in the pilot study (Eberle & Schreier 2013).

Table 13. "Atlantic" creole features (Baker & Huber 2001), as rated in the *eWave* (all examples are taken from the *eWave*): collapsed feature groups

Feature	Variety and *eWave* rating								
	BerE	TdCE	BahCr	BahE	StHE	Earlier AAVE	Urban AAVE	Gullah	Southeast American Enclave
Forms or phrases for the second person plural pronoun other than *you* (*y'all*, *all of you*, *etc.*)	B	A	B	B	B	B	A	A	A
Them instead of demonstrative *those* ("in them days")	B	B	A	B	A	A	A	A	A
Plural marking via postposed elements (*e.g. an(d) them* / *dem*; *-mob*) ("Some a di woman dem single woman")	?	C	A	C	B	C	D	A	D
Associative plural marked by postposed *and them* / *them all* / *dem* ("I have a picture of my dad and them working their own road")	C	B	A	B	B	D	A	A	B
Plural marking via preposed elements ("*e.g.* ol, olgeta; *etc.*")	?	D	A	B	C	D	D	D	D
Object pronoun forms as (modifying) possessive pronouns: third person plural ("them book" for "their book")	C	D	C	C	D	D	C	C	B
Completive/ perfect done ("He done go fishing")	C	C	C	A	C	A	B	A	A

(*continued*)

Table 13. (*continued*)

Feature	Variety and *eWave* rating								
	BerE	**TdCE**	**BahCr**	**BahE**	**StHE**	**Earlier AAVE**	**Urban AAVE**	**Gullah**	**Southeast American Enclave**
Say-based complementizers ("We hear say you gone to da city" for "We heard that you [were] gone to the city")	?	D	A	D	B	D	C	A	C
Subject pronoun forms as (modifying) possessive pronouns: first person plural ("When we done make we farm")	?	D	B	D	D	D	D	B	D

Affiliations are again feature- and variety-specific. It is noteworthy that the two features (1) forms or phrases for the second person plural pronoun other than *you* and (2) *them* instead of demonstrative *those* are attested across varieties, once A and B ratings are collapsed, as can be seen in Table 13. Other significant parallels occur with completive/perfect *done* and object pronoun forms as (modifying) possessive pronouns with the third person plural, which are rated C in BerE and a number of varieties: in Table 12, Bahamian Creole, Bahamian English, Jamaican English and Gullah, as well as TdCE, Bahamian Creole, StHE and Jamaican English, respectively; in Table 13, Bahamian Creole, Bahamian English, Urban AAVE and Gullah, as well as TdCE, Bahamian Creole and StHE, respectively.

With regard to the "World-wide" feature list, there is no common pool of features which share ratings across varieties, as can be seen in Tables 14 and 15; these again provide an overview of the values assigned for both distinct and collapsed feature groups, respectively:

Table 14. "World-wide" creole features (Baker & Huber 2001), as rated in the *eWave* (all examples are taken from the *eWave*)

Feature	Variety and *eWave* rating							
	BerE	**TdCE**	**BahCr**	**BahE**	**StHE**	**JamE**	**Earlier AAVE**	**Gullah**
Invariant *be* with non-habitual function ("here I be" (presentational), "I be cold" (copula))	?	C	D	C	D	D	D	D
Go-based future markers[a] ("He gon build my house")	?	D	A	B	B	C	A	A
Invariant *be* as habitual marker ("He be sick")	C	B	B	B	C	D	C	A
Past tense/anterior marker *been* ("I been cut the bread")	?	C	C	C	C	C	C	A
Deletion of copula *be* before NPs ("He Ø a good teacher")	C	C	C	B	B	B	B	C
Deletion of copula *be* before AdjPs ("She Ø smart")	C	C	A	B	B	B	B	A
Deletion of copula *be* before locatives ("She Ø at home")	C	C	A	B	B	C	B	A
Demonstratives for definite articles ("That door bin close" for "the door closed")	?	C	D	X	A	C	C	C
Finish-derived completive markers ("wakum gaden blong mitala finis" "I have completed my work in the garden")	?	D	D	D	D	D	D	D
For (to) as infinitive marker ("You werenae allowed at this time for to go and take another job on.")	C	B	C	C	C	D	C	C
Subject pronoun forms as (modifying) possessive pronouns: third person singular ("he book" for "his book")	?	D	B	D	C	D	B	A

(*continued*)

Table 14. (*continued*)

Feature	Variety and *eWave* rating							
	BerE	**TdCE**	**BahCr**	**BahE**	**StHE**	**JamE**	**Earlier AAVE**	**Gullah**
Object pronoun forms as (modifying) possessive pronouns: first person singular ("He's me brother"; "I've lost me bike")	C	C	C	C	B	D	C	C
Never as preverbal past tense negator ("He never came")	C	C	B	B	C	?	B	A
No as preverbal negator ("Me no iit brekfus")	?	D	C	B	C	C	D	?
Indefinite article *one/wan* ("They seen one ["a"] green snake tangled round a tree")	?	B	A	X	B	C	C	?

[a] With regard to futurity and copula absence, I again follow the same procedure as in the pilot study, i.e. adopting the *eWave* distinction, because it offers higher numbers of features (see Eberle & Schreier 2013: 298). With regard to *one* as definite article (mentioned by Baker & Huber 2001), I also adopted the *eWave* classification, which lists this feature as an indefinite article.

Table 15. "World-wide" creole features (Baker & Huber 2001), as rated in the *eWave* (all examples are taken from the *eWave*): collapsed feature groups

Feature	Variety and *eWave* rating								
	BerE	**TdCE**	**BahCr**	**BahE**	**StHE**	**Earlier AAVE**	**Urban AAVE**	**Gullah**	**Southeast American Enclave**
Invariant *be* with non-habitual function ("here I be" (presentational), "I be cold" (copula))	? [C]	C	D	C	D	D	C	D	C
Go-based future markers ("He gon build my house")	?	D	A	B	B	A	A	A	B
Invariant *be* as habitual marker ("He be sick")	C	B	B	B	C	C	A	A	D

Table 15. (*continued*)

Feature	Variety and *eWave* rating								
	BerE	**TdCE**	**BahCr**	**BahE**	**StHE**	**Earlier AAVE**	**Urban AAVE**	**Gullah**	**Southeast American Enclave**
Past tense/anterior marker *been* ("I been cut the bread")	? [C]	C	C	C	C	C	B	A	D
Deletion of copula *be* before NPs ("He Ø a good teacher")	C	C	C	B	B	B	A	C	D
Deletion of copula *be* before AdjPs ("She Ø smart")	C	C	A	B	B	B	A	A	D
Deletion of copula *be* before locatives ("She Ø at home")	C	C	A	B	B	B	A	A	D
Demonstratives for definite articles ("That door bin close" for "the door closed")	?	C	D	X	A	C	B	C	C
Finish-derived completive markers ("wakum gaden blong mitala finis" "I have completed my work in the garden")	?	D	D	D	D	D	D	D	D
For (to) as infinitive marker ("You werenae allowed at this time for to go and take another job on.")	C	B	C	C	C	C	C	C	C
Subject pronoun forms as (modifying) possessive pronouns: third person singular ("he book" for "his book")	?	D	B	D	C	B	C	A	D

(*continued*)

Table 15. (*continued*)

Feature	Variety and *eWave* rating								
	BerE	TdCE	BahCr	BahE	StHE	Earlier AAVE	Urban AAVE	Gullah	Southeast American Enclave
Object pronoun forms as (modifying) possessive pronouns: first person singular ("He's me brother"; "I've lost me bike")	C	C	C	C	B	C	D	C	C
Never as preverbal past tense negator ("He never came")	C	C	B	B	C	B	C	A	C
No as preverbal negator ("Me no iit brekfus")	?	D	C	B	C	D	D	?	D
Indefinite article *one/wan* ("They seen one ["a"] green snake tangled round a tree")	?	B	A	X	B	C	C	?	C

The only two features in Table 14 which are similarly rated across varieties are (1) *for* (*to*) as infinitive marker and (2) object pronoun forms as (modifying) possessive pronouns with the first person singular. For each of these, only two varieties differ in their ratings: for the first, TdCE, where a B was assigned, and Jamaican English, where a D was assigned; and for the second, StHE, where a B was assigned, and again Jamaican English, where a D was assigned. When the feature ratings are collapsed, *for* (*to*) as infinitive marker is again attested in all varieties, with a higher rating assigned only in TdCE (rated B, see Table 15).

Since the strongest parallels are again shared between BerE and almost all varieties discussed in the synchronic analyses, the same point as above becomes evident here too: typological affiliations are particularly noticeable between varieties of the same status. In both diachronic analyses, high-contact L1 varieties are most numerous, namely TdCE, StHE, Bahamian English, Earlier AAVE and Urban AAVE, followed by creoles, namely Bahamian Creole and Gullah. Jamaican English is the only variety classified as indigenized L2 and the Southeast American Enclave dialects the only variety classified as traditional L1.

Different explanations might account for these findings, then. In terms of structural affiliations with varieties spoken in the Caribbean and in (North) America, which can be traced in the synchronic analyses, such ties strongly reflect contemporary mobility patterns. Apart from the fact that many Bermudians are of (in part) Caribbean descent, both short- and long-term acts of mobility lead Bermudians frequently to the Caribbean – and to North America as well, as they travel to destinations in both world regions for vacation purposes, to visit family members, to study or work. These acts of mobility result in continuous and intense interaction and contact with speakers of local varieties at the respective destinations, and might thus also result in routine accommodation as discussed in Section 2.2.4. I argue that such processes and their linguistic consequences, for instance leveling, are one of the reasons that account for some of the structural affiliations between BerE and varieties spoken in these two world regions (the only destination which Bermudians frequently travel to and which is not strongly reflected in structural affiliations is Great Britain; such affiliations might potentially emerge, however, when different sub-varieties are analyzed). An additional aspect which might play a role with regard to affinities with Caribbean varieties could be the fact that many black Bermudians were taught by teachers from the Caribbean, when schools were still segregated (see Section 3.1.4). The teachers' varieties must have functioned as some sort of model for dialect convergence or as acquisitional target. With regard to affinities with U.S. varieties, norm-orientation certainly also plays a role, especially considering Hall's (2019: 225) statement discussed above.

Similar historical acts of mobility and patterns of cross-migration might also serve as an explanation for some of the diachronic findings. From the 18th century onwards, Bermudian maritime movements along trade routes across the Atlantic (to the U.S., the Caribbean, but also up north to Newfoundland) led to close contact and interaction with speakers of varieties to which typological affiliations can be traced. As a consequence, certain features may have been transported to the archipelago (see Eberle & Schreier 2013: 299): here, especially Caribbean varieties and U.S. coastal varieties are likely sources. Similarly, major population movements, such as enslaved people or – later – groups of Caribbean workers, may also have resulted in features being brought to the islands. These features may then have been diffused throughout the Bermudian speech community. The local situation, with interethnic households for instance, would make this a likely scenario, as also argued in the pilot study (Eberle & Schreier 2013: 300).

Because such movements often reflected and still reflect earlier (cross-)migration patterns, this explanation is closely connected to a second, which focuses on language-ecological aspects (see Eberle & Schreier 2013). The structural affiliations which have become evident may result from similar settlement histories, contact scenarios and input varieties which may have provided features to the feature pool

in various settings (Mufwene 2001). It is possible that BerE adopted features from input varieties of British settlers as well as various incoming speaker groups similar to other varieties in the wider geographical region. Especially varieties spoken within colonial locales or locales with similar sociolinguistic situations and contact scenarios are prime candidates here, such as the Bahamas, locales along the U.S. East Coast and potentially Tristan da Cunha and St. Helena. It is noteworthy in this context that the hypothesis of Southern British English varieties as important input varieties of BerE is not reflected in the typological affiliations which emerge, as varieties of Southern British English do not share a high number of ratings with BerE, neither in the synchronic nor diachronic analyses.

Considering the Bermudian sociohistorical context outlined in Chapter 3 further, it might also be the case that BerE features were brought to certain locales and that BerE or an early colonial koiné was an influential input variety in various settings (again see Eberle & Schreier 2013). Potential settings are especially located in the Caribbean: in the Bahamas, Bermudians were among the first settlers establishing colonies in Eleuthera and in the Turks and Caicos Islands, many Bermudians stayed seasonally because of the salt trade (Cutler 2003: 53). Taking the extensive mobility levels of Bermudian men into account as well (yet keeping in mind what it would have meant to be mobile in the 18th century), BerE features might also have been transported to locales along the U.S. East Coast, because the Carolinas, for instance, were regularly visited by Bermudian traders and home to close-knit Bermudian diaspora communities (the Bermuda-Bahamas-Carolina triangle comes to mind here). The question remains, however, in how far such diaspora communities would foster contacts and interaction with the larger community and thus a further diffusion of BerE features.

The structural parallels between BerE and Bahamian English, Bahamian Creole and Jamaican English as well as between BerE and Earlier AAVE, Gullah, Urban AAVE and Southeast American Enclave dialects which emerge in the diachronic analyses seem to corroborate the hypothesis of feature diffusion in both directions, to and from Bermuda. Hence, I want to continue arguing for the importance of a two-way transfer pattern, similarly as in the pilot study (Eberle & Schreier 2013: 301): features seem to have been brought from various settings in the wider geographical region to Bermuda, but also vice versa. Once ratings for the varieties spoken in St. Kitts and Nevis and in the Turks and Caicos Islands, for instance, are also available, this transfer pattern might emerge even more prominently.

One aspect I have not yet addressed in detail is the fact that the closest structural affiliations emerge between BerE and the two South Atlantic varieties TdCE and StHE, in both the synchronic and diachronic analyses. While Bermudians started to sail across the North Atlantic and the Caribbean Sea from the 18th century

onwards, they do not seem to have ventured further into South Atlantic waters. Hence, no cross-migration patterns or contacts between Bermuda and Tristan da Cunha or St. Helena exist: an explanation for the extensive structural parallels must lie elsewhere than in direct sociohistorical links. Since all three varieties are classified as high-contact L1 varieties, a closer look at the contact histories of the respective settings might shed light on potential reasons for the emerging similarities.

StHE is the older variety of the two, with a "continuous native-speaker tradition" since the mid-17th century (<ewave-atlas.org/languages/73>). According to Schreier (2008: 119), the most influential varieties which contributed features to the feature pool during its formation phase were mainly nonstandard Southern English dialects (spoken by the early settlers) as well as Malagasy (spoken by the enslaved people from Madagascar). Apart from these, additional inputs were Standard British English, Cantonese, Afrikaans, Asian/Indian languages, French and Portuguese(-based pidgin or creole?; as listed by Schreier 2008: 119). Structural affiliations between StHE and TdCE are not too surprising, considering that StHE is in turn one of the most influential inputs in the Tristanian context: TdCE formed in the 1820s (much later than StHE and BerE), when settlers from St. Helena, Britain, the northeastern U.S. and South Africa established the community (Schreier 2003). This "suggest[s] that three different types of linguistic contact were at work in the crucial formation period [of TdCE]: dialect contact, language contact and input from StHE" (Schreier 2003: 63; 2016b).

While the overall contact scenario in St. Helena thus seems to involve more language contact than the one in Bermuda, some of the influential input varieties as well as characteristics of the early formation phase seem to correspond: StHE also formed in a *tabula rasa* context, with nonstandard British varieties as most likely inputs (for further details, see Schreier 2008). The same can be said regarding TdCE, which, in addition, seems to have formed in a contact scenario that was characterized by extensive dialect contact (more so than StHE; for further details, see Schreier 2003: 66). These commonalities might account for some of the structural parallels, with potentially similar linguistic consequences of contact-induced change and similar features being selected out of the respective feature pools. However, the question remains as to why such strong ties emerge, especially considering that such close affiliations do not become apparent between BerE and other varieties with similar status and contact histories.

It is of course possible that the current research design, with the tentative rating system and the exclusion of any features which might be rated D, influences the findings here: the resulting numbers of shared features might be biased towards structural affiliations which especially emerge in these types of contact scenarios and with these types of varieties. Further research is needed in order to investigate

in how far the features which are not yet attested might influence the results. Also, a sub-division along ancestry lines might shed additional light on the question in how far ties are regionally specific according to ancestries.

5.3 A variationist analysis of selected Bermudian English features

To complement the comparative qualitative analyses, I now turn to a quantitative investigation of CCR and past *be* leveling. For both of these well-studied variables in variationist sociolinguistics, I first outline important characteristics as well as raise specific research questions, before addressing methodological considerations. I then present and discuss the total frequencies of CCR and past *be* leveling and subject the datasets to mixed-effects logistic regression analyses, to gain insights into language-internal and -external factors which predict the realization of each variable. Finally, I compare the BerE findings with findings of similar previous studies which focus on CCR and past *be* leveling in varieties that are spoken in the wider geographical region or are characterized by different degrees of restructuring.

The aims here are two-fold:

- to first assess whether some of the trends which have emerged in the qualitative analyses, both with regard to regional and structural affiliations, are corroborated on the basis of the quantitative findings;
- and, second, to contextualize these findings, so as to anchor BerE within the canon of varieties for which these variables have been studied and to shed light on comparable patterns that allow further speculations on BerE's degree of restructuring and the linguistic processes that must have influenced its historical development.[30]

To compute stepwise (step-up and step-down) mixed-effects logistic regression analyses, Rbrul was used for a number of reasons (see Daleszynska n.d. for a more detailed discussion of Rbrul and mixed-effects logistic regression analyses; or Gries 2013).[31] Firstly, Rbrul allows to take a particular aspect of linguistic datasets into account, namely the fact that the extracted tokens "are naturally grouped according to the individual speakers who produced them" (Johnson 2009: 363). Secondly, and crucially, "*Rbrul* provides factor weights for all factors in a factor group […]. This makes comparative studies simpler because it is possible to compare each

30. Similar to above, I aim to gain these insights into BerE's historical development based on an analysis of synchronic data (i.e. an extrapolation as discussed above).

31. I used Rbrul version 3.1.0, called "Take A Letter, Maria", and R version 3.4.1, called "Single Candle", as well as Rbrul version 3.1.1, "The Real Diana", and R version 3.4.2, "Short Summer".

factor's level and effect across data sets from earlier points in LVC research history" (Tagliamonte 2012: 156). Considering the aims just outlined, this is of particular importance; so as to contextualize the BerE findings as comprehensively as possible, I mirror the statistical procedure, models and analyses put forth in previous studies (see below).

Since the present study's research design and aims focus on contextualization more than exploratory data analysis, a number of statistical issues would need to be refined in future studies that approach morphosyntactic variation in BerE from a purely quantitative perspective. Among other things, firstly, it would be necessary to further check for interactions/interrelated factors and Type I errors, as Tagliamonte (2012: 130–131) explains. Considering that "[t]here will always be some degree of overlap or redundancy across factors" (Tagliamonte 2012: 130), either random forests could additionally be implemented (see the discussion in Tagliamonte & Baayen 2012: 161) or two different mixed-effects logistic regression models run and compared, once an expanded dataset is available: one that implements each factor as independent and one that includes an interaction term for certain factors. Especially with regard to social factors such as education and mobility, for instance, this would shed light on intricacies of variable patterns which have not emerged in the present study, not least because of the adopted statistical procedure (I computed all factor groups as independent), which was determined by the nature of the dataset and the overall aim of contextualizing the results.

Secondly, so as to draw conclusions regarding the effects of categorical speakers and regarding individual and group behavior in the Bermudian speech community, a similar methodological procedure as outlined by Tagliamonte and Baayen in their (2012: 165–166) study on *was/were* variation could be implemented. While I refrained from excluding non-variable speakers in the analysis of past *be* leveling here (see below), they (2012: 166) test for the assumption that "[b]eing a nonvariable individual must be, at least in part, predictable from other variables" by working with different statistical tools, namely "a conditional inference tree and a logistic model […] with as a dependent variable whether the individuals did not show any variability".

Indeed, working with a combination of statistical techniques in future quantitative studies, as Tagliamonte and Baayen (2012) do, might prove particularly fruitful especially considering the challenges resulting from the nature of the present dataset (see Chapter 4 and below). In how far "[r]andom forests provide a useful complement to logistic modeling" is further outlined in detail in their (2012: 161) study; adopting such a procedure would allow a more intricate assessment of factors governing variability in BerE morphosyntax, building on the present findings which provide a first step towards an understanding of variable patterns in the use of CCR and past *be* leveling.

5.3.1 Syllable-coda consonant cluster reduction

Syllable-coda CCR refers to "[t]he deletion of a consonantal segment in syllable-coda or word-final [consonant clusters]" (Schreier 2005: 29). The question as to which consonantal segments can be reduced, i.e. the "scope of the phonological process" (Wolfram, Childs & Torbert 2000: 35), has been controversially discussed in the literature. While some researchers "treat it as a more general process applying to all syllable-coda clusters that end in a stop and have alpha voicing" (Wolfram, Childs & Torbert 2000: 35; see also Childs, Reaser & Wolfram 2003: 11; Fasold 1972; and Wolfram & Fasold 1974), i.e. clusters ending in /t/, /d/, /k/ and /p/, others only analyze the deletion of alveolar plosives, i.e. the reduction of word-final /t/ and /d/; this is referred to as "/t,d/ deletion" or "coronal stop deletion" (Schreier 2005: 132, 2008; see Schreier 2005 for a succinct review; compare Labov 1972). Both lines of study use the term CCR for the variable, no matter whether all syllable-coda clusters ending in a stop or only alveolar plosives are analyzed.

All previous studies, however, agree on a number of language-internal effects which have been found to condition CCR with remarkable consistency (see Schreier 2008, for instance). It is, first of all, "context-sensitive, operating differently in distinct phonological environments" (Schreier 2005: 29): both following and preceding environment of the word-final consonantal segment affect reduction. Following environment is one of the strongest effects and considered one of the two main constraints on CCR: across varieties, reduction levels are higher when the word-final consonantal segment is followed by a consonant than a vowel (i.e. CC#C; see Schreier 2005: 30, 55 and 2009: 60; Childs, Reaser & Wolfram 2003: 12). While this has been consistently confirmed in all studies focusing on CCR, a following pause seems to be a more diagnostic environment in terms of differentiating varieties: depending on variety, it might either have "an enhancing [or] an impeding effect on the reduction of a cluster-final consonant" (Schreier 2005: 30; see also Guy 1991, discussed in Holmes & Bell 1994; Santa Ana 1996). Preceding environment is a comparatively weaker effect and its strength has also been found to vary across varieties (Schreier 2005: 29–30; according to Schreier, Hispanic varieties of English in the U.S. seem to display a particularly strong effect). While it is for this reason "perhaps more diagnostic than [other]" effects (Schreier 2005: 133), the general pattern that has emerged in most studies is that deletion rates are lower in less sonorous environments, i.e. when the preceding segment is a stop or a fricative, than in more sonorous ones, i.e. when it is a nasal or liquid (see for instance Labov 2004: 8 for a potential explanation of this).

The second major constraint which affects CCR across all varieties is a grammatical one, namely the morphemic status of the word-final consonant cluster. In most varieties studied, "monomorphemic clusters (such as *past*, *desk*, or *find*) are more

prone to undergo reduction than bimorphemic clusters (such as *passed*, *stopped*, or *knocked*), where the cluster-final plosive represents an independent morpheme" (Schreier 2009: 60). Some studies further implement a more fine-grained categorization here, by analyzing a third factor level in addition to monomorphemic and bimorphemic clusters, namely that of doubly marked, ambiguous, or semiweak verbs (Patrick 1991: 174; see also Bayley 1994). These verbs, "which indicate the past by both suffixation and ablaut (e.g., *told*), normally fall between regular past verbs and monomorphemes in deletion rate" (Patrick 1991: 174, drawing on Guy 1980).

Table 16 provides an overview of conditioning effects and the respective factor level rankings which have been reported for factor groups in previous research (adapted from Table 3.1 in Schreier 2009: 60, who in turn adapted it from Guy 1991 and Wolfram & Thomas 2002: 134):

Table 16. Overview of conditioning effects on English CCR (adapted from Schreier 2009: 60)

Language-internal or language-external	Conditioning effect	Hierarchy
Language-internal	Following phonetic environment	Plosive > sonorant > pause > vowel
Language-internal	Preceding phonetic environment	Nasal > lateral > sibilant > plosive
Language-internal	Morphemic status of cluster	Monomorphemic > ambiguous > bimorphemic
Language-internal	Stress	Unstressed > stressed
Language-external	Social class	Lower social class > higher social class
Language-external	Style	Casual > formal
Language-external	Contact	Language-contact > dialect-contact derived

Language-external effects, i.e. social or sociopsychological effects, are also listed here, since "[t]he relative frequency of consonant cluster reduction has also been linked to social variables such as social status, ethnicity and style" for instance (Mallinson & Wolfram 2002: 758). I re-address these in the discussion of specific methodological considerations in Section 5.3.1.1 and in the discussion of the Bermudian findings in Section 5.3.1.2.

There is also consensus in the literature that all speakers, irrespective of gender, age, social or regional background and bilingualism or multilingualism, reduce clusters even in more formal speech styles, albeit to varying degrees (Schreier 2009: 59, 2005). CCR can consequently be defined as "a true universal of English" (Schreier 2009: 59) or a true angloversal in Szmrecsanyi and Kortmann's sense (2009b: 33–34). For this reason, demonstrating reduction in a new variety has *per se*

no analytical potential with regard to "dialectal distinctiveness" (Schreier 2005: 32): rather, diagnostic value lies in the establishment of reduction frequencies, strength of conditioning effects as well as constraint rankings according to the factor levels which have been examined in previous research. This is where the current focus lies, namely on quantitative patterns in the manifestation of CCR in BerE and other varieties, so as to draw conclusions on potential affiliations of BerE with these varieties.

Global reduction frequencies are insightful because they "may represent a reliable indicator as to whether and, if so, to what extent the variety in question came into contact with other languages/phonotactic systems" (Schreier 2005: 201). This is based on the arguments that CCR is generally described as a contact-dependent variable (Schreier 2009: 63–64) and that higher reduction rates speak for a variety to have "undergone extensive contact with languages other than English or, alternatively, that it developed in a context of sustained multilingualism" (Schreier 2009: 63–64).

Based on such global rates, varieties have been grouped into three different categories in previous studies by Schreier (2005, 2008, 2009, 2016a): the first group consists of varieties that "have either long-standing historical continuity of speakers and natural transmission with little contact […] or else undergone extensive dialect contact in colonial settings" and, accordingly, "moderately low rates" of CCR (Schreier 2016a: 143). Language shift varieties are identified as a second group and varieties with intense language contact histories as a third group, with the latter being characterized by the highest reduction rates (Schreier 2016a: 143). Table 17 below provides an overview of varieties for which studies exist, their respective reduction rates and classification (adapted from Schreier 2016a: 144).

With regard to the first group of varieties, I want to highlight one particular aspect that is discussed by Schreier (2016a: 143): "[l]ooking at total reduction rates […], we note that varieties that have undergone recent dialect contact (such as New Zealand English) differ very little from long-term established varieties that have merged via koinéization". This speaks for Principle 2 which Schreier addresses in his (2005: 200) study, namely that "[c]ontact between systems with similar or identical phonotactic systems does not lead to phonotactic simplification. CCR remains stable in dialect-contact situations and is not modified during koinéisation". I address this again in Section 5.3.1.2, in the discussion of the BerE findings.

As briefly touched upon above, some conditioning effects, then, are especially diagnostic in terms of dialectal distinctiveness or varietal affiliation. Apart from the effects of a following pause, the effects of the preceding environment or "the potential for resyllabification [may also] be particularly insightful since they are more specific and set varieties apart more distinctly" (Schreier 2005: 135). Comparing the findings that emerge in these contexts in BerE to those reported in other studies may consequently "yield crucial insights into ancestral links and general transfer of phonotactic structures" (Schreier 2005: 204). For this reason,

Table 17. Global reduction rates in different varieties of English (note that the group descriptions also stem from Schreier 2016a: 144)

Typology	Variety	Study	Total CCR (in percent)
Group 1	York English	Tagliamonte & Temple (2005)	24
Group 1	Pakeha New Zealand English	Schreier (2003)	27.8
Group 1	Philadelphia English	Neu (1980)	28.2
Group 1	White Hyde County NC English	Wolfram & Thomas (2002)	28.8
Group 2	African American English, Washington DC	Fasold (1972)	40.2
Group 2	Texas Tejano English	Bayley (1995)	48
Group 2	Los Angeles Chicano English	Santa Ana (1996)	52
Group 3	Early Maori New Zealand English	Schreier (2003)	66.5
Group 3	African American English, Hyde County NC	Wolfram & Thomas (2002)	67.2
Group 3	Mesolectal Jamaican Creole English	Patrick (1991, 1999)	72.3
Group 3	St. Helenian English	Schreier (2008)	86.5
Group 3	Black Bahamian English	Childs, Reaser & Wolfram (2003)	87.6
Group 3	Tristan da Cunha English	Schreier (2005)	87.8
Group 3	Early Vietnamese English	Wolfram et al. (1986)	~92

Key:
Group 1: long standing historical continuity of speakers and natural transmission with little contact, dialect contact in colonial settings
Group 2: language shift varieties with a high percentage of English as L2 speakers
Group 3: heavy language contact and/or creolization

I particularly focus on these more diagnostic effects in the discussion of the results in Section 5.3.1.2.

Based on this overview of the variable's general characteristics, the following specific questions lie at the outset of the present analysis:

1. How high are the global CCR rates in BerE? How can these rates be contextualized, based on findings from previous research?
2. Which language-internal and -external factors condition CCR in BerE? Do the hierarchies of factor levels which are discussed in previous research emerge in BerE too?
3. Based on these findings, with which varieties does BerE align and what are the implications concerning the degree of restructuring the variety must have undergone? In how far are the findings indicative of language contact influencing the historical and sociolinguistic development of BerE?

Since "[t]he quantitative application of CCR processes is [such] […] a highly diagnostic indicator of linguistic differentiation and diversification in English" (Schreier 2005: 222), the following analyses of global reduction rates, conditioning effects and constraint rankings allow me to draw additional conclusions regarding potential regional and structural affiliations of BerE.

5.3.1.1 *Methodology*

Such a contextualization of the BerE findings is especially insightful with regard to CCR because it is one of the most studied variables in variationist research (Tagliamonte & Temple 2005; Schreier 2008). Considering that "the literature on final CCR is quite 'messy'" (Schreier 2005: 159), however, especially with regard to differing extraction and coding criteria or methodologies, I mainly focus on Schreier's approach to syllable-coda CCR outlined in Chapter 4 of his (2005) *Consonant Change in English*, which provides a theoretical baseline and benchmark for comparison. It is one of the most detailed studies on CCR that I am aware of and one of the few that provides a more detailed discussion of CCR in a variety that has (predominantly) emerged out of a dialect contact scenario (New Zealand English, see p. 143). This is of particular relevance considering the specific research questions outlined above and the hypothesis that BerE primarily formed in a dialect contact scenario, outlined in Section 3.2.

Hence, the data extraction procedures in the present study follow previous studies by Schreier especially (2005; but also later, similar studies, 2008, 2009). I also extracted "[a]ll word-final plosives that were preceded by one consonant (bisegmental CC, *last*)" in monosyllabic words, whereas those in polysyllabic words were only extracted "on condition that stress fell on the last syllable" (Schreier 2008: 207). Clusters with more than two segments, such as *danced* or *glimpsed* (Schreier 2008: 207), were excluded. Note that /k/ and /p/ were extracted, since I defined the dependent variable as presence or absence of /t/, /d/, /k/ and /p/, following the studies outlined above.

To account for potential type-token influences, I included only six words in a particular environment (Schreier 2005, 2008; Childs, Reaser & Wolfram 2003 only include five words).[32] Unstressed functions words were not included, since these "could be subject to lexicalized reduction" (Schreier 2005: 138; see also Guy 1991; Wolfram, Childs & Torbert 2000; Torbert 2001): the adverb *just* and forms with

32. Coding the word and subsequently including it as a random effect would make it possible to extract more than six words in a particular environment (see Johnson 2010–2014: 53 for a more detailed explanation). As an inclusion of these tokens would influence global rates, however, which are of prime importance regarding contextualization here, I followed extraction procedures outlined in previous studies.

contracted *not* (for instance *didn't*, *wasn't*).[33] The high-frequency item *and* was also excluded, for the same reason that other studies have advanced: "high-frequency items […] are more likely to undergo reduction" so that an inclusion might skew the results (Schreier 2008: 207, drawing on Neu 1980: 53; see also Bayley 1994; Childs, Reaser & Wolfram 2003; Tagliamonte & Temple 2005). Finally, word-final plosives followed by a homorganic stop were not included either (for instance *sent to*; Schreier 2008: 207), since such a following environment rendered it "impossible to perceive from the tape recordings whether the final stop was absent or present" (Wolfram 1969: 58, quoted in Schreier 2008: 207; see also Patrick 1991; Holmes & Bell 1994; or Torbert 2001, for instance). Similarly, I also excluded plosives which were followed by a dental fricative (*sent them*; Schreier 2008: 207); in many instances, these are realized as stops (Bayley 1994; Tagliamonte & Temple 2005).

In terms of token numbers, I aimed to extract 100 tokens per speaker. I generally started extracting at minute five of the recordings, so as to control for effects of informants being aware that the recording device was running. Where it was not possible to extract this number of tokens because of varying data amounts (compare Schreier 2016a), I also included tokens which occurred during the first five minutes of the interviews. The total number of tokens amounts to $N = 4{,}954$.

Whether or not the word-final consonantal segment was reduced was then impressionistically coded in an Excel file. In order to account for the fact that reduction "is not a simple matter of either/or, but involves decreasing levels of realization" (Bell 1977: 325, quoted in Holmes & Bell 1994: 58), I coded "forms showing any overt reflex of the stop […] as retained", similar to Guy (1991: 4), and included reliability tests so as to check my assessments. A second researcher controlled 100 randomly selected tokens from five speakers; we then compared the number of extractions for which our individual assessments differed, which resulted in a 93 percent agreement rate.

I also noted the immediate context of the cluster (up to six words), the nature of the cluster, morphemic status (monomorphemic, bimorphemic, ambiguous), preceding environment (sibilant, stop, non-sibilant fricative, nasal, or liquid [excluding pre-consonantal /r/, see below]; see, for instance, Patrick 1991) and following environment (consonant, vowel, glide, or pause; see, for instance, Patrick 1991; Torbert 2001). I decided to include a separate category for ambiguous words in the classification of the cluster's morphemic status, similar to Neu (1980), Santa Ana (1996), Torbert (2001), or Tagliamonte and Temple (2005), and included suppletive forms in the monomorphemic (see Guy 1991) and past participles and derived passives in the bimorphemic categories (see Patrick 1991). I did not add any more sub-categories here, because of the generally low token number (see below; this would have resulted in very low token numbers for each category). With regard to preceding segments, I only included /l/ in the category of liquids, as post-vocalic

33. The verbs *want to* / *wanna* were also excluded.

/r/ has generally been excluded in previous studies (since Fasold 1972; see Patrick 1991: 172; Labov 1995; or Santa Ana 1996: 74 for a discussion of reasons). With regard to following segments, then, I did not add any further categories based on their manner of articulation, for the same reason as discussed above (the number of tokens in these categories would have been too low). Finally, rate of speech (analyzed by Guy in his 1980 study), articulatory complexity of the cluster (again analyzed by Guy in 1980) as well as speech style were excluded; the first two because comparative findings would be scarce and the third because a division into sub-categories would not be possible based on the present dataset (compare Torbert 2001, for instance, who discusses how style has been found to affect CCR). Additionally, I coded extra-linguistic factors as independent variables: numerical age and age group, residence, gender, ethnicity, education level and mobility group (for an overview of the categorization into factor levels and a discussion of caveats, see Chapter 4).

In the analysis, the total frequencies and reduction rates were first determined, based on the total number of tokens (N = 4,954). Mixed-effects logistic regression models were then computed, so as to gain insights into factor groups and factor weights which predict the reduction of syllable-coda consonants in BerE. While morphemic status, following and preceding environment, residence, age, gender, ethnicity, education and mobility were included as fixed effects, speaker was implemented as random effect, so as to account for the fact "that some individuals might favor a linguistic outcome while others might disfavor it" (Johnson 2009: 365; I did not compute random slopes by speaker, based on the explanation outlined in Johnson 2010–2014: 43).

In the mixed-effects logistic regression analyses, I relied on a subsample of data from speakers for whom it was possible to extract a minimum of 40 tokens (Table A2, in Appendix 1, outlines this subsample), because my coding procedure and methodology closely mirror those of previous studies.[34] By consequence, the highest token number upon which individual statistical models were based is N = 4,572.[35] Because of missing metadata for certain speakers, an additional number of tokens had to be excluded in the models which were fitted to analyze the effects of the social variables, so that the prerequisites for running these models were still given. I indicate this in the individual instances below.

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34. Working with mixed-effects logistic regression models would make it possible to include more datapoints, i.e. all tokens extracted per speaker, even though the numbers might be unbalanced (as long as they are above one token per speaker; see Johnson 2010–2014). This remains to be implemented, however, in future studies with an exclusively quantitative focus.

35. I am aware that these token numbers are comparatively low. Wolfram, Childs and Torbert (2000: 36), however, address this and argue that "the essential pattern of CCR typically emerges with a quite limited sample of speakers and tokens". Hence, the results should be indicative of patterns of variation which can be tested against larger datasets, once these are available.

The following exact procedure summarizes the individual steps of the logistic regression analyses, which were all computed using Rbrul:

1. I first ran a mixed-effects logistic regression model based on all extracted tokens of the subsample (N = 4,572; Model 1). Here, all linguistic factor groups as well as the social factor groups residence, gender, age and ethnicity were included as fixed effects (i.e. all factors for which metadata are complete). Speaker was the only random effect which was implemented.
2. In a next step, I computed a mixed-effects logistic regression model based on the token file where NAs had been excluded in the social factor groups: the total token number of this analysis is N = 3,831 (43 speakers). All factor groups were included as fixed effects (this corresponds to the full model with all linguistic and social factors; Model 2), to test the relationship of all these factors and CCR *in globo*. I again implemented speaker as random effect.
3. Based on this token number (N = 3,831), I then ran a model with only the social factor groups as fixed effects and speaker as random effect. To test in how far adding speaker as random intercept implicated the significance of the social factor groups, I subsequently excluded the random effect and ran a model with only fixed effects, emulating earlier analyses (Models 3.1 and 3.2).

All fixed effects in all runs were entered without interaction term and thus modeled as non-interacting variables, a point I have addressed above. For each run, reduction of the final consonantal segment was set as the application value for the dependent variable.

The results were then compared to those established for other English varieties in the wider geographical region (for instance Schreier 2005, and his comparison of varieties; Schreier 2008, StHE; Patrick 1991, Jamaican Creole; Bayley 1994, Tejano English; Wolfram, Childs & Torbert 2000, three different dialects in North Carolina and the Bahamas; Tagliamonte & Temple 2005, British English; etc.). Since distinct methodologies which were adopted in these studies considerably affect global rates, conditioning effects and constraint rankings (see Schreier 2005, 2009), and thus the contextualization of the BerE findings here, it is essential "to give [the] findings some leeway for methodological considerations" (Schreier 2009: 63) in order not to overgeneralize. The trends and patterns which emerge, however, still point towards similarities and differences between BerE and the varieties for which studies exist (see the argument raised in Childs, Reaser & Wolfram 2003: 10 as well).

A final issue that also needs to be considered because it might have an impact on the findings here is the question as to whether word-final CCR is a phonological or morphosyntactic phenomenon in BerE. The fact that past tense forms (and participles and passives as well) can variably occur without inflection influences the analysis, since Wolfram (1984: 34–35) states the following:

> [i]f a variety exhibits both the phonological process of final cluster reduction and the grammatical process of unmarked tense, we may not be able to determine whether a particular instance of nonrealized past tense on a regular verb is to be attributed to the phonological or grammatical source.

Accordingly, results for "bimorphemic clusters may be confounded by the grammatical system" here too, similarly as Childs, Reaser and Wolfram (2003: 11) argue with regard to Bahamian English. This needs to be kept in mind in the discussion of the present findings and warrants further research along the lines of Patrick's (1991) study, where he investigated this in mesolectal Jamaican Creole.

5.3.1.2 *Results and discussion of findings*

Considering absolute and relative frequencies, the global reduction rate of syllable-coda consonant clusters in BerE amounts to 35.12 percent (1,740/4,954 tokens). Male speakers reduce consonantal segments more frequently than female speakers: 38.07 percent of all tokens are absent (1,099/2,887), as opposed to 31.01 percent (641/2,067). Across age groups, global reduction rates are remarkably stable: group 1, the oldest group, displays the highest rates, with 36.35 percent (237/652), followed by group 3, with 36.17 percent (336/929), group 2, with 34.62 percent (762/2,201), and group 4, with 34.56 percent (405/1,172). Based on these rates, there is no evidence in the Bermudian data to support the following expectation which is outlined by Holmes and Bell (1994: 74) on a more general level:

> given the fact that CCR appears to be a stable linguistic variable, that it would follow the standard age graded pattern suggested by Chambers and Trudgill (1980: 92), where older and younger people tend to use more vernacular forms than those in between who are under most social pressure to conform.

A cross-tabulation of the distribution across these two factor groups reveals the most noticeable realization difference in age group 3 (speakers born between 1961 and 1979; see Figure 1 below), where the reduction rate for male speakers is 43.4 percent and for female speakers 24.6 percent.

With regard to ethnicity, Bermudians of African descent reduce clusters most frequently, namely in 36.8 percent of all cases (969/2,633). Bermudians of European descent follow, with a global absence rate of 33.32 percent (710/2,131), and Bermudians of Native American descent display the lowest rate (and the lowest number of tokens), with 32.11 percent (61/190). No clear hierarchy emerges in the distribution of global reduction rates across education groups, as group 1 (Bermudians who did not finish schooling) reduces most clusters, with a 44 percent rate (110/250), followed by group 3, with 38.88 percent (327/841), group 4, with 33.55 percent (945/2,817), and group 2, with 31.94 percent (23/72). Group 5, i.e. speakers for whom no information is available, displays a reduction rate of 34.39 percent (335/974), which is the third highest. Similarly, the distribution rates across

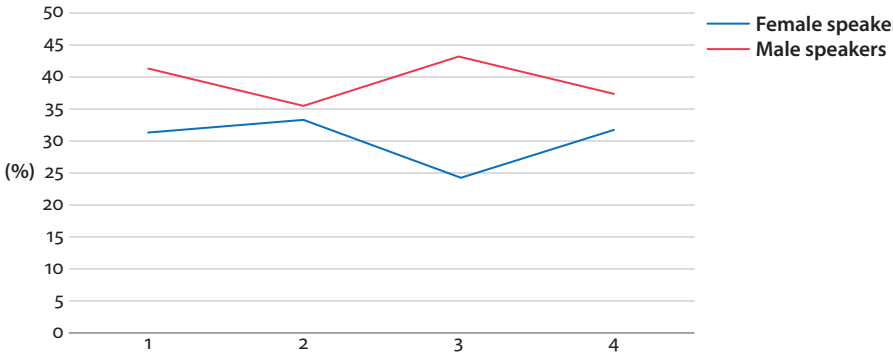

Figure 1. Cross-tabulation of global CCR rates according to gender and age group (x-axis: age group; with the classification as outlined in Chapter 4)

mobility levels do not reveal a clear pattern either; what is noticeable is the fact that the groups with lower levels display slightly higher reduction rates: 43 percent of tokens are reduced in group 2 (43/100), 41.73 percent in group 1 (58/139), 38.42 percent in group 4.1 (209/544), 35.71 percent in group 4.3 (525/1,470), 32.3 percent in group 3.1 (334/1,034) and 31.34 percent in group 4.2 (357/1,139). Here again, group 5, i.e. speakers with unknown levels of mobility, displays the third highest reduction rate, with 40.53 percent (214/528).

In terms of linguistic factors, the distributions of global reduction rates closely mirror results outlined in previous research. First, with regard to morphemic status, monomorphemic clusters display the highest reduction rates with 39.5 percent (1,507/3,815), followed by ambiguous clusters with 31.71 percent (65/205; the low token number is noteworthy here, however). A considerably lower reduction rate becomes evident in bimorphemic clusters, with 17.99 percent (168/934). Figure 2 provides an overview of these results:

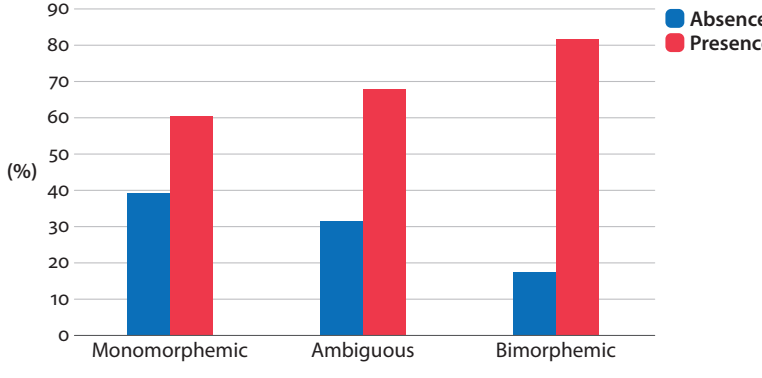

Figure 2. Global CCR rates according to morphemic status

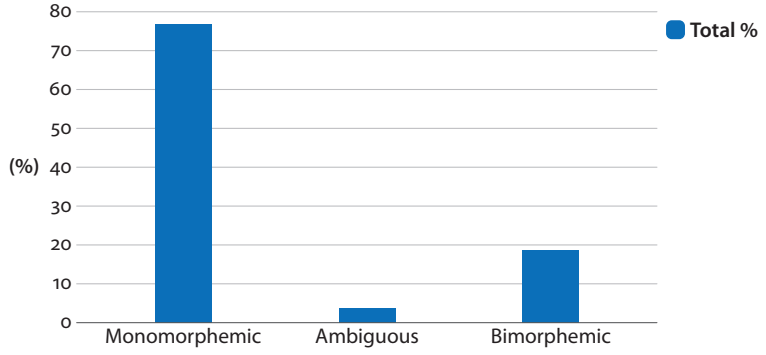

Figure 2a. Percentages of total token numbers per environment according to morphemic status

Second, with regard to following environment, the most common pattern reported in the literature also emerges here: global reduction rates are much higher for segments followed by a consonant, pause, or glide than for segments followed by a vowel. The corresponding numbers are 49.71 percent (844/1,698), 44.3 percent (315/711), 41.53 percent (184/443), and 18.89 percent (397/2,102). Especially noteworthy is the significant drop in percentages when pre-consonantal and pre-vocalic environments are compared, as visualized in Figure 3:

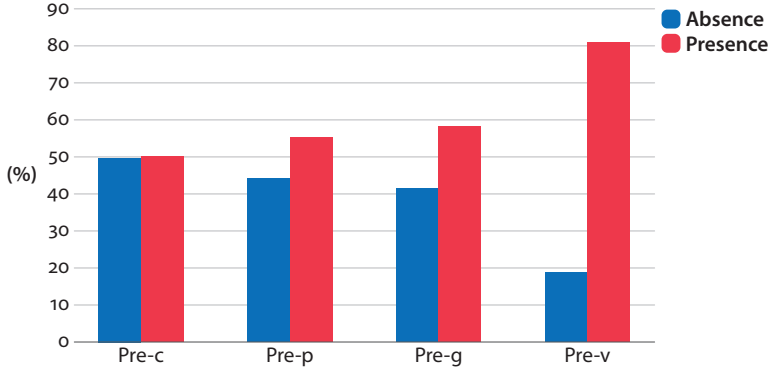

Figure 3. Global CCR rates according to following environment;
pre-c = preceding a consonant; pre-p = preceding a pause; pre-g = preceding a glide; pre-v = preceding a vowel

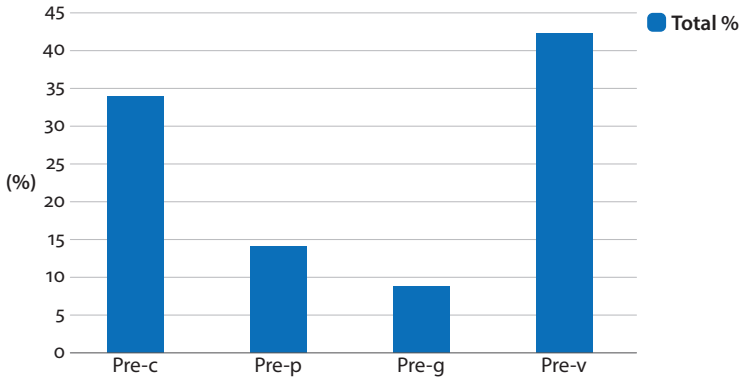

Figure 3a. Percentages of total token numbers per environment according to following environment

Third, with regard to preceding environment, the distribution rates also match reported patterns: consonants following nasals are most often reduced, with a rate of 39.07 percent (910/2,329), then consonants following sibilants, with 37.26 percent (424/1,138), liquids, with 35.19 percent (259/736), stops, with 22.29 percent (105/471), and non-sibilant fricatives, with 15 percent (42/280; see Figure 4):

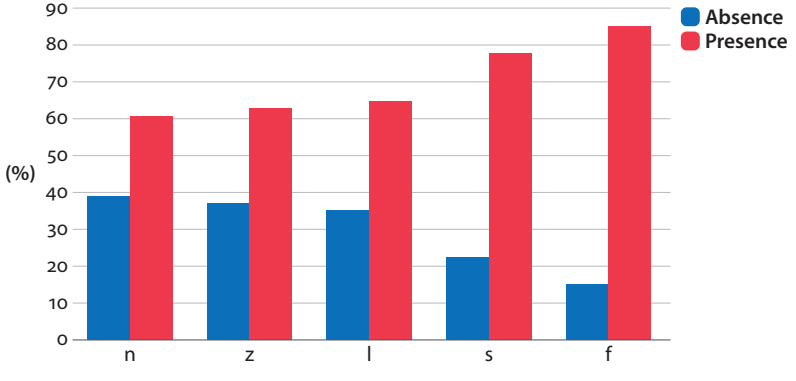

Figure 4. Global CCR rates according to preceding environment; n = nasal; z = sibilant; l = liquid; s = stop; f = non-sibilant fricative

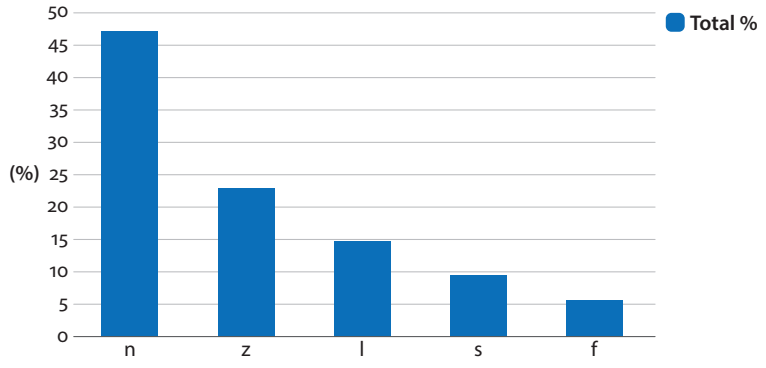

Figure 4a. Percentages of total token numbers per environment according to preceding environment

Based on the frequencies just outlined, then, the patterns which emerge in the linguistic factors indeed closely mirror the most common distributions reported in previous work. The hierarchy monomorphemic > ambiguous/semi-weak > bimorphemic, which also characterizes BerE, is reported as so common that a reversal is highly diagnostic in terms of language contact influencing a variety's historical development, as it has only been found in creolized varieties or varieties with intense language contact histories, such as Jamaican Creole English or StHE for instance (and very rarely so; Patrick 1991; Schreier 2005, 2008). In these varieties, Schreier (2009: 65) states, internal constraints seem to work "differently, so that bimorphemic clusters have in fact higher reduction rates than monomorphemic ones".[36] Since BerE displays the more common pattern, it does not seem to align with these varieties in this regard, which is especially noticeable considering the fact that BerE shares close structural affiliations with StHE in the qualitative analyses.

Similar conclusions can also be drawn on the basis of the pre-vocalic reduction rates, because comparatively higher rates have been discussed as indicative of language contact influencing a variety's development as well. Drawing on previous studies, Childs, Reaser and Wolfram (2003: 12; see also Schreier 2009: 68) explain that

> prevocalic cluster reduction tends to be enhanced in varieties influenced historically by phonological transfer from prior language contact situations rather than from independent development within English due to the fact that syllable-coda clusters are […] relatively rare in most languages of the world.

36. Here, however, variable past tense marking needs to be considered, as this might affect reduction rates in bimorphemic clusters. See, for instance, Labov (2004: 12), who describes Patrick's (1991) efforts to separate these two processes, so as to account for actual absence rates in bimorphemic clusters in mesolectal Jamaican Creole (see above).

The Bermudian rate of reduction in this environment is not particularly high (18.89 percent), which would suggest that BerE affiliates with varieties such as Standard English, Northern U.S. White Working Class Speech and Appalachian English, rather than AAVE, Vietnamese English, varieties of Native American English (see Childs, Reaser & Wolfram 2003: 12), or StHE. Since these varieties display considerably higher pre-vocalic reduction rates, BerE does again not seem to align with varieties which have developed in intense language contact scenarios.

In this context, however, a point raised by Wolfram, Childs and Torbert (2000: 34) has to be considered, namely that such lower pre-vocalic reduction rates

> should not be interpreted to mean that there was no prior contact situation. It is quite possible for speakers of other languages to assimilate completely to the language norms of an English-speaking community over time, including their use of syllable-coda clusters.

Accordingly, the present findings need to be interpreted with due caution, especially since there are also factors which would render a scenario of complete assimilation plausible in the Bermudian context (for instance, the early establishment and nature of the settlement as well as population demographics).

In a similar vein, reduction rates in a pre-pausal environment are also insightful, since this effect is described to be variety-specific (see above): Schreier (2005: 222) outlines that "[e]ven though the general trend is not clear-cut, there is evidence to suggest that pauses behave like consonants in many contact-derived varieties whereas they align with vowels in British, American and White New Zealand varieties". Torbert (2001: 377) too discusses this, drawing on Guy (1980) and his arguments that "Anglo speakers tend to align prepausal CCR with their rates of prevocalic CCR, that is, to reduce relatively seldom", whereas "AAVE speakers tend to do exactly the opposite, aligning CCR in prepausal environments with preconsonantal ones" (cross-tabulations of the Bermudian data reveal a similar pattern, with speakers of both European and African ancestries displaying rates that align accordingly). In BerE, the reduction rate of clusters in a pre-pausal environment is comparable to rates of clusters in pre-consonantal and pre-glide environments, with 44.3 percent, compared to 49.71 percent and 41.53 percent, respectively. Since pre-vocalic rates are significantly lower, this would speak for an alignment of BerE with varieties where pauses behave like consonants, such as AAVE or other contact-derived varieties. I return to the question as to whether a following pause favors or inhibits reduction in the discussion of the results which emerge in the mixed-effects analyses.

In terms of preceding environment, sonority also seems to be an important criterion in BerE, similarly as suggested with regard to other varieties in previous literature (see Schreier 2005: 133–134 for an in-depth discussion of a sonority

hierarchy): the most commonly reported pattern is reflected in the Bermudian dataset as well, in that more sonorous environments, such as nasals and liquids, display higher reduction rates than less sonorous ones, such as stops and non-sibilant fricatives. The only diverging aspect is that reduction rates in environments with a preceding sibilant are rather high (with the second-highest rate); these are usually reported to align with rates of less sonorous environments (stops).

Finally, the overall Bermudian reduction rate of 35.12 percent is comparatively low: it places BerE in between group 1 and 2 varieties within the typology suggested by Schreier (2005: 220). While it is somewhat higher than the 28.8 percent reported for White Hyde County NC English, a group 1 variety, and the 25–30 percent that would be expected if BerE "resembled 'new dialects' such as [Pakeha New Zealand English, spoken by New Zealanders of European descent]" (a point raised by Schreier 2005: 203 in connection to TdCE, but also applicable here), it does not match the 40.2 percent reported for African American English, a group 2 variety. Accordingly, BerE seems to affiliate most closely with varieties characterized by long standing historical continuity, natural transmission or dialect contact in colonial settings as well as with African American English (Schreier 2016a: 144), although this affiliation is not straightforward. Since creolized or creole varieties and varieties which have developed in intense language contact scenarios display rates that are almost twice as high as the Bermudian rate (starting from 66.5 percent; see Schreier 2008: 212), it can definitely be said, however, that BerE does not align with such varieties, despite potentially varying methodologies coming into play. This corroborates the hypotheses outlined in Section 3.2, in so far as a reconstruction of the early formation phase as well as BerE's subsequent development does not suggest that the variety has been characterized by intense language contact.[37]

A similar picture can be observed when we turn to the results of the mixed-effects logistic regression models. Considering the output of the first model, which includes morphemic status, preceding and following environment, residence, gender, age and ethnicity as fixed effects as well as speaker as random effect, the following factor groups emerge as significant predictors of the dependent variable: following environment ($p < 1.41e\text{-}85$), morphemic status ($p < 2.27e\text{-}13$), preceding environment ($p < 3.5e\text{-}06$) and gender ($p < 0.0125$). Table 18 provides a summary:

37. That it might be possible for speakers to completely assimilate to language norms (Wolfram, Childs & Torbert 2000: 34, see above) needs to be considered here however.

Table 18. Summary of the first mixed-effects logistic regression model for CCR in BerE; the application value is absence of the final consonant[a]

Consonant Cluster Reduction: Model 1				
Input probability 0.269				
Total N 4,572				
Deviance 5229.332				
Log likelihood -2614.666				
AIC 5253.331				
Df 12				
Factor groups	**Log odds**	**Tokens (N)**	**Proportion of application value**	**Factor weight**
Following environment	$p < 1.41e\text{-}85$			
Consonant	0.567	1567	0.510	0.638
Pause	0.261	642	0.436	0.565
Glide	0.111	403	0.412	0.528
Vowel	–0.938	1960	0.196	0.281
Effect size				*0.357*
Morphemic status	$p < 2.27e\text{-}13$			
Monomorphemic	0.367	3510	0.401	0.591
Ambiguous	0.083	191	0.319	0.521
Bimorphemic	–0.450	871	0.186	0.389
Effect size				*0.202*
Preceding environment	$p < 3.5e\text{-}06$			
Sibilants	0.343	1048	**0.386**	0.585
Nasals	0.297	2154	**0.393**	0.574
Liquids	0.057	675	0.357	0.514
Stops	–0.254	432	0.225	0.437
Non-sibilant fricatives	–0.443	263	0.156	0.391
Effect size				*0.194*
Gender	$p < 0.0125$			
Male	0.207	2644	0.387	0.552
Female	–0.207	1928	0.315	0.448
Effect size				*0.104*
Random				Speaker
Not significant				Residence, Age group, Ethnicity

[a] The formatting of all mixed-effects logistic regression tables is adapted from Schleef, Meyerhoff and Clark (2011) as well as Daleszynska (n.d.).

Based on this first model, CCR in BerE seems to be constrained by similar factors as in other varieties of English. First, the factor following environment influences the probability of reduction most. Log odds and factor weights in this factor group

speak for the following ranking of constraints: consonants favor reduction most, with a factor weight of 0.638, followed by pauses and glides, which align with consonants in that they favor reduction as well, albeit to a lesser extent. Following vowels, by contrast, disfavor it, with a negative log-odd value and a factor weight of 0.281, which is significantly below the 0.5 threshold. Second, morphemic status also emerges as a significant factor group. Here, monomorphemic clusters favor reduction, while bimorphemic clusters disfavor it, with a factor weight of 0.389. Ambiguous verbs are placed in between, with a factor weight of 0.521, which indicates a very slight favoring effect. Third, the factor preceding environment presents a more complex picture. While it appears as a significant factor group, with sibilants, nasals and liquids favoring and stops and non-sibilant fricatives disfavoring reduction (the latter quite strongly so), interactions seem to emerge in this context; a point I re-address below. Gender, finally, is the only social factor which influences the probability of reduction and it displays the weakest effect (with a p-value of < 0.0125). Since previous research has found that male speakers use vernacular features more (Holmes & Bell 1994: 56, for instance; see below), the results here reflect an expected pattern, with male speakers favoring and female speakers slightly disfavoring reduction. Not significant are residence, age group and ethnicity.

In order to account for the interactions in the factor group preceding environment (indicated in bold in Table 18), I ran a number of models with collapsed factor levels, which were combined according to Daleszynksa's (n.d.: 11) argument that this "needs to be conceptually validated". While collapsing sibilants and non-sibilant fricatives into a category of fricatives (see Model 1.1 in Appendix 3) did not lead to an improvement, collapsing nasals and liquids did (see Model 1.2 in Appendix 3; this was based on the reasoning that both environments have high sonority levels and that previous results have indicated that they correlate with CCR in a similar way; compare Daleszynska n.d.: 11). In this model, no more interactions become evident and the same factors as discussed above emerge as significant predictors of reduction, with the same constraint rankings.

The results of the second and most complex model, where all factors were included as fixed effects and speaker as random effect, largely confirm the trends which emerge in the first model: with following environment, preceding environment and morphemic status, the same factors (except gender) emerge as significant predictors of the dependent variable.[38] Also, almost exactly the same constraint rankings become apparent (with slightly varying log odds and factor weights, however; see

38. The only two aspects which do not correspond are, first, that preceding environment exhibits a stronger effect than morphemic status and, second, that gender is no longer significant. With an inclusion of speaker as random effect, the latter might be due to the lower number of tokens upon which the second model is based (see Johnson 2010–2014: 55–56 as well as 23 for a more detailed discussion).

Model 2.1 in Appendix 3). In terms of following environment, consonants, pauses and glides favor reduction, as opposed to vowels. In terms of preceding environment, sibilants and nasals again show a favoring effect, in contrast to stops and non-sibilant fricatives; liquids are so close to the 0.5 threshold that no favoring or disfavoring effect can be argued for. Finally, the factor weights of the morphemic status factor levels show the same pattern as above, with monomorphemic and ambiguous clusters favoring reduction and bimorphemic clusters inhibiting it. It is noteworthy (but not too surprising, see below) that none of the social predictors emerge as significant.

In this model, the proportions of the application value do not point to interactions in the factor group preceding environment, but rather in the factor group following environment. Adopting the same procedure as above, I collapsed glides and consonants (since glides are not associated with vowels in English; they do not function as vowel nuclei; Davenport & Hannahs 2005: 16) and ran the model again. While the results of this run reflect the results of the first (as discussed above), the interaction does not seem to persist (Table 19):

Table 19. Summary of the second mixed-effects logistic regression model for CCR in BerE, with collapsed factor levels consonants and glides (= consonants); the application value is absence of the final consonant

Consonant Cluster Reduction: Model 2				
Input probability 0.245				
Total N 3,831				
Deviance 4369.964				
Log likelihood -2184.982				
AIC 4389.964				
Df 10				
Factor groups	**Log odds**	**Tokens (N)**	**Proportion of application value**	**Factor weight**
Following environment	$p < 3.51e\text{-}68$			
Consonant (including glides)	0.572	1637	0.494	0.639
Pause	0.258	516	0.409	0.564
Vowel	–0.830	1678	0.201	0.304
Effect size				*0.335*
Preceding environment	$p < 3.97e\text{-}10$			
Sibilants	0.494	880	0.399	0.621
Nasals	0.415	1825	0.399	0.602
Liquids	–0.028	536	0.325	0.493
Stops	–0.301	361	0.208	0.425
Non-sibilant fricatives	–0.581	229	0.127	0.359
Effect size				*0.262*

(*continued*)

Table 19. (*continued*)

Factor groups	Log odds	Tokens (N)	Proportion of application value	Factor weight
Morphemic status	$p < 2.29e\text{-}09$			
Monomorphemic	0.337	2939	0.400	0.583
Ambiguous	0.074	154	0.312	0.518
Bimorphemic	–0.410	738	0.183	0.399
Effect size				*0.184*
Random				Speaker
Not significant	Residence, Gender, Age group, Ethnicity, Education, Mobility			

Based on the results of both models, the constraint rankings in BerE thus closely mirror those reported in other varieties, especially with regard to the language-internal factor groups: (1) clusters followed by consonants favor reduction considerably, in contrast to clusters followed by vowels; (2) monomorphemic clusters exhibit a favoring and bimorphemic clusters a disfavoring effect; and (3) sonority plays a role. Because both phonological and morphemic predictors emerge as significant, CCR in BerE seems to be conditioned by both types of factors, which would make it a morphophonological phenomenon. Table 20 provides a summary of the significant predictors of reduction in BerE and their respective hierarchies:

Table 20. Significant predictors of CCR and their constraint hierarchies

Factor	Hierarchy
Following environment	Consonant > pause > glide > vowel
Preceding environment	Sibilant > nasal > liquid > stop > non-sibilant fricative
Morphemic status	Monomorphemic > ambiguous > bimorphemic
Gender	Male > female

These findings allow us to draw a number of conclusions considering the research questions outlined above, which I want to address at this point.

In terms of following environment, the high pre-consonantal reduction rates and strong favoring effects of a following consonant (with factor weights ranging from 0.638 to 0.641), firstly, seem to "[reflect] a natural simplification process prohibiting strings of successive consonants" (Wolfram, Childs & Torbert 2000: 20). Such a process is observable in numerous varieties of English and seems to be quite common (Wolfram, Childs & Torbert 2000: 20).

Secondly, a following pause aligns more with consonants than vowels in BerE: the factor weights associated with pre-pausal environments range from 0.544 to 0.565; numbers which are much closer to the factor weights of pre-consonantal than

pre-vocalic environments, but which do not strongly favor reduction. This reflects the frequency distributions discussed above and also speaks for an affiliation of BerE with contact-derived varieties such as AAVE (see Schreier 2005: 181, who discusses how Wolfram & Thomas 2002 report a similar pattern in Hyde County AAE, with stronger favoring effects, though), rather than with varieties such as West Virginian Appalachian English or York English (see again Schreier 2005: 167–196 for a discussion of rates reported in these varieties).

Thirdly, in terms of pre-vocalic environments, syllable structure and resyllabification have been noted to play a role, as briefly touched upon above: "it has been proposed that the final coronal consonant tends to be retained if it can be resyllabified as part of the following onset" (Anttila 2004: 207; see also Schreier 2005: 134 and Labov 1995 for a more comprehensive discussion of resyllabification and its effects on CCR). Based on the results reported above, a following vowel is clearly – and very strongly, with factor weights ranging from 0.304 to 0.281 – disfavoring reduction in BerE, which reflects the comparatively low reduction rate in this environment. Hence, an alignment of BerE with varieties that have not undergone heavy language contact during their formation or subsequent development is corroborated in the statistical analyses, though the same note of caution has to be taken into account as above.

As discussed above, the emerging constraint rankings of the factor groups preceding environment and morphemic status also closely follow the more widespread patterns reported in the literature. While the preceding environment factor levels largely reflect sonority hierarchies outlined in previous studies, I want to particularly focus on the morphemic status factor levels here. The fact that the emerging hierarchy in BerE reflects the more common hierarchy monomorphemic > bimorphemic corroborates the trend discussed above, namely that BerE does not affiliate with varieties that have been characterized by heavy language contact during their formation phase or subsequent development (Schreier 2005: 154–155; see also Schreier 2008; Patrick 1991). It is noteworthy here, however, that one of the two varieties with which BerE shares the closest structural parallels in the typological analyses, namely StHE, displays the reverse pattern (bimorphemic > monomorphemic; Schreier 2008: 233). Hence, this alignment is not confirmed in the present context, which is not too surprising though, considering the higher levels of language contact influencing the historical development of StHE (see Section 5.2.2). As regards clusters in ambiguous verbs, finally, the emerging factor weights indicate a slight favoring effect and align with monomorphemic rather than bimorphemic clusters. This is expected, considering the fact that previous studies generally report these clusters to fall in between monomorphemic and bimorphemic ones (see for instance Bayley 1994; Santa Ana 1996).

With regard to social factors, finally, gender is the only significant predictor, and only in the first model. The pattern of male speakers reducing more clusters than female speakers and favoring reduction corresponds to expectations based on previous research, since CCR is a "stable non-standard feature" (Johnson 2010–2014: 25–26, drawing on Labov 2001: 266; see also for instance Holmes & Bell 1994: 79, who report such findings in New Zealand English). This is, however, one of the few parallels to previous work: while social class, another factor that is frequently implicated in CCR, has not been included in the present analysis, none of the other language-external factors seem to predict variable realization of consonant clusters in similar ways as reported in previous studies.

Since the literature on mixed-effects logistic regression suggests that emerging results may be more conservative when speaker is implemented as random effect (see Johnson 2010–2014: 55), one possible reason for this might lie in the statistical model and methodological decisions that were adopted in the present analysis. So as to test for such potential effects, I computed additional runs without speaker as random effect, based on both the full token number of the subsample (Model 3.1; see Appendix 3) and lower token number (Model 3.2; see below). Because it was only possible to include the full number of social variables in the second model, I focus on this model here.[39]

When speaker is excluded as random effect, more social variables reach significance: gender emerges as the predictor with the highest significance ($p < 0.00024$), followed by education ($p < 0.000575$), mobility ($p < 0.00518$) and ethnicity ($p < 0.0242$). The only two factors which are not significant are age group and residence (see Table 21):

39. Because numerous interactions became evident, I again collapsed the factor levels of different factor groups. In the factor group residence, I combined St. George's, St. Davids, Smith's, Devonshire and Pembroke into a group called "east" and Warwick, Southampton and Sandys into a group called "west"; I further combined age groups 1 and 2 into an older age group and 3 and 4 into a younger one; I combined speakers of African and Indian heritage; in the factor group education, I combined groups 1 and 2 into one group; and in the factor group mobility, I combined groups 1, 2 and 3 into one and also collapsed all subgroups of the fourth group, so as to have a group of lower mobility levels and one of higher levels. Further refinement would be needed in the mobility factor group.

Table 21. Summary of the second mixed-effects logistic regression model for CCR in BerE, with only social factor groups included (residence, gender, age group, ethnicity, education, mobility) and collapsed factor levels; speaker was not added as random effect and the application value is absence of the final consonant

Consonant Cluster Reduction: Model 3.2				
Input probability 0.378				
Total N 3,831				
Deviance 4937.092				
Log likelihood –2468.546				
AIC 4949.092				
Df 6				
Factor groups	**Log odds**	**Tokens (N)**	**Proportion of application value**	**Factor weight**
Gender	$p < 0.00024$			
Male	0.131	2151	0.380	0.533
Female	–0.131	1680	0.321	0.467
Effect size				*0.066*
Education	$p < 0.000575$			
1 + 2	0.297	295	0.427	0.574
3	0.094	765	0.387	0.524
4	–0.392	2771	0.338	0.403
Effect size				*0.171*
Mobility	$p < 0.00518$			
Higher levels (Group 4)	0.217	3007	0.351	0.554
Lower levels (Groups 1, 2 and 3)	–0.217	824	0.368	0.446
Effect size				*0.108*
Ethnicity	$p < 0.0242$			
African and Indian descent	0.085	1801	0.380	0.521
European descent	–0.085	2030	0.332	0.479
Effect size				*0.042*
Not significant				Age group, Residence

Such results indicate that, based on the present dataset, speaker variability may potentially override other, weaker conditioning factors which might emerge in statistical analyses that rely on higher token numbers (compare Young & Bayley 1996: 259).

In light of both the distributional and statistical analyses, then, the following conclusions can be drawn in terms of the questions raised at the outset. The global reduction rate suggests that BerE aligns with varieties that have predominantly

emerged out of dialect contact scenarios, because it is very close to rates we have come to expect for such varieties, but not unequivocally so, because it is also slightly higher. Considering the argument that "contact between structurally and phonotactically similar systems does not lead to an increase of this vernacular root" (Schreier 2009: 64, 2016a), such a slightly higher rate seems to indicate that a different phonotactic system must have played some role in the development of BerE. This is not corroborated, however, when we take certain results of the statistical analyses into account, for instance of the factors following environment (pre-vocalic rates) or morphemic status (the emerging hierarchy of factor levels). These do not indicate that language contact influenced the variety's development to similar degrees as reported in other studies. Consequently, a somewhat intermediary alignment between varieties with longstanding historical continuity, natural transmission or dialect contact in colonial settings and varieties which have formed in intense language contact scenarios seems to be most accurate, with BerE positioned closer to the dialect contact end of the scale, considering the findings of this first quantitative analysis.

5.3.2 Past *be* leveling

The second variable which is analyzed from a quantitative perspective concerns subject-verb agreement of the verb *be*. In Standard English, *be* exhibits "iconic status" because of its irregular paradigm (Hay & Schreier 2004: 210; compare also Schreier 2002): in the present tense, *am* is to be used with the first person singular, *is* with the third person singular and *are* with all remaining persons and in the past tense, *was* with the first and third person singular and *were* with all remaining persons. While it has thus "preserved person-number concord" (Schreier 2002: 70), it also exhibits extensive variation in countless varieties of English (see for instance Cheshire & Fox 2009 for a general overview and Tagliamonte 1998: 156–157 for a historical overview of *was/were* variation and a summary of conclusions that can be drawn when consulting historical records; compare also Smith & Tagliamonte 1998 or Tagliamonte 2009).

In both present and past *be* paradigms, processes of leveling and regularization have been amply documented. It seems, however, that "[past *be* leveling is much more common than present *be* leveling] in virtually all varieties of vernacular English having *be* regularization" (Wolfram 2008: 522; compare also Tagliamonte & Smith 1999). Because of this and because of the extensive body of research that focuses on leveling in the past *be* paradigm (see below), I exclusively concentrate on and discuss regularization in this environment here; I re-address this focus again in Section 5.3.2.1.

In the past *be* paradigm, then, a number of distinct variable patterns have been identified to characterize varieties (see Britain 2002a; Tagliamonte 2009), despite the fact that "variability makes it difficult to pinpoint the overall trends in the directionality" of regularization (Schreier 2002: 74; see also Hay & Schreier 2004: 210). First, varieties may exhibit what Tagliamonte (2009: 110–111, drawing on Chambers 2000) calls "Vernacular Pattern I", namely "levelling to *was* across person, number and polarity" (Britain 2002a: 17; Hay & Schreier 2004: 210). This is generally acknowledged to be the most common pattern and has been widely documented, for instance in American varieties and AAVE (Anderwald 2001; see also Britain 2002a for an overview), Buckie English in Scotland (Smith & Tagliamonte 1998), TdCE (Schreier 2002), Samaná English (Tagliamonte & Smith 1999) as well as Australian English (Eisikovits 1991). Because *was* in standard *were* contexts is so widespread across vernacular varieties, Chambers (2004) has proposed it to be a vernacular universal (see Section 2.2.1; see also for instance Wolfram & Sellers 1999; Wolfram & Schilling-Estes 2003).

The second leveling tendency, "Vernacular Pattern II" (Tagliamonte 2009), is predominantly attested in nonstandard British varieties (see for instance Anderwald 2001, who investigates the British National Corpus; Tagliamonte 1998, York English; Britain 2002a, the variety spoken in the Fens area; Cheshire & Fox 2009, London English) as well as in a smaller number of U.S. varieties (Schilling-Estes & Wolfram 1994, Ocracoke; Wolfram & Sellers 1999, Lumbee Vernacular English; Wolfram & Schilling-Estes 2003, Southern enclave communities). In these varieties, leveling to *was* occurs in positive and leveling to *weren't* in negative contexts, so that *was* and *weren't* indicate polarity (see Cheshire & Fox 2009: 1–2). This process has been explained to result in what Schilling-Estes and Wolfram (1994: 289) call "remorphologization", where "the two allomorphs of past *be* are being used to distinguish positives from negatives rather than to mark person-number distinctions, as they do in Standard English" (Wolfram & Sellers 1999: 98; see also Schreier 2002: 74; Hay & Schreier 2004: 210–211).

A third leveling pattern, finally, also occurs, namely usage of nonstandard *were* in positive polarity contexts. According to Britain (2002a: 19), however, "the literature provides little detail of its present socio-geographical distribution or the linguistic constraints operative on […] varieties" which exhibit this tendency.

With regard to BerE, qualitative evidence of past *be* regularization suggests that leveling to *was* is the predominant pattern, i.e. Vernacular Pattern I (see Section 5.1). Examples (165)–(172) illustrate how *was* is used with the second person singular as well as with all plural persons except the second person plural (no instances of leveling in this environment were found):

(165) the time that you **was** born (S26, Pembroke Parish)

(166) since we **was** nine years old (S22, Southampton Parish)[40]

(167) these guys **was** painting the dinghy (S34, St. George's Parish)

(168) and they **was** not using it (S49, Southampton Parish)

(169) the people **was** like extra polite (S32, Southampton Parish)

(170) the policemen and the chief of police **was was** British (S1, Smith's Parish)

(171) there **was** seven of us (S53, St. George's Parish)

(172) it **was** no pensions (S40, Southampton Parish)

While some instances of *were*/*weren't* in standard *was* contexts also occur, these are rare indeed. In the entire dataset, only four instances are observed, which do not allow the identification of a clear pattern with regard to polarity (Examples [173]–[176]):

(173) but she **weren't** there (S16, Pembroke Parish)

(174) like nobody **weren't** worrying about it (S26, Pembroke Parish)

(175) as pretty much everyone in these days **were** (S27, Smith's Parish)

(176) the original group of Black Bermudians **were** actually of Angolan descent (S41, Bermuda Islands)

The predominant use of *was* in standard *were* contexts which becomes evident when leveling occurs in the present dataset mirrors a trend reported by Schreier (2002: 74), namely that "transplanted varieties of postcolonial English show an overwhelming trend toward *was* as a pivot form, strongly supporting Chambers's view". Because of the clear tendency here too, I focus my discussion on nonstandard *was* and exclusively analyze this environment (see also Section 5.3.2.1).

The fact that such leveling and regularization processes are so widely attested across varieties, as discussed above, is reflected in the number of studies which focus on this: similar to syllable-coda CCR, *was*/*were* variation is also one of the most widely researched variables in variationist sociolinguistics to date. Studies have examined leveling in different contexts, from synchronic and diachronic perspectives: varieties in the U.K. and U.S. have been subject of study (Tagliamonte 1998; Smith & Tagliamonte 1998; Anderwald 2001; Britain 2002a; Cheshire & Fox 2009; Schilling-Estes & Wolfram 1994; Hazen 1998, 2000, 2014; Wolfram & Sellers 1999; Mallinson & Wolfram 2002), in the Atlantic and Caribbean (Britain & Sudbury 2002; Schreier 2002, 2003; Tagliamonte & Smith 1999), or in Australia and New

40. This is one instance where variability becomes evident in the speech of the same speaker, within the same construction: while S22 uses the nonstandard variant first, he also uses the standard variant a couple of minutes later: *since we* ***were*** *nine years old*.

Zealand (Eisikovits 1991; Hay & Schreier 2004). Most of these studies have focused on a qualitative description as well as quantitative analysis of variable patterns and conditioning effects; some have also investigated "genetic relationships and (potential) founder effects (Tagliamonte & Smith 2000) or […] contact-induced regularization mechanisms in new-dialect formation (Schreier, 2002b)" (Hay & Schreier 2004: 210). More recent work has also, for instance, addressed intermediate variants of *was* and *were* (Richards 2010) or the implementation of novel statistical methods which make it possible to analyze variability in more quantitative detail (Tagliamonte & Baayen 2012; see Schreier 2016b: 203–204 for a comprehensive summary of reported findings).

Again similar to CCR, a number of linguistic factors have been found to condition variable use of nonstandard *was* in standard *were* contexts: I briefly review type of subject, polarity, proximity of the subject and verb, type of determiner and type of clause in more detail. The first, type of subject, has been reported to be the most important factor (see Smith & Tagliamonte 1998, for instance). All subject types, i.e. second person singular as well as first, second and third person plural (analyzed according to a three-fold distinction of third person plural pronoun, lexical noun and existential, see Tagliamonte 1998; for a discussion of an even more fine-grained distinction, see Hay & Schreier 2004), variably agree with *was*, yet some do so more frequently and favor the leveled variant. Tagliamonte and Smith (1999: 11; see also Schreier 2002: 74–75) provide a concise summary of this:

> [t]he personal pronoun *you*, whether singular or plural, is often singled out as having the highest frequency of nonstandard *was* (Feagin 1979; Labov et al. 1968). Use of *was* with first-person plural *we*, on the other hand, is attested, but with relatively lower rates (Feagin 1979; Labov et al. 1968). […] While [third-person plural contexts] differ in their use of *was*, their constraint hierarchy in most contemporary studies is identical. Third-person plural *they* is the least likely to appear with *was* than all the other personal pronouns (Eisikovits 1991; Feagin 1979), while plural NPs tend to have relatively higher rates (Christian, Wolfram, and Dube 1988; Hazen 1996; Meechan and Foley 1994; Schilling-Estes and Wolfram 1994). Existentials, on the other hand, have the highest rates of nonstandard *was* cross-dialectally.

This final aspect, namely that existentials followed by plural noun phrases display the highest rates of *was*, has been widely reported indeed (for instance in Eisikovits 1991; Tagliamonte 1998; Hay & Schreier 2004; see Cheshire & Fox 2009: 7–8 for an overview) and seems to occur "even in speech communities with relatively little non-standard *was* in other contexts" (Britain 2002a: 19; see Meechan & Foley 1994; Walker 2007; or Meyerhoff & Walker 2013, who have investigated *was/were* variation in existentials separately).

While a number of researchers have proposed common constraint hierarchies for this effect, based on comparable findings which have been reported across varieties (see Cheshire & Fox 2009: 6 for a comprehensive discussion), Tagliamonte outlines that generalizing might have been premature, because varieties display differing hierarchies in her (2009) study, where she compares type of subject effects in 13 speech communities. As Cheshire and Fox (2009: 6) summarize, "[s]he finds no regular relationship between leveled *was* and different pronoun subjects, although in most communities, existential contexts clearly favor *was* leveling, and NP subjects tend to favor *was* leveling over third plural pronoun subjects".

The second factor which has been identified as a conditioning effect is polarity (Tagliamonte 2009: 119; a factor which is particularly relevant with regard to Vernacular Pattern II). In some varieties, negative contexts display a much higher frequency or favor the usage of *weren't* in standard *was* contexts (see Tagliamonte 1998; Hazen 2014; and the discussion above). Even though Tagliamonte and Smith (1999: 12) outline that "[s]o far, there are no attestations of a polarity effect in contexts of standard *were*", I have included this factor in the present analysis so as to test for it and potentially examine polarity effects in more detail in future studies where nonstandard *were/weren't* in standard *was* contexts can be taken into account as well.

Proximity of or distance between subject and verb is a third factor that has been discussed in connection to agreement patterns (Tagliamonte 1998; Britain & Sudbury 2002; Hay & Schreier 2004):

> Tagliamonte (1998: 173–174) analyzed separately the effect of proximity between the verb and the subject for both preverbal and postverbal third plural NP subjects, finding in each case that frequencies of nonstandard *was* increase with greater numbers of intervening words. (Cheshire & Fox 2009: 8)

Such effects of intervening linguistic material have been explained in terms of processing effects and a "look-ahead" mechanism: "the further ahead one has to look, the less likely there is to be subject-verb agreement" (Cheshire & Fox 2009: 8; see also Meechan & Foley 1994: 73). Especially in existential contexts, the distance between subject and verb is relevant, "since previous studies find that separating the verb from its postverbal subject […] results in a higher rate of singular agreement" (Walker 2007: 155).

The two remaining factors are closely connected to this, namely type of determiner in existentials and clause type. First, based on the assumption that definiteness might influence variability (Meechan & Foley 1997; see also Walker 2007: 156; Britain & Sudbury 2002), the type of determiner has been quite extensively investigated in studies which have exclusively concentrated on *was*/*were* variation in existentials. Most researchers who have included this factor have coded it according to a division suggested by Britain and Sudbury (2002): bare noun phrases,

adjectives, definite articles, quantifiers with the indefinite article *a* (such as *a lot of*), other quantifiers, negatives, or numbers (see also Hay & Schreier 2004: 218; Walker 2007: 156–157). While no common constraint hierarchy seems to have emerged, however, findings can be summarized as follows: "[a]cross most studies, *no* and numbers tend to favour singular agreement, while quantifiers, adjectives and bare forms tend to disfavor" (Walker 2007: 153; who also provides a more detailed overview of relevant findings).

Secondly, and finally, clause type has been included in a number of previous studies so as to identify potential influences resulting from subject-verb order, which is connected to processing effects that have been argued to play a role:

> [t]he frequency with which *was* occurs with a plural postverbal subject in [existential] clauses has been explained as reflecting the influence of word order or, more generally, processing effects […], such that a subject that is uttered after the verb or that is separated from the verb does not trigger agreement. One of the problems of analyzing the more general effect of subject-verb order[,] [however,] is that most other relevant constructions do not occur with any great frequency in spontaneous speech. (Cheshire & Fox 2009: 16)

Interrogatives are one of the few clause types that occur sufficiently frequently so that it is possible to report leveling rates: previous studies find higher rates of nonstandard *was* in interrogatives than in environments with preverbal subjects (see Smith & Tagliamonte 1998: 112, who cite Eisikovits 1991, and Moore 2011: 353, who cites Cheshire & Fox 2009: 16–17). Tag questions are further relevant structures in this context: these, however, are mainly discussed in studies investigating nonstandard *were*/*weren't* and occur relatively rarely in spontaneous speech, which has made it difficult to draw conclusions as to whether nonstandard *weren't* is favored in this environment (see Schilling-Estes & Wolfram 1994: 299).

Taking these characteristics of the variable into account, then, I outline the more general patterns of variation that become evident in the present dataset and conduct a quantitative analysis. Similar questions as in Section 5.3.1 are raised here too:

1. How frequently does nonstandard *was*/*wasn't* occur in standard *were*/*weren't* contexts in the present dataset? How can BerE leveling patterns be contextualized in terms of previous research?
2. Which language-internal and -external constraints condition variability of past *be* in BerE? Do the present findings match those reported in the extensive body of work that concentrates on this particular variable?
3. Based on these findings, what are the implications regarding potential standardization processes in BerE? In how far do the leveling patterns reflect the Bermudian sociohistorical and sociolinguistic contexts?

The investigation of past *be* leveling complements the previous qualitative and quantitative analyses, because the variable here "persists in virtually all vernacular English varieties in the face of social pressure to eradicate it (e.g., Trudgill 1990; Wolfram & Fasold 1974) [and] serves as an ideal socially diagnostic linguistic variable, because social groups readily can be differentiated based on how and to what extent they use leveled *be*" (Schilling-Estes & Wolfram 1994: 275).

5.3.2.1 *Methodology*

As discussed above, the analysis here focuses exclusively on past *be* leveling, for various reasons. First, variability in the past *be* paradigm has been so widely attested that it seems to appear "even [in] varieties with relatively little other morpho-syntactic non-standardness" (Britain 2002a: 17). Considering that a morphosyntactic variable might occur more rarely than a phonological one even in the most casual datasets, such a widely attested phenomenon provides the best prerequisites to extract token numbers which render a quantitative analysis possible on the basis of the present dataset (see Chapter 4). Secondly, the extensive body of research focusing on past *be* leveling allows a better contextualization of the Bermudian findings than that focusing on present *be* leveling. This is crucial considering the overall aims of the present study.[41]

Within this paradigm, I concentrate on nonstandard *was* in standard *were* contexts only, because a qualitative assessment of the patterns of variation characterizing BerE has brought to light that nonstandard *were* in standard *was* contexts occurs extremely rarely. A variationist analysis would not be possible considering the low frequencies of the nonstandard variant. Consequently, I extracted all instances of standard *were*/*weren't* in second person singular and all plural environments into an Excel file. False starts and formulaic expressions were excluded (Tagliamonte 1998: 160; Cheshire & Fox 2009: 12), along with subjunctive contexts, for the same reason that Schilling-Estes and Wolfram (1994: 286) advance: I concentrate on "unambiguously nonstandard leveling".[42]

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41. Also, regularization has been argued to be "unencumbered by independent phenomena (such as contraction and the possible formulaic nature of presentational *there's*)" in this paradigm (Tagliamonte 2009: 106 concentrates her discussion on this environment).

42. I excluded instances of subjunctives and *were* in conditional clauses; these contexts are so rare in the current dataset that an inclusion would not make conceptual sense, since it would not be possible to separately analyze them. Note that I decided against excluding neutralization contexts *a priori* because of the current focus on grammatical constraints (as Tagliamonte 1998: 188 has done) and because of considerations regarding the token number. I also included speakers who demonstrated no variability.

This extracting procedure resulted in a total token number of $N = 591$ (of which $N = 80$ occur in an existential environment). These tokens were then coded according to the dependent variable, i.e. whether or not leveling to *was*/*wasn't* occurred, as well as according to the language-internal factors discussed above, with the following factor levels:

1. type of subject: second person singular *you*, first person plural *we*, second person plural *you*, third person plural pronouns (*they were*), third person plural regular noun phrases (*Bermudians were*), third person plural irregular noun phrases (*the children were*), third person plural collective noun phrases (*the people were*),[43] third person plural conjoined noun phrases (*Bermudians and Kittitians were;* this included "cases in which both singular and plural NPs were combined", similarly as Hay and Schreier 2004: 223 discuss), or plural existentials (*there were Bermudians*);
2. polarity: positive or negative;
3. proximity of subject and verb (which is especially relevant for plural noun phrase and existential subjects; Tagliamonte 1998: 173): no intervening material or the number of intervening words (1, 2, 3, or more; Hay & Schreier 2004: 215);
4. type of clause: declarative, interrogative, or tag (Cheshire & Fox 2009: 12);
5. and type of determiner in existentials: bare noun phrases, adjectives, definite articles, quantifiers with the indefinite article *a*, other quantifiers, negatives, or numbers (Britain & Sudbury 2002; see Hay & Schreier 2004: 217 for example sentences).

With regard to this last factor, I followed the same procedure as Tagliamonte (1998: 189), for instance, in environments where more than one determiner was present. I also included an additional category for other types of determiners such as indefinite articles or demonstratives, so as to account for forms which might not fit into any of the seven categories listed above. Finally, I coded the tokens according to the same extra-linguistic factors as above:[44] numerical age and age group, residence, gender, ethnicity, education level and mobility group.

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43. Similarly as Tagliamonte (1998: 167) highlights with regard to her York corpus, collective nouns also relatively rarely occur in the present dataset and, "[w]hen they do occur, it is often difficult to assign them an unambiguous number interpretation as this varies depending on context". Note that I excluded tokens with *family* as the subject, for the same reason that Hay and Schreier (2004: 224) exclude collective nouns.

44. Tagliamonte (1998: 154) summarizes how such factors might be implicated: "Feagin (1979) found that nonstandard *was* is far more frequent in the lower classes, and Meechan and Foley (1994) reported more frequent usage among less educated speakers".

The analytical procedure here reflects that of the quantitative investigation into CCR, discussed in Section 5.3.1.1. In the distributional analysis, I first determined the overall extent and global frequencies of leveling, based on the total number of tokens ($N = 591$). I identified leveling rates for each speaker and cross-tabulated the data, so as to identify empty cells and issues that might arise because of data sparsity (see below). In the statistical analysis, I computed mixed-effects logistic regression models where all factor groups were included as fixed effects and speaker as random effect. As before, these models are based on a subsample of data, this time from 27 speakers for whom it was possible to extract at least 10 tokens (see Table A3 in Appendix 1 for an overview of these informants). Here too, it was necessary to further adjust the dataset during the course of the analysis, as missing metadata had to be excluded once the social factors were implemented (see also Section 5.3.1.1).

The following steps summarize the exact procedure of the statistical analysis:

1. first, I computed a mixed-effects logistic regression model based on all extracted tokens of the subsample ($N = 458$). I included the linguistic factor groups type of subject (with collapsed levels third person plural regular and irregular noun phrases and second person singular and plural, because of low token numbers), polarity and proximity of subject and verb as well as the social factor groups residence, gender, age and ethnicity as fixed effects; speaker was the only random effect which was implemented.
2. I then ran a second model based on the token file where NAs had been excluded in the social factor groups: the total token number here was $N = 392$ (23 speakers). Since all factor groups except clause type and type of determiner were included as fixed effects (the type of subject factor group with collapsed levels third person plural regular and irregular noun phrases and second person singular and plural, as above), this corresponds to the full model; again, speaker was computed as the only random effect.
3. I finally ran a model including only the social factor groups, testing the influence of speaker as random effect by computing two different models: one which implemented speaker as random effect and one which did not.

No interaction terms were entered (see Section 5.3.1.1) and the application value for the dependent variable was set to reflect nonstandard *was* in standard *were* contexts in each run (compare Schilling-Estes & Wolfram 1994: 283; Tagliamonte 1998: 160–161).

A crucial caveat that has to be addressed in this context is data sparsity: the total token numbers are very low indeed, which results in a number of empty cells in certain environments (see Taglimonte 2012: 136 for a discussion of token numbers). As a consequence, some of the more fine-grained factor levels of certain factor groups had to be collapsed already at the outset, so as to arrive at token

numbers that would make a statistical analysis possible (I address this in individual instances below). The trade-off is, of course, a loss of analytical power, as an initially fine-grained categorization is broadened again. Since this complicates an in-depth assessment of constraint rankings and a contextualization of the BerE findings, I especially concentrate on the global frequencies and attempt to investigate and contextualize the trends that emerge in the statistical analysis as far as possible on the basis of the present dataset; further research is needed, however, once an expanded dataset is available.

5.3.2.2 *Results and discussion of findings*

The overall extent of nonstandard *was* in standard *were* contexts amounts to 20.14 percent in the present dataset (119/591 tokens). This seems to be an unexpectedly high rate considering the previous qualitative assessment of *was/were* variation in BerE; however, it includes tokens in existential contexts, where 50 instances out of 80 exhibit nonconcord. When these are analyzed separately or excluded, as has been standard procedure in previous studies (Tagliamonte 1998; Schreier 2002), the overall extent of leveling drops to 13.5 percent (69/511).

Considering leveling rates per speaker, high levels of inter-speaker variability become evident, both in terms of overall and leveled occurrences, as illustrated in Figures 5 (instances of nonstandard *was* and standard *were* across male speakers) and 6 (instances of nonstandard *was* and standard *were* across female speakers; both Figures include leveled instances with plural existential subjects):

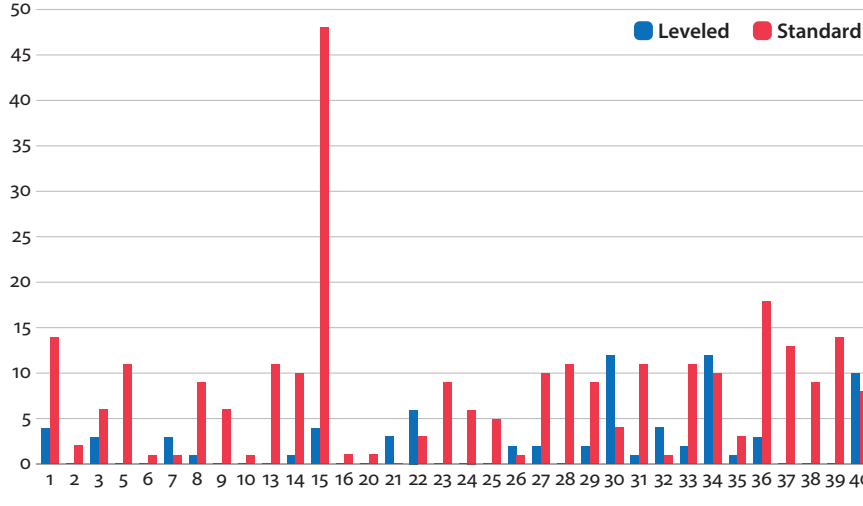

Figure 5. Instances of nonstandard *was* and standard *were* across male speakers (note that the x-axis displays the speaker number)*

* Not all speakers are represented here, because tokens of *were/weren't* did not occur in all interviews.

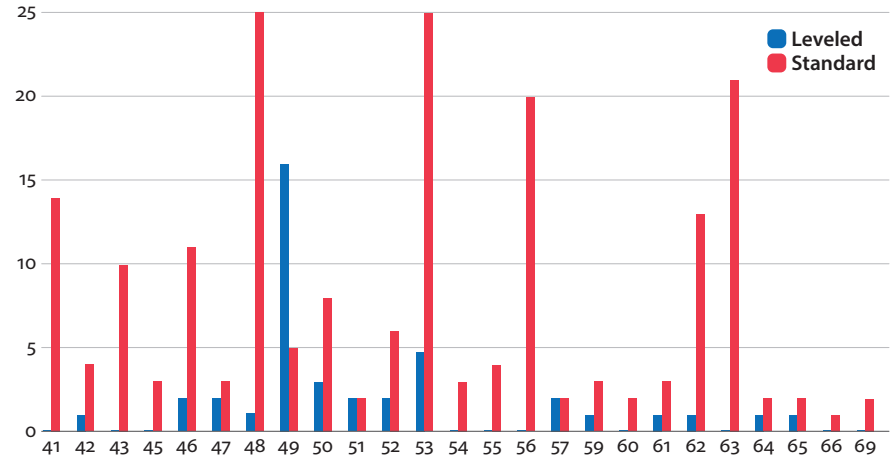

Figure 6. Instances of nonstandard *was* and standard *were* across female speakers (note that the x-axis displays the speaker number)*

* Not all speakers are represented here, because tokens of *were/weren't* did not occur in all interviews.

The Figures reveal that 25 speakers do not use nonstandard *was* at all: namely S2, S5, S6, S9, S10, S13, S16, S20, S23, S24, S25, S28, S37, S38, S39, S41, S43, S45, S54, S55, S56, S60, S63, S66 and S69. A closer look at the characteristics of these informants does not reveal (particularly noticeable) commonalities, except perhaps their generally high levels of education and mobility (though many speakers with comparable education and mobility levels do not show categorically standard usage). In contrast, only one speaker uses nonstandard *was* categorically, namely S21. Since this assessment is based on only three instances, however, it would be misleading to argue that he does not use the standard variant (it is quite likely that, in a larger dataset, standard *were* would occur too). While such speakers are excluded from further analysis in some studies, because they do not variably use the feature in question, I included their tokens so as not to further reduce already low token numbers. Also noteworthy in this context is S15, who contributes the highest token number of the entire sample, namely 52 instances of past *be* (four of which are instances of leveling; note that I did not exclude him in the statistical analysis based on Tagliamonte & Baayen's 2012: 146 point, because I implemented speaker as random effect).

Based on frequencies calculated from the total token number of $N = 591$ (i.e. including existentials), the following patterns can be noted with regard to the social factors: firstly, male speakers display a higher overall leveling rate compared to female speakers, with 21.47 percent (76/354) compared to 18.14 percent (43/237), respectively. Secondly, the oldest speakers show the highest rate of nonstandard *was*, with 50 percent (43/86), followed by the youngest speakers, with 20.16 percent (25/124), the second youngest, with 16.84 percent (16/95), and finally the second

oldest, with 12.24 percent (35/286). In a cross-tabulation of leveling rates across gender and age group, the following pattern becomes evident (Figure 7):

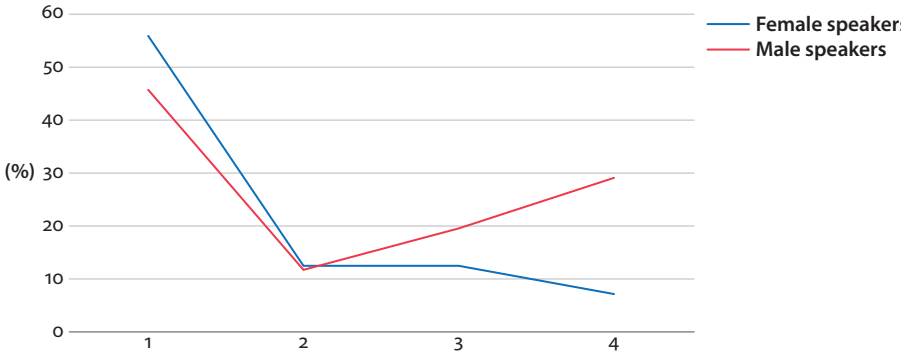

Figure 7. Cross-tabulation of nonstandard *was* according to gender and age group (x-axis: age group; with the classification as outlined in Chapter 4)

According to Figure 7, female speakers of the oldest age group use the leveled variant more frequently than male speakers of the same age group (55.56 percent and 46.00 percent, respectively) and this entire age group demonstrates higher usage rates overall, compared to all other age groups. In the two youngest age groups, a reversal can be noted, with male speakers displaying higher rates of leveling than female speakers (19.64 percent in group 3 and 29.17 percent in group 4, compared to 12.82 percent and 7.69 percent, respectively).

Thirdly, with regard to ethnicity, speakers of Native American descent show the highest extent of leveling, with a 48.39 percent leveling rate (15/31), followed by speakers of African descent, with a 25.87 percent rate (74/286), and speakers of European descent, who show the lowest rates with 10.95 percent (30/274).

The two social factors where the clearest patterns emerge, based on absolute and relative frequencies, are education and mobility. The rates across education groups display a decreasing tendency in the use of regularized *was* from group 1 to group 4: 56.25 percent of all instances (18/32) are leveled in group 1, followed by 25 percent (1/4) in group 2, 20.83 percent (20/96) in group 3 and 10.28 percent (37/360) in group 4. The very low token numbers in group 2 need to be considered here, however, as they stem from one speaker only; consequently, the reported leveling rate of 25 percent is not representative of the speaker group (in the mixed-effects logistic regression models below, groups 2 and 3 are combined into one larger, intermediary group of speakers so as to account for this).

Leveling rates per mobility group, finally, reveal that usage of nonstandard *was* decreases with increasing levels of mobility: group 1 displays 41.67 percent (5/12), group 3.1 32.59 percent (44/135), group 4.1 24.62 percent (16/65), group 4.2

12.5 percent (14/112) and group 4.3 7.55 percent (16/212). The only exception is group 2, with a leveling rate of 9.09 percent; here, however, the tokens again stem from one informant only (1/11). The low token numbers in this group and further groups (for example in group 1 as well) make it necessary to collapse factor levels in this factor group too in all further analyses below.

Taking the language-internal factors into consideration, then, the following distribution of nonstandard *was* in standard *were* contexts can be observed across grammatical subjects: similar to previous studies, existentials with plural noun phrases exhibit by far the highest rates of nonconcord, with 62.5 percent (50/80 as mentioned above; I return to this in more detail below); third person plural conjoined noun phrases display 23.53 percent leveling (4/17); third person plural collective noun phrases 19.35 percent (6/31); third person plural regular noun phrases 18.66 percent (25/134); second person singular subjects 18.18 percent (6/33); first person plural subjects 9.89 percent (9/91); and third person pronoun subjects 9.69 percent (19/196). Figure 8 illustrates these rates:

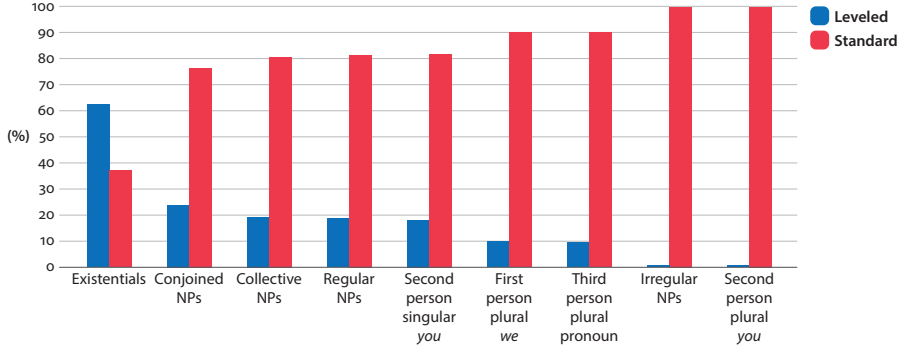

Figure 8. Nonstandard *was* and standard *were* rates according to type of subject

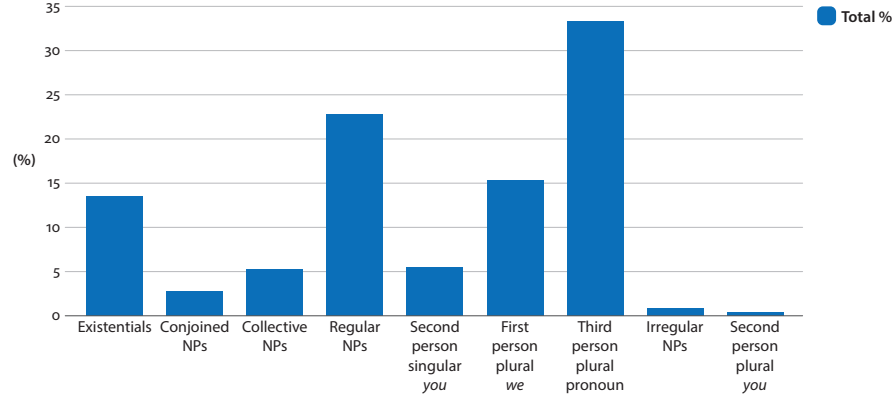

Figure 8a. Percentages of total token numbers per environment according to type of subject

With both second person plural subjects and third person plural irregular noun phrases no instances of leveling occur; here too, however, both environments exhibit very low token numbers (3/3 and 6/6, respectively). In the analyses below, this is addressed by collapsing factor levels: because of the distributional patterns just outlined, I jointly analyze second person singular and plural subjects (see Hay & Schreier 2004: 212) and third person plural regular and irregular noun phrases (see Schreier 2002: 96, endnote 3, for an explanation of reasons for collapsing these factor levels).

While the question as to whether polarity is also a significant predictor of variability in only one past *be* paradigm is mainly of interest here (see above), I nonetheless want to outline the distributional pattern that can be found with regard to polarity in the present dataset, for completeness sake: negative contexts show a leveling rate of 26.67 percent (8/30) and positive contexts one of 19.79 percent (111/561). Even though instances of negative past *be* are much less frequent here, nonstandard *wasn't* also occurs in standard *weren't* contexts and not only in combination with existential subjects, as illustrated in the following example: *they* ***wasn't*** *really interested in school* (S30, Warwick Parish; compare Tagliamonte's 1998: 162 discussion of this in York English).

Similarly as reported in previous studies, intervening linguistic material between subject and verb also influences the rate of nonstandard *was* in standard *were* contexts in the present dataset. Contexts with no intervening material display a leveling rate of 13.6 percent (62/456), contexts with one intervening word a rate of 35.38 percent (23/65), contexts with two words one of 50 percent (12/24), contexts with three words one of 68.18 percent (15/22) and contexts with more intervening words one of 29.17 percent (7/24). These rates reflect a general trend toward higher rates of nonstandard *was* in environments where some linguistic material is intervening, as Figure 9 illustrates:

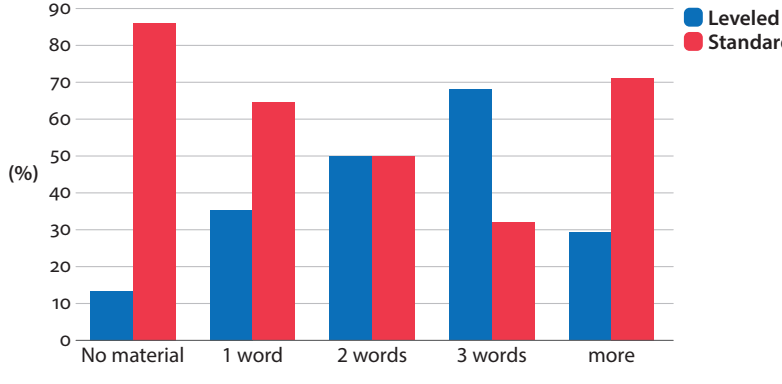

Figure 9. Nonstandard *was* and standard *were* rates according to intervening linguistic material

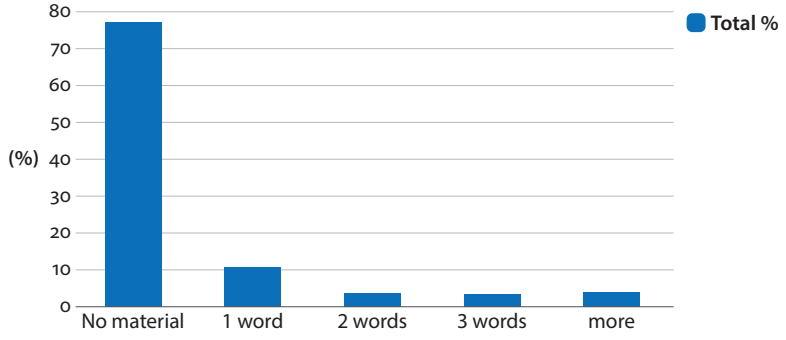

Figure 9a. Percentages of total token numbers per environment according to intervening linguistic material

That this factor plays a role becomes even more evident when all factor levels with intervening material are collapsed, so as to arrive at a broader, binary distinction of contexts with and without intervening material (compare Tagliamonte & Baayen 2012: 141): the total leveling rate then amounts to 42.22 percent (57/135), compared to 13.6 percent in contexts with no intervening linguistic material (Figure A3 in Appendix 4 provides an overview of the distribution of nonstandard *was* and standard *were* according to intervening material in existential environments only).

Finally, while Cheshire and Fox (2009) report that interrogatives occur frequently enough in their dataset to analyze potential effects of word order, the same cannot be said here. Only nine instances of interrogative structures occur, which is too small a number to include in any quantitative analysis. Hence, this factor is excluded, as a detailed examination of its effects is not possible based on the present dataset.

In terms of the question in how far these findings are corroborated in the mixed-effects logistic regression analyses, the results prove problematic. The output of the first run, which is based on the token file of the subsample ($N = 458$) and which includes the social and linguistic factor groups discussed above, illustrates this (Table *be* leveling 1.1 in Appendix 4): while type of subject, ethnicity, proximity of subject and verb, age group and residence emerge as significant predictors of nonstandard *was*, the token numbers in certain cells are as low as expected considering the distributions just outlined. As a consequence, the proportion of the application values point to numerous interactions in factor levels across factor groups, which render the results unreliable.

In an attempt to account for this and arrive at results that still allow as meaningful a contextualization as possible considering the nature of the data, I successively collapsed various factor levels, ran the regression and checked the output after each run. In the model with the following collapsed factor levels, no more interactions became evident:

- type of subject: all other types but existentials and existentials;
- intervening material: intervening material (one, two, three and more intervening words) and no intervening material;
- residence: east and west (as detailed in Section 5.3.1.2);
- age group: group 1, an intermediary age group (groups 2 and 3, as discussed above) as well as group 4;
- and ethnicity: a combination of speakers of Native American and African descent and speakers of European descent.

Table 22 provides the output of this model:

Table 22. Summary of the first mixed-effects logistic regression model for past *be* leveling in BerE, with collapsed factor levels for all factors except gender and polarity; the application value is leveling to *was*

Past *Be* Leveling: Model 1				
Input probability 0.314				
Total N 458				
Deviance 252.622				
Log likelihood –126.311				
AIC 266.622				
Df 7				
Factor groups	**Log odds**	**Tokens (N)**	**Proportion of application value**	**Factor weight**
Type of subject	$p < 1.47e\text{-}09$			
Existentials	1.384	64	0.578	0.8
Other types of subject	–1.384	394	0.119	0.2
Effect size				*0.6*
Proximity of subject and verb	$p < 0.00458$			
Intervening material	0.724	106	0.387	0.674
No intervening material	–0.724	352	0.122	0.326
Effect size				*0.348*
Ethnicity	$p < 0.00103$			
Indian and African descent	1.342	239	0.268	0.793
European descent	–1.342	219	0.091	0.207
Effect size				*0.586*
Age group	$p < 0.0017$			
1	1.345	71	0.549	0.793
4	0.443	100	0.180	0.609
Intermediary age groups	–1.788	287	0.094	0.143
Effect size				*0.65*
Random				Speaker
Not significant				Residence, Gender, Polarity

In this model, type of subject is, not surprisingly, by far the strongest predictor of the dependent variable, with a p-value of $p < 1.47e\text{-}09$: existentials clearly favor the usage of nonstandard *was*, whereas non-existentials disfavor it. Proximity of subject and verb, ethnicity and age group further emerge as significant predictors, yet in a much weaker way. With regard to these factor groups, it becomes evident that (1) intervening material favors and no intervening material inhibits leveling to *was*; that (2) Native American and African descent display a favoring and European descent a disfavoring effect; and that (3) the log odds and factor weights of the oldest and youngest age groups point to a favoring effect (the older group's numbers in a much stronger way) and those of the intermediary groups to a disfavoring effect.

Accordingly, the following constraint hierarchies become evident (Table 23), which reflect the findings discussed in the distributional analysis above:

Table 23. Intermediary summary of significant predictors of past *be* leveling in BerE and their constraint hierarchies

Factor	Hierarchy
Type of subject	Existentials > non-existential subjects
Proximity of subject and verb	Intervening material > no intervening material
Ethnicity	Native American and African descent > European descent
Age group	Oldest > youngest > intermediary age groups

Important to note here, however, is the loss of analytical power that results from collapsing the factor levels as extensively. While such a procedure makes it possible to arrive at a model that allows first insights into constraint rankings, the resulting rankings and conditioning effects cannot be contextualized beyond a very general level (see below).

This is especially evident considering the second model that I computed, where I included all social factors, but had to limit the token number further ($N = 392$, because of missing metadata). This first full model resulted in a mismatch of the best step-up and step-down runs, which made it necessary to compute a number of different models with different configurations (in terms of both factor groups and levels), in order to test as to whether any of these configurations might provide statistical results that allow an interpretation, based on this lower number of tokens.[45]

45. The first model which provided an output where the best step-up and step-down runs matched is summarized in Table *be* leveling 2.1 in Appendix 4. Because this model also displayed a number of problematic issues similar to the first model discussed above, I again conducted a series of tests with different methodological adjustments. Collapsing factor levels led to similar mismatches as before, however, and a second series of tests seemed to identify ethnicity as a problematic factor group. So as to arrive at a model which included education, mobility and as many other factors as possible and where the best step-up and step-down runs matched, I subsequently excluded ethnicity.

The best possible model I arrived at includes the following factor groups as fixed effects: residence (with three factor levels: collapsed as above); gender; age group (with three factor levels: collapsed as above); education (with two factor levels: groups 1, 2 and 3 combined as well as group 4); mobility (with two factor levels: groups 1 and 3 combined and all sub-groups of group 4); type of subject (with two factor levels: collapsed as above); as well as proximity of subject and verb (with three factor levels: no intervening material, one or two intervening words and three or more intervening words); the only random effect which was implemented is speaker. Table 24 summarizes the resulting output:

Table 24. Summary of the second mixed-effects logistic regression model for past *be* leveling in BerE, with collapsed factor levels for all factors except gender; the application value is leveling to *was*

Past *Be* Leveling: Model 2				
Input probability 0.273				
Total N 392				
Deviance 189.872				
Log likelihood –94.936				
AIC 201.872				
Df 6				
Factor groups	**Log odds**	**Tokens (N)**	**Proportion of application value**	**Factor weight**
Type of subject	$p < 1.26e\text{-}07$			
Existentials	1.423	54	0.519	0.806
Other types of subjects	–1.423	338	0.074	0.194
Effect size				*0.612*
Proximity of subject and verb	$p < 0.000351$			
Three or more intervening words	1.436	33	0.455	0.808
One or two intervening words	–0.202	58	0.293	0.45
No intervening material	–1.234	301	0.070	0.226
Effect size				*0.582*
Education	$p < 0.0398$			
Levels below 4 combined	1.16	92	0.261	0.761
Level 4	–1.16	300	0.097	0.239
Effect size				*0.522*
Random				Speaker
Not significant				Residence, Gender, Age group, Mobility

Similar factors as above influence the probability of leveling in this model: type of subject is again the strongest predictor ($p < 1.26e-07$), followed by proximity of subject and verb ($p < 0.000351$). The log odds and factor weights in these two factor groups display the expected patterns, which have also emerged in the first model: first, existentials favor the usage of nonstandard *was*, as opposed to other types of subjects which jointly disfavor it; second, more intervening words favor leveling, whereas no intervening material and one or two intervening words disfavor it (the former quite strongly so). Education, as the only significant social predictor here, displays a comparatively weaker effect ($p < 0.0398$), but the ranking of the factor levels mirrors the findings of the distributional analysis in this context as well: higher levels of education disfavor the usage of the nonstandard variant. Accordingly, the constraint rankings and conditioning effects that emerge in this second model can be summarized as follows (Table 25):

Table 25. Significant predictors of past *be* leveling and their constraint hierarchies

Factor	Hierarchy
Type of subject	Existentials > non-existential subjects
Proximity of subject and verb	Three or more intervening words > one or two intervening words > no intervening material
Education	Levels below 4 > level 4
Ethnicity	Native American and African descent > European descent
Age group	Oldest > youngest > intermediary age group

In order to again check for consequences in the social factors' significance levels which might result from including speaker as random effect, I finally computed a last model including only social factors. In the first run of this model, where speaker was implemented as random effect, education again emerged as the only social factor which reached statistical significance. In the second run, where this was not the case, more social factors reached significance, similarly as in the first quantitative analysis (compare Section 5.3.1.2; Table 26 provides an overview of the results here).

In this run, age group exerts the strongest influence on the probability of leveling ($p < 0.000175$), followed by education ($p < 0.00161$) and residence ($p < 0.00701$). The individual hierarchies of the corresponding factor levels mirror hierarchies which have become evident in earlier models, except for the factor residence, where a divide between east (disfavoring the leveled variant) and west (favoring it) can be seen. The only two factors which are not selected as significant are gender and mobility.[46] Accordingly, the inclusion of speaker as random effect seems to lead to

46. Because the aim of this model is to test the effects of computing speaker as random effect, I have refrained from attempting to reduce the implications evident in the proportion of the

Table 26. Summary of Model 2.2 for past *be* leveling in BerE, with only the social factor groups included (residence, gender, age group, education, mobility) and collapsed factor levels for all factors except gender; speaker was not added as random effect and the application value is leveling to *was*

Past *Be* Leveling: Model 2.2				
Input probability 0.217				
Total N 392				
Deviance 266.066				
Log likelihood –133.033				
AIC 278.067				
Df 6				
Factor groups	**Log odds**	**Tokens (N)**	**Proportion of application value**	**Factor weight**
Age group	$p < 0.000175$			
4	0.777	100	0.180	0.685
1	0.100	18	0.556	0.525
Intermediary	–0.877	274	0.091	0.294
Effect size				*0.391*
Education	$p < 0.00161$			
Levels below 4 combined	0.743	92	0.261	0.678
Level 4	–0.743	300	0.097	0.322
Effect size				*0.356*
Residence	$p < 0.00701$			
West	0.662	116	0.250	0.66
Bermuda Islands	–0.144	66	0.045	0.464
East	–0.518	210	0.100	0.373
Effect size				*0.287*
Not significant				Gender, Mobility

a more conservative estimate of influences here too (as reported above); this needs further testing in future studies.

Based on the findings of both the distributional and statistical analyses, then, a number of trends emerge, which reflect discussions in previous work. With regard to the social factors, the percentages of leveling across gender reveal an expected pattern for this type of variable, in that female speakers use the standard variant more often than male speakers (compare Smith & Tagliamonte 1998; Schreier 2002). This pattern does not reach statistical significance, however, and is also not

application values, which persist in this model. Here especially, further quantitative testing is necessary once an expanded dataset is available.

corroborated once leveling rates across gender and age group are cross-tabulated: female speakers in the oldest and second oldest age groups demonstrate higher leveling rates than male speakers in the same age groups. While this does not correspond to expected linguistic behavior in terms of gender, it is, however, indicative of an age effect which partly mirrors findings reported in previous work.

In the present dataset, the overall percentages of leveling are highest for the oldest speakers (group 1 above). This is in line with one of Schreier's (2002: 86) age-related findings in his TdCE dataset, where he notes the highest levels of nonstandard usage in the oldest age group. A second of his (2002) age-related findings cannot be observed in as straightforward a manner here, however: namely lowest levels of nonstandard usage in the youngest speaker group (Hazen 2014: 77 also reports similar tendencies in Appalachian English). While an overall decline in leveling rates does become apparent when we compare the oldest and youngest speakers in the BerE sample, such a comparison masks a cross-over pattern: the second oldest speaker group displays the lowest leveling rates overall. A similar result can be observed in the mixed-effects logistic regression models: whenever age is selected as significant (as in Models 1, 1.1, 2.1 and 2.2), groups 1 and 4 align in so far as they both favor the usage of the leveled variant (generally, the log odds and factor weights of group 1 show a much stronger favoring effect and, in Model 2.1, the values for group 4 even suggest a slight disfavoring effect, though this is weak). The values of the intermediary age group, once groups are collapsed, by contrast, suggest a very clear disfavoring effect in every model, which complicates an interpretation of the leveling rates and factor weights in terms of a similar age effect as Schreier reports.

Based on the distributional analysis, the clearest trends emerge with regard to education and mobility: the standard variant is much more frequently used in groups who are characterized by higher education and mobility levels. The first tendency is also reflected in the logistic regression models, since education emerges as the only significant social factor: speakers who have gone to college or university disfavor the usage of the nonstandard variant, according to results in Model 2. This is in pace with findings reported in previous literature: Smith and Tagliamonte (1998: 112) highlight that "[i]n studies where education has been considered, less educated speakers tend to use *was* in contexts of *were*". While they cite Meechan and Foley (1994) as an example, who investigate leveling in existentials, Hazen (2014: 97) also notes such a trend in his analysis of Appalachian English for instance, where speakers with postsecondary education display less leveling.

The second tendency, i.e. higher rates of standard *were* in more mobile groups, has also been discussed by Schreier (2002: 89–90). He finds that "mobility has a clear effect on women's speech […]. [T]he least mobile women, regardless of age, [have] by far the highest percentages of *was* regularization, whereas there is a massive drop in the speech of medium and high-mobility groups". This is reflected in the

present findings as well, particularly in that female speakers of the oldest age group use *was* most frequently, as reported in Figure 7 above. These speakers can definitely be described as the least mobile: the women of the oldest age group are and have been more sedentary than the men of the same age group and any other speaker group in the present sample (with the occasional exception of course). Because this group does not comprise many speakers at the moment, however, a closer analysis of leveling rates – cross-tabulated with gender, age and mobility levels – as well as constraint rankings – mobility is not selected as significant – would be especially insightful in a follow-up study focusing on this speaker group.

In terms of linguistic factors, also a number of conclusions can be drawn, which reflect previous findings and allow an assessment of similarities across a set of varieties, though on a very general level only (as discussed above). As reported in most previous studies, the first and most noticeable pattern is evident in terms of type of subject: here too, leveling is most frequent with plural subjects in existential constructions, with a drastic decline in percentages across the levels of this factor group (from 62.5 percent leveling within existential contexts – Tagliamonte [1998: 162] reports similar rates for York English – to 9.69 percent within third person pronoun contexts). This is also the most consistent finding in all statistical models: type of subject is the predictor which influences the probability of leveling most in all runs (p-values might fluctuate, but the overall effect is comparable), with existentials favoring the leveled variant and all other types of subjects collectively disfavoring it (see Models 1 and 2).[47]

Especially in this context, however, data sparsity is relevant: while it would prove insightful to statistically examine existential and non-existential environments in more detail, since previous studies have reported distinct effects (see above), we have to rely on an assessment of distributional patterns here. The overall frequencies point to a number of trends and insights: first, in existential contexts, the oldest age group displays by far the highest rates of the nonstandard variant and male speakers use leveled *was* much more frequently than female speakers (see Figures A1 and A2 in Appendix 4). Second, in other contexts, noun phrases display intermediary and personal pronouns lowest leveling rates, which corresponds to one of the most general patterns reviewed in the literature (for instance by Hay & Schreier 2004: 225). The only exception becomes evident with third person plural irregular noun phrases, which categorically occur with standard *were* in the BerE dataset (this is somewhat unexpected considering previous studies, but is likely due

47. Hazen's (2014) study is noteworthy here, since type of subject did not emerge as significant in his analysis. While he adopted a similar methodological procedure, he excluded existential contexts, however, which might be part of the reason why results differ, considering that existentials demonstrate the highest rates of leveled *was* overall.

to data sparsity; compare Hay & Schreier 2004: 225). As such, for most parts, the pattern emerging here reflects an aspect of the Northern Subject Rule discussed by Cheshire and Fox (2009: 6–7), since the nonstandard variant occurs more frequently with noun phrase subjects than with third person plural pronoun subjects (based on percentages; Cheshire & Fox 2009: 15; Tagliamonte 2009: 114). Third, the rates of nonstandard *was* in personal pronoun subject types also correspond to previous findings. Tagliamonte (2009: 113) summarizes, for instance, that "[t]he subjects–*you*, *we*, and *they*–are often reported to be ordered regularly so that *you* has the most of nonstandard *was*, then *we*, and the third-person plural pronoun *they* has the least", which is also evident in the present dataset (with the exception of second person plural *you*, addressed above).

With regard to type of subject, an even more detailed assessment of distributional patterns is possible, because Schreier (2002: 85) provides an overview of leveling rates across a number of studies and varieties. While he (2002: 96) cautions that "[s]ome of these results should not be compared in the strict sense and have to be interpreted with care" – especially because of varying speaker characteristics, datasets or methodologies –, extensive variation both within and across varieties becomes evident (I have added the Bermudian rates for comparative purposes in Table 27):

Table 27. Comparison of leveling to *was* across varieties, given in percentages (adapted from Schreier 2002: 85; Table 3)

Variety	2nd SG	1st PL	3rd PL	NP PL	Ext	Total
Samaná (Tagliamonte and Smith 2000)	58	89	92	91	–	89
Sydney (Eisikovits 1991)	31.7	10.5	9.5	7.4	44.4	12.9
English Fens (Britain 2002)	71.7	67.2	47.7	53.7	80.7	62.8
Anniston (Feagin 1979)	60.4	47.2	46.6	45.0	68.4	50.3
Appalachian (Christian, Wolfram and Dube 1988)	all pronouns combined: 76.6[a]			68.5	92.4	76.9
Buckie (Smith and Tagliamonte 1998)	91	73	0	81	91	58
York (Tagliamonte 1998)	12	9	3	7	66	17
Tristan da Cunha (Schreier 2002)	88.9	97.7	90.2	94.9	96.3	93.8
Bermuda	18.18	9.89	9.69	18.62	62.5	20.14

[a] According to Schreier (2002: 85), Christian, Wolfram and Dube (1988) reported the rate of leveling jointly for all pronouns.

As a general trend, it can be observed that the leveling rates reported for the varieties listed in Table 27 seem to be much higher than the rates reported here, except those for Sydney English and York English; I re-address this again below. Particularly, the much higher levels of TdCE are noteworthy, as these speak for a much more regularized past *be* paradigm in TdCE than in BerE: the close affiliations which have emerged in the qualitative analyses are not confirmed in the distributional patterns of this factor.

Proximity of subject and verb emerges as the second linguistic factor influencing past *be* regularization in the BerE dataset. As can be expected based on previous research, environments with a higher number of intervening words display higher rates of nonstandard *was*. This is also confirmed in the logistic regression models, where proximity of subject and verb is selected as significant (see Model 1 and 2 above): considering the log odds and factor weights, intervening linguistic material favors the usage of *was*, whereas no intervening linguistic material quite decisively disfavors it. These results provide evidence that processing effects also play a role, similarly as previous studies have highlighted.

To sum up then, based on the present dataset and distributional and statistical analyses, leveling to *was* is the predominant pattern of regularization in the BerE past *be* paradigm. While this form of leveling is conditioned by many of the same factors that have been discussed in previous research, its overall extent is comparatively low considering rates put forth for other varieties. This might be due to a number of reasons.

First of all, the formal nature of the dataset might be one of the reasons that account for the more standard-like pattern emerging here (see Chapter 4), considering that leveling is especially evident in vernacular speech. It would be insightful to investigate rates in interviews conducted by a Bermudian researcher, so as to check in how far accommodation, addressee effects, or style shifting influence regularization levels.

Secondly, issues of stigmatization, prescriptive pressure, norm-orientation and standardization also come into play (see Smith & Tagliamonte 1998; Tagliamonte & Smith 1999: 21–22; Wolfram & Schilling-Estes 2003; Cheshire & Fox 2009; Tagliamonte 2009). Schilling-Estes and Wolfram (1994: 275), for instance, note that "English teachers and other guardians of standard forms maintain a vigilant watch for leveled *be*", a statement which is also echoed by Schreier (2002: 91), who notes that mass education and increasing levels of literacy are influential factors which have an impact on regularization levels (see also Cheshire & Fox 2009: 3 for a discussion of this). These issues are highly relevant in the Bermudian context as well: on the one hand, the present speaker sample includes a comparatively high number of speakers with higher education levels, who have repeatedly commented on non/standard language use and have shown a degree of awareness of

BerE features which are considered "wrong" by prescriptive standards because of their exposure to standard norms (see Chapter 4). On the other hand, the rate of illiteracy is generally quite low in Bermuda, a fact that S28 for instance explicitly commented on. Since the leveled variant of the past *be* paradigm is a highly salient feature that is associated as nonstandard – which was pointed out by various informants in our interviews –, a more standard-like pattern is not surprising. To exemplify this further: S6, a teacher, used leveled *was* as an example of a feature he would correct in his students' speech.

Finally, isolation and (im)mobility are also of importance (see Schreier 2002; Wolfram & Schilling-Estes 2003) – and not only because the latter is closely connected to attaining a university degree off-island. Comparing the Bermudian to the Tristanian situation is particularly insightful in this regard, because Schreier (2002: 70) attributes a decline in the extremely high levels of nonstandard *was* in TdCE to exactly such factors: he

> [suggests] that the special sociolinguistic scenario that gave rise to [TdCE] […] led to unprecedented regularization of past tense *be* with *was* as a pivot form. Increasing geographical mobility and off-island education, on the other hand, result in a significant increase of standard *were* forms.

Because BerE cannot be described as having formed in a similar sociolinguistic scenario with regard to the degree of isolation and because acts of mobility have taken and continue to take many Bermudians off-island on a regular basis, comparatively low rates and decidedly lower rates of nonstandard *was* than reported for TdCE are again not surprising. Indeed, the differences between Bermuda and Tristan da Cunha in these respects might account, among other reasons, for their non-alignment in terms of past *be* regularization.

CHAPTER 6

Conclusion

Keeping the present study's global aim – i.e. shedding first light on diachronic developments and synchronic patterns of morphosyntactic variation in BerE –, its research design and theoretical backdrop – i.e. a combination of both qualitative and quantitative approaches situated within a typological and variationist sociolinguistics as well as sociolinguistics of mobility framework –, and the nature of its dataset – i.e. semi-structured sociolinguistic interviews – in mind, a number of conclusions can be drawn. I review these first, before addressing broader implications and dimensions where a continued exploration of BerE might prove to be particularly insightful.

6.1 The cross-dialectal profiles

In terms of the questions as to whether BerE exhibits structural similarities to varieties in the wider geographical region and as to how these might allow a typological classification of BerE, both the synchronic and diachronic cross-dialectal profiles strongly indicate close affiliations with contact-derived varieties of similar status, particularly spoken in three of the four world regions which are focused on here: the South Atlantic, the Caribbean and North America. According to the numbers of shared *eWave* frequency ratings, BerE especially aligns with TdCE, StHE, Bahamian English, Bahamian Creole, Jamaican English and varieties of AAVE (among others), as opposed to varieties spoken in the British Isles: in neither the synchronic nor diachronic analyses do high numbers of shared ratings point towards such a regional affiliation. While this is somewhat unexpected – especially in the diachronic analyses, where a connection to varieties spoken in the British Isles might have been expected to emerge more strongly because of BerE's origins –, methodological aspects might play a role here, for instance because synchronic data were used to gain insights into the variety's diachronic development.

Also somewhat unexpected are the strong affiliations with the two South Atlantic varieties (especially considering Bermuda's sociohistorical context outlined in Chapter 3), since no direct links or contacts between Bermuda and St. Helena and/or Tristan da Cunha can be traced. While Bermudians sailed to a

multitude of destinations, established various trade networks and were among the founding population of a number of settlements in the Atlantic and Caribbean region from the 17th century onwards, none of the sources considered here would suggest that they (regularly) ventured into South Atlantic waters. Consequently, potential explanations for such extensive structural parallels must lie elsewhere, for instance in comparable new-dialect formation scenarios (input varieties and founder effects), contact histories or processes of analogical change. I return to this again below.

Taking these findings into account, a classification of BerE in regional or areal terms is not a straightforward endeavor (compare also Hall 2019: 225). On the one hand, the morphosyntactic similarities between BerE and the varieties spoken in the U.S. or Caribbean are not extensive enough to allow a continuation of the argument that the variety can be, sociolinguistically speaking, classified as an American or Caribbean variety. Perhaps once more data are available, a more fine-grained typological investigation which implements a division into sub-varieties along ancestry lines might reveal a different picture: namely that Euro BerE can be classified as a U.S. variety and ABerE as a Caribbean variety. An inclusion of the Portuguese speech community would be essential in such an analysis, however, so as to check whether their variety aligns more with Euro BerE or ABerE and so as to further complicate the labels of speech communities, ancestry lines and sub-varieties (considering additional dimensions of variation and complexities that characterize ethnic backgrounds in Bermuda; see Hall 2019).

On the other hand, the striking extent of structural parallels between BerE and the two South Atlantic varieties is indicative of a potential areal classification: namely describing BerE as an Atlantic variety of English. Such a classification seems to be the most accurate at the moment, yet here too further research is needed:

- to examine in how far such an Atlantic connection can be corroborated by additional typological and variationist analyses of, for instance, phonological features;
- and to investigate the comparative potential of such a classification with an inclusion of more under-researched varieties of different status, time depth or contact histories which are spoken in Atlantic settings, such as coastal speech communities in North America (also keeping potential pitfalls in mind, however; compare Myrick, Eberle, Schneier & Reaser 2019).

While such a classification bears considerable potential for further research, a number of explanations can be advanced to account for the strong patterns of alignment, which are relevant not only considering the historical development and synchronic affiliations of BerE, but also considering the historical spread and contemporary linguistic landscape of English in the wider geographical region.

Firstly, focusing on new-dialect formation theories in a language-ecological approach (see Eberle & Schreier 2013), shared input varieties might have contributed similar features to the feature pool in various settings. While further in-depth historical scrutiny would be needed to gain yet more evidence as to exact characteristics of the settler populations in early colonial settings (see Section 3.1.1), it is safe to say that populations of similar – and quite diverse – regional, social and linguistic backgrounds migrated to locales in North America, the Caribbean and the North and South Atlantic during the 17th and (potentially 18th) century (depending on locale). As demographics in these settings must thus have been similar, contact scenarios, input varieties and features in the feature pool must have been similar as well. Founder effects come into play, since this must have resulted in comparable linguistic processes shaping the formation of the varieties in their respective settings, for instance in feature-selection and -retention or leveling processes.

Here, especially varieties spoken in coastal settings in North America and island settings in the Atlantic and Caribbean would be prime candidates for further comparative studies, particularly varieties such as StHE and Bahamian English. Because of their social and sociolinguistic contexts and because of the extensive structural parallels which have emerged between BerE and these two varieties in both the diachronic and synchronic analyses, it would be insightful to continue investigating questions as to whether such strong affiliations might have resulted from similar new-dialect formation scenarios, parallel developments or comparable processes of analogical change, taking predictive new-dialect formation models further into account (as, for instance, put forth by Trudgill; see Chapter 2).

Secondly, (cross-)migration movements and patterns of mobility across the Atlantic and Caribbean may be seen as contributory too, in that they have resulted in points of contact which provided potential for accommodation, feature transfer and diffusion and contact-induced change across the region. This diffusion of features must have happened according to a two-way transfer pattern, first discussed in the pilot study (Eberle & Schreier 2013): namely to and from Bermuda. On the one hand, incoming population groups must have contributed features to the Bermudian feature pool throughout the archipelago's 400-year history, which must then have spread because of the nature and structure of the Bermudian community and because of continued contact, interaction, accommodation and leveling (see Section 3.2; Eberle & Schreier 2013). Here, especially the population movements during the colony's early phase and movements from the Caribbean need to be considered. On the other hand, the fact that Bermudians were among the first to establish settlements in Eleuthera or Grand Turk, formed (diaspora) communities in the Carolinas, seasonally traveled to multiple destinations and built extensive trade networks across the Atlantic must also have resulted in a diffusion of BerE features throughout the wider geographical region. In settings where Bermudians

were among the founding population, an early colonial koiné must have been an influential input variety, with founder effects again coming into play: here, especially locales in the Caribbean (the Bahamas and Turks and Caicos Islands) as well as in North America (coastal communities) come to mind (see Chapter 3).

Because the diachronic analyses are based on synchronic data, however, future research with an exclusively historical focus might unearth further clues that allow a more specific assessment of questions that arise out of the argument of a two-way transfer pattern – for instance questions as to what the structural characteristics and the degree of crystallization of this early colonial koiné must have been, which features might have made it into the feature pool in locales this variety must have been transported to and in how far such features might have found their way back to Bermuda in a changed form via later (cross-)migration movements (compare Schreier, Eberle & Perez 2017: 250–251). As Eberle and Schreier (2013: 300) argue, "[t]he possibility that BerE can indeed be seen as a spearhead for varieties such as Bahamian and Turks and Caicos Islands English calls for extensive future research, especially with regard to the question of dialectal affiliations and donor varieties in the Caribbean".

Since contemporary (cross-)migration movements and patterns of mobility reflect the historical ones in many respects, it is not surprising that findings of both the diachronic and synchronic analyses point to extensive structural parallels between BerE and varieties spoken in North America and the Caribbean (but not necessarily varieties spoken in the South Atlantic, as addressed above). While both intra- and inter-island levels of mobility have increased and while the scope of mobility/ies has expanded in the 21st century, the predominant (cross-) migration patterns still seem to connect Bermuda to the U.S. and the Caribbean (as well as England, though this link is not reflected as strongly in structural affiliations). Bermudians traveling regularly to locales in these regions and also staying for longer periods of time (see Section 3.1.5) provides the circumstances and contexts which result in accommodation and contact-induced change as well as feature transfer and diffusion. In this regard, it would be insightful to also focus on the linguistic repertoires of Bermudians abroad and returning Bermudians, so as to gain insights into matters of second-dialect acquisition for instance (see below).

In this context, a particularly relevant question remains: namely, in how far such cross-dialectal affiliations could also be traced to varieties for which no description in the *eWave* is available to date. Especially varieties spoken in coastal communities in the U.S., the Turks and Caicos Islands, or St. Kitts and Nevis would be prime candidates for comparison: the first and second because of the close contacts and sociohistorical links between these locales and Bermuda and the third because it has been described as an important historical site regarding the spread of English in the Caribbean and beyond (see Schneider 2013: 480, drawing on Baker 1998).

6.2 The feature analyses: Consonant cluster reduction and past *be* leveling

A complimentary perspective to these more global, qualitative findings emerges in the more fine-grained variationist analyses of individual features. The first examination of syllable-coda CCR is particularly suitable, for instance, to further assess in how far BerE aligns with varieties of similar status and displays variable patterns which are indicative of contact-induced change and restructuring, since high reduction rates have been attributed to contact between varying phonotactic systems. Because the global reduction rate of CCR in BerE is relatively and comparatively low, with 35.12 percent, the first main finding here does not suggest that BerE's formation and development were particularly strongly influenced by such contact (thus reflecting the hypotheses focusing on the variety's historical development discussed in Section 3.2.1). Such a percentage aligns BerE in between group 1 and 2 varieties and not with creole and creolized varieties or varieties that have developed under intense language contact conditions in Schreier's (2005) typology (Section 5.3.1).

A closer look at global reduction rates and constraint rankings of individual factor groups tested in the mixed-effects logistic regression models allows a further contextualization of the BerE findings: distribution rates reflect the most common patterns reported in previous research and variation seems to be similarly conditioned as in other varieties. First of all, following environment is also one of the strongest predictors of the dependent variable in BerE, in all Rbrul runs. The hierarchy which emerges here mirrors the most common hierarchy outlined in the literature, namely consonant > pause > vowel. In the present dataset, a following consonant favors reduction most and the highest reduction rates are observed in this environment. By contrast, the factor weights of a following vowel speak for an inhibiting effect and the lowest reduction rates emerge in this context. This result in particular corroborates the point raised above, namely that BerE does not affiliate with varieties that have formed in intense language contact scenarios or that have come into contact with differing phonotactic systems, since different patterns have been reported for such varieties (Section 5.3.1.2). The findings for following pause, finally, align this environment with consonants in the present dataset, as the factor weights indicate a slight favoring effect. This has also been described for AAVE for instance, which would point to similarities between BerE and AAVE considering this environment.

Secondly, both preceding environment and morphemic status are also significant predictors of variation in BerE, but to a lesser extent than following environment and to varying degrees (depending on the model). The constraint rankings established for both of these factor groups again reflect earlier work: in terms of

preceding environment, a sonority effect also plays a role and in terms of morphemic status, the most prevalent pattern emerges in BerE too. Monomorphemic clusters clearly favor reduction and display the lowest rates of retained segments, while bimorphemic clusters inhibit reduction and display the highest rates. Because a reversal of this hierarchy has only been found in creoles, creolized varieties or varieties with intense language contact histories, such as Jamaican Creole or StHE for instance, BerE does again not align with such varieties, similar to above. As a consequence, the close affiliation between BerE and StHE which emerged in the qualitative analyses is not corroborated in this particular environment.

As regards the social factors which were included in the quantitative analysis, the following global reduction rates emerge: male speakers reduce segments more frequently than female speakers; the oldest speakers reduce segments more frequently than any other age group; and Bermudians of African descent reduce segments more frequently than Bermudians of European and Native American descent (no clear pattern can be observed with regard to education and mobility groups). In the logistic regression analyses, however, hardly any of these factors are selected as significant: only gender emerges as a significant predictor of variation, and only in the first model. This might have to do with the methodological decisions to (a) exclude social class, which has been reported as one of the most significant language-external factors in other studies (see Wolfram, Childs & Torbert 2000: 18 for instance), and (b) compute models which implement speaker as random effect.

In addition, an expanded dataset might make it possible to observe further intricacies of variable patterns or recognize language-external, community-wide effects which might implicate the behavior of the linguistic variable in this type of statistical analysis (see Johnson 2010–2014: 22–23, 56; Chapter 5). Such considerations also – and particularly – affect the second feature analysis and its findings, to which I now turn.

Considering past *be* regularization, qualitative evidence outlined in Sections 5.1 and 5.3.2 indicates that the most common pattern, Vernacular Pattern I, is the predominant pattern in BerE too. As of yet, there is no evidence to suggest that Vernacular Pattern II also occurs. This absence is noteworthy, because it does not align BerE with a number of varieties which have been studied in the U.S. coastal regions: according to Wolfram and Thomas (2002: 69),

> […] productive use of the remorphologized pattern […] now seems to be confined to a primary dialect region along the Mid-Atlantic coastal area that extends from the Eastern Shore of Maryland and Virginia, including Tangier Island (Shores, 2000) and Smith Island (Schilling-Estes, 1997, 2000b) in the Chesapeake Bay area, to the Outer Banks barrier islands and the adjacent coastal region of mainland North Carolina. (Schilling-Estes and Wolfram, 1994; Wolfram et al., 1999)

Since significant historical (cross-)migration and levels of contact can be traced between Bermuda and these regions, it would be insightful to further investigate in how far such non-alignment is corroborated in other feature analyses.

The past *be* verbal paradigm in the present dataset is, however, characterized by an exceedingly standard-like system, since comparatively low rates of nonstandard *was* in standard *were* contexts emerge: 20.14 percent of all instances exhibit the leveled variant. It is especially striking how infrequently nonstandard *was* occurs when existential contexts are excluded, i.e. the type of subject with which the leveled variant is most frequent: the rate then drops to 13.5 percent. A number of potential explanations can again be advanced for such low leveling rates overall, explanations which go beyond the nature of the dataset or methodological considerations.

First, prescriptive pressure, norm-orientation and standardization as well as high levels of literacy in the Bermudian speech community might play a role (compare Tagliamonte & Smith 1999 and their explanation of leveling rates observed in their Samaná dataset). Bermudians are very aware of the nonstandard nature of *was* in standard *were* contexts, as has become evident in a number of interviews where prescriptive pressures have been commented on: leveled forms are salient and stigmatized. Taking this into consideration, it is not surprising that (1) the leveled variant is infrequent in the present dataset and (2) education is selected as a significant social factor in the second mixed-effects logistic regression model, where the emerging values indicate a disfavoring effect of the nonstandard variant in higher education groups.

Second, levels of (im)mobility are also of relevance. Speech communities which are characterized by endonormative orientation, dense social networks and low levels of mobility (Trudgill 2004b: 442; Schreier 2002, 2003) seem to be much more prone to maintaining vernacular forms, such as leveled *was* in this particular case (see Trudgill 2004b: 442; Schreier 2002, 2003; of course, other factors also play a role, for instance identity work; see Wolfram & Schilling-Estes 1997). Increasing levels of mobility in such communities, then, have been argued to contribute to an increase in the usage of standard forms, such as standard *were*, as these influence processes of dialect leveling and change (see Schreier 2002: 70, 2003: 90). Since the Bermudian speech community has been and continues to be characterized by extensive levels of intra- and inter-island mobility (Chapter 3), high levels of the standard variant are again not too surprising. In this context, however, it is necessary to take additional dimensions into account, for instance "individual and psychological aspects, such as the preservation of a distinctive local identity" (Schreier 2003: 90).

In pace with this line of argumentation, the patterns which emerge in the past *be* paradigm might be seen as pointing to changes in people's everyday mobility/ies affecting the variety, a question which was raised at the outset as the most

overarching research question. Even though mobility is not selected as a significant factor predicting the behavior of the dependent variable in the mixed-effects logistic regression models, one of the clearest trends becomes evident in the levels of this factor group in the distributional analysis: usage of nonstandard *was* significantly decreases with higher levels of mobility. Also, the highest rates of nonstandard *was* can be observed in the oldest speaker group, which is the group comprising the most sedentary speakers and the speakers who have not had as many opportunities to attend off-island tertiary education institutes (with individual qualifications, of course; see Section 5.3.2.2). In this context particularly, it would be insightful to further examine the intricacies and the interplay of the social factors in future research.

Implementing mobility in this manner, i.e. by computing it as a social variable in the quantitative analyses (among other things), is a first step towards a more integrative approach to space, spatiality and mobility I argue is crucial to take into consideration in the Bermudian context, so as to account for the nature of the (speech) community. Future work might focus on a number of questions that build on the present discussion: for instance,

- how can a more multilayered understanding of space, spatiality and mobility (along the lines discussed in Sections 2.2.3, 2.2.4 and Chapter 4) be implemented into a variationist research design, so as to further develop existing theories of language variation and change?
- which additional conceptual dimensions need to be taken into account in an attempt to quantify mobility? How can, in Britain's (2013b: 17–18) terms, "everyday mundane mobilities of human routine behaviour" be integrated into a quantitative framework, for instance?
- how can "non-local mobile members of the community" (Britain 2013b: 16) and returning Bermudians (compare Kerswill 2006: 2275) be considered, especially in terms of their influence on the language repertoires of the speakers they interact with in Bermuda?

Further integrating changing mobility practices of the Bermudian (speech) community into variationist sociolinguistic frameworks by addressing such questions might make it possible to gain additional insights into dialect leveling, supra-localization or second-dialect acquisition in the Bermudian context.

Returning to the specific leveling rates and constraint rankings of the language-internal factor groups, then, a number of BerE findings reflect findings advanced in previous research: two of the most frequently reported factors are also significant predictors of the dependent variable here, namely type of subject and proximity of subject and verb. Within the first factor group, existentials exhibit a very strong favoring effect, whereas all other types of subjects disfavor the

nonstandard variant. Within the second factor group, i.e. proximity of subject and verb, intervening linguistic material also exerts a significant favoring effect, as opposed to no intervening material. Because the nature of the dataset has made some methodological adjustments necessary, however, so as to arrive at results which allow a contextualization (see Sections 5.3 and 5.3.2.1), a more detailed investigation of additional, individual effects of factor levels has to be postponed to future research. The present analysis provides a first step towards more exploratory data analyses which examine patterns of variation from a purely quantitative perspective and implement other statistical techniques.

6.3 Bermudian English: Not as blank a spot anymore

To come to a conclusion, *Bermudian English. A Sociohistorical and Linguistic Profile* describes the origins and development as well as morphosyntactic structure of a hitherto severely under-researched variety of English, combining a qualitative and quantitative approach and complementing existing studies which document English varieties in the wider geographical region.

Based on the cross-dialectal profiles outlined in the qualitative analyses, BerE demonstrates extensive structural parallels with contact-derived varieties in the South Atlantic, the Caribbean and the U.S., so that no clear typological alignment in regional/areal terms can be argued for. The emerging morphosyntactic affiliations are, as in the pilot study, again "explained by the Bermudian community's sociohistorical and sociolinguistic contexts, including settlement patterns, population demographics, and peopling" (Eberle & Schreier 2013: 279). A two-way transfer pattern is argued for, with implications regarding the directionality of feature transfer and diffusion throughout the Atlantic and the Caribbean: features must have been transported to and from Bermuda.

The two quantitative analyses, then, provide a more fine-grained picture of variable structure and constraints governing two linguistic features: while the analysis of CCR aligns BerE with varieties that have predominantly emerged out of dialect contact scenarios, the analysis of past *be* leveling is indicative of prescriptive pressure, norm-orientation and standardization as well as increased levels of mobility influencing the patterns of this particular variable.

Thus, the present study provides a first step towards reconstructing the historical origins and development as well as towards documenting morphosyntactic variation of BerE. It serves as a starting point for future research: tapping further into BerE's analytical potential contributes to the existing body of research that describes the diversity of English(-based) varieties in the Atlantic and the Caribbean.

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Appendices

Appendix 1. Informants

Table A1. List of informants

Informants						
Speaker number	**Year of birth / Age group**	**Gender**	**Residence**	**Ethnicity**	**Education level**	**Mobility group**
S1	1948 / 2	male	Smith's Parish	of (in part) African descent	3	4.3
S2	1959 / 2	male	Bermuda Islands	of European descent	4	4.1
S3	1956 / 2	male	Smith's Parish	of European descent	4	4.1
S4	1970 / 3	male	Bermuda Islands	of (in part) African descent	5	5
S5	est. 1955 / 2	male	Bermuda Islands	of European descent	4	4.3
S6	est. 1950 / 2	male	Sandys Parish	of (in part) African descent	4	4.1
S7	est. 1970 / 3	male	Bermuda Islands	of European descent	5	1
S8	1935 / 1	male	Pembroke Parish	of (in part) African descent	5	5
S9	est. 1945 / 2	male	Paget Parish	of (in part) African descent	5	3.1
S10	1953 / 2	male	Bermuda Islands	of (in part) African descent	3	5
S11	1920 / 1	male	St. George's Parish	of (in part) African descent	5	5
S12	est. 1940–1945 / 2	male	St. George's Parish	of European descent	5	5
S13	1961 / 3	male	St. George's Parish	of (in part) African descent	4	4.3
S14	1950 / 2	male	Southampton Parish	of (in part) African descent	3	2
S15	1944 / 2	male	Pembroke Parish	of European descent	4	4.3
S16	1988 / 4	male	Pembroke Parish	of (in part) African descent	5	4.1
S17	1959 / 2	male	Pembroke Parish	of (in part) African descent	5	5
S18	1975 / 3	male	Pembroke Parish	of (in part) African descent	5	5
S19	1953 / 2	male	Southampton Parish	of (in part) African descent	5	4.2

Informants

Speaker number	Year of birth / Age group	Gender	Residence	Ethnicity	Education level	Mobility group
S20	1988 / 4	male	Devonshire Parish	of European descent	4	4.2
S21	1972 / 3	male	Pembroke Parish	of (in part) African descent	3	5
S22	1944 / 2	male	Southampton Parish	of (in part) African descent	1	3.1
S23	1947 / 2	male	Warwick Parish	of (in part) African descent	4	4.2
S24	1949 / 2	male	Pembroke Parish	of European descent	3	3.1
S25	1978 / 3	male	Warwick Parish	of European descent	4	4.3
S26	1979 / 3	male	Pembroke Parish	of (in part) African descent	5	5
S27	1981 / 4	male	Smith's Parish	of European descent	4	4.2
S28	1944 / 2	male	Warwick Parish	of European descent	4	4.3
S29	1981 / 4	male	Devonshire Parish	of European descent	4	4.2
S30	1981 / 4	male	Warwick Parish	of (in part) African descent	4	4.1
S31	1982 / 4	male	Smith's Parish	of European descent	4	4.3
S32	1992 / 4	male	Southampton Parish	of (in part) African descent	3	4.2
S33	1944 / 2	male	Pembroke Parish	of (in part) African descent	5	3.1
S34	1941 / 1	male	St. George's Parish	of (in part) Native American descent	5	3.1
S35	est. 1945 / 2	male	St. George's Parish	of (in part) Native American descent	5	5
S36	1968 / 3	male	Southampton Parish	of (in part) African descent	4	4.3
S37	1946 / 2	male	St. George's Parish	of European descent	4	4.3
S38	est. 1964 / 3	male	Bermuda Islands	of European descent	4	4.3
S39	1992 / 4	male	Devonshire Parish	of European descent	4	4.2
S40	1925 / 1	male	Southampton Parish	of European descent	1	3.1
S41	1974 / 3	female	Bermuda Islands	of (in part) African descent	4	4.3
S42	1958 / 2	female	Bermuda Islands	of (in part) African descent	5	3.1
S43	1977 / 3	female	Bermuda Islands	of European descent	4	4.1
S44	1959 / 2	female	Pembroke Parish	of (in part) African descent	5	5
S45	1932 / 1	female	Bermuda Islands	of (in part) African descent	4	4.3

Informants

Speaker number	Year of birth / Age group	Gender	Residence	Ethnicity	Education level	Mobility group
S46	1948 / 2	female	Southampton Parish	of (in part) African descent	3	3.1
S47	1943 / 2	female	Pembroke Parish	of (in part) Native American descent	1	3.1
S48	est. 1960 / 2	female	Sandys Parish	of (in part) African descent	4	4.1
S49	1941 / 1	female	Southampton Parish	of (in part) African descent	5	5
S50	1967 / 3	female	Bermuda Islands	of (in part) African descent	4	4.2
S51	1926 / 1	female	Pembroke Parish	of (in part) African descent	5	3.1
S52	1921 / 1	female	St. George's Parish	of European descent	3	1
S53	1943 / 2	female	St. George's Parish	of (in part) African descent	3	3.1
S54	1992 / 4	female	Pembroke Parish	of European descent	4	4.2
S55	est. 1949–1954 / 2	female	Pembroke Parish	of (in part) African descent	4	4.2
S56	1949 / 2	female	Bermuda Islands	of European descent	4	4.3
S57	1972 / 3	female	Sandys Parish	of (in part) African descent	4	4.3
S58	1972 / 3	female	Pembroke Parish (born and raised in the U.S. until the age of 7)	of (in part) African descent	4	4.2
S59	1982 / 4	female	Devonshire Parish	of European descent	4	4.3
S60	1985 / 4	female	Bermuda Islands	of (in part) African descent	5	5
S61	1981 / 4	female	Devonshire Parish	of European descent	4	4.3
S62	1992 / 4	female	Pembroke Parish	of European descent	4	4.2
S63	1986 / 4	female	St. George's Parish	of European descent	4	4.2
S64	1957 / 2	female	Warwick Parish	of (in part) African descent	4	4.2
S65	2000 / 4	female	Sandys Parish	of (in part) African descent	2	4.2
S66	2001 / 4	female	Sandys Parish	of (in part) African descent	2	4.2
S67	est. 1947 / 2	female	St. George's Parish	of (in part) African descent	5	5
S68	1972 / 3	female	Pembroke Parish	of European descent	4	4.3
S69	1958 / 2	female	Bermuda Islands	of (in part) African descent	3	3.1

Table A2. Subsample of speakers, for whom more than 40 CCR tokens were extracted

Informants						
Speaker number	**Year of birth / Age group**	**Gender**	**Residence**	**Ethnicity**	**Education level**	**Mobility group**
S1	1948 / 2	male	Smith's Parish	of (in part) African descent	3	4.3
S2	1959 / 2	male	Bermuda Islands	of European descent	4	4.1
S3	1956 /2	male	Smith's Parish	of European descent	4	4.1
S4	1970 / 3	male	Bermuda Islands	of (in part) African descent	5	5
S5	est. 1955 / 2	male	Bermuda Islands	of European descent	4	4.3
S6	est. 1950 / 2	male	Sandys Parish	of (in part) African descent	4	4.1
S7	est. 1970 / 3	male	Bermuda Islands	of European descent	5	1
S8	1935 / 1	male	Pembroke Parish	of (in part) African descent	5	5
S9	est. 1945 / 2	male	Paget Parish	of (in part) African descent	5	3.1
S13	1961 / 3	male	St. George's Parish	of (in part) African descent	4	4.3
S14	1950 / 2	male	Southampton Parish	of (in part) African descent	3	2
S15	1944 / 2	male	Pembroke Parish	of European descent	4	4.3
S21	1972 / 3	male	Pembroke Parish	of (in part) African descent	3	5
S22	1944 / 2	male	Southampton Parish	of (in part) African descent	1	3.1
S23	1947 / 2	male	Warwick Parish	of (in part) African descent	4	4.2
S24	1949 / 2	male	Pembroke Parish	of European descent	3	3.1
S25	1978 / 3	male	Warwick Parish	of European descent	4	4.3
S27	1981 / 4	male	Smith's Parish	of European descent	4	4.2
S28	1944 / 2	male	Warwick Parish	of European descent	4	4.3
S29	1981 / 4	male	Devonshire Parish	of European descent	4	4.2
S30	1981 / 4	male	Warwick Parish	of (in part) African descent	4	4.1
S31	1982 / 4	male	Smith's Parish	of European descent	4	4.3
S32	1992 / 4	male	Southampton Parish	of (in part) African descent	3	4.2
S33	1944 / 2	male	Pembroke Parish	of (in part) African descent	5	3.1
S34	1941 / 1	male	St. George's Parish	of (in part) Native American descent	5	3.1
S36	1968 / 3	male	Southampton Parish	of (in part) African descent	4	4.3

Informants

Speaker number	Year of birth / Age group	Gender	Residence	Ethnicity	Education level	Mobility group
S37	1946 / 2	male	St. George's Parish	of European descent	4	4.3
S38	est. 1964 / 3	male	Bermuda Islands	of European descent	4	4.3
S39	1992 / 4	male	Devonshire Parish	of European descent	4	4.2
S40	1925 / 1	male	Southampton Parish	of European descent	1	3.1
S41	1974 / 3	female	Bermuda Islands	of (in part) African descent	4	4.3
S42	1958 / 2	female	Bermuda Islands	of (in part) African descent	5	3.1
S43	1977 / 3	female	Bermuda Islands	of European descent	4	4.1
S45	1932 / 1	female	Bermuda Islands	of (in part) African descent	4	4.3
S46	1948 / 2	female	Southampton Parish	of (in part) African descent	3	3.1
S47	1943 / 2	female	Pembroke Parish	of (in part) Native American descent	1	3.1
S48	est. 1960 / 2	female	Sandys Parish	of (in part) African descent	4	4.1
S49	1941 / 1	female	Southampton Parish	of (in part) African descent	5	5
S50	1967 / 3	female	Bermuda Islands	of (in part) African descent	4	4.2
S51	1926 / 1	female	Pembroke Parish	of (in part) African descent	5	3.1
S52	1921 / 1	female	St. George's Parish	of European descent	3	1
S53	1943 / 2	female	St. George's Parish	of (in part) African descent	3	3.1
S54	1992 / 4	female	Pembroke Parish	of European descent	4	4.2
S55	est. 1949–1954 / 2	female	Pembroke Parish	of (in part) African descent	4	4.2
S56	1949 / 2	female	Bermuda Islands	of European descent	4	4.3
S57	1972 / 3	female	Sandys Parish	of (in part) African descent	4	4.3
S59	1982 / 4	female	Devonshire Parish	of European descent	4	4.3
S61	1981 / 4	female	Devonshire Parish	of European descent	4	4.3
S62	1992 / 4	female	Pembroke Parish	of European descent	4	4.2
S63	1986 / 4	female	St. George's Parish	of European descent	4	4.2
S64	1957 / 2	female	Warwick Parish	of (in part) African descent	4	4.2
S65	2000 / 4	female	Sandys Parish	of (in part) African descent	2	4.2
S69	1958 / 2	female	Bermuda Islands	of (in part) African descent	3	3.1

Table A3. Subsample of speakers, for whom more than 10 tokens of past *be* were extracted

Informants						
Speaker number	**Year of birth / Age group**	**Gender**	**Residence**	**Ethnicity**	**Education level**	**Mobility group**
S1	1948 / 2	male	Smith's Parish	of (in part) African descent	3	4.3
S5	est. 1955 / 2	male	Bermuda Islands	of European descent	4	4.3
S8	1935 / 1	male	Pembroke Parish	of (in part) African descent	5	5
S13	1961 / 3	male	St. George's Parish	of (in part) African descent	4	4.3
S14	1950 / 2	male	Southampton Parish	of (in part) African descent	3	2
S15	1944 / 2	male	Pembroke Parish	of European descent	4	4.3
S27	1981 / 4	male	Smith's Parish	of European descent	4	4.2
S28	1944 / 2	male	Warwick Parish	of European descent	4	4.3
S29	1981 / 4	male	Devonshire Parish	of European descent	4	4.2
S30	1981 / 4	male	Warwick Parish	of (in part) African descent	4	4.1
S31	1982 / 4	male	Smith's Parish	of European descent	4	4.3
S33	1944 / 2	male	Pembroke Parish	of (in part) African descent	5	3.1
S34	1941 / 1	male	St. George's Parish	of (in part) Native American descent	5	3.1
S36	1968 / 3	male	Southampton Parish	of (in part) African descent	4	4.3
S37	1946 / 2	male	St. George's Parish	of European descent	4	4.3
S39	1992 / 4	male	Devonshire Parish	of European descent	4	4.2
S40	1925 / 1	male	Southampton Parish	of European descent	1	3.1
S41	1974 / 3	female	Bermuda Islands	of (in part) African descent	4	4.3
S43	1977 / 3	female	Bermuda Islands	of European descent	4	4.1
S46	1948 / 2	female	Southampton Parish	of (in part) African descent	3	3.1
S48	est. 1960 / 2	female	Sandys Parish	of (in part) African descent	4	4.1
S49	1941 / 1	female	Southampton Parish	of (in part) African descent	5	5
S50	1967 / 3	female	Bermuda Islands	of (in part) African descent	4	4.2
S53	1943 / 2	female	St. George's Parish	of (in part) African descent	3	3.1
S56	1949 / 2	female	Bermuda Islands	of European descent	4	4.3
S62	1992 / 4	female	Pembroke Parish	of European descent	4	4.2
S63	1986 / 4	female	St. George's Parish	of European descent	4	4.2

Appendix 2. Qualitative typological analysis

2.1 *eWave* feature ratings for Bermudian English

Table A4. *eWave* feature ratings for Bermudian English

Feature number	Name of feature	BerE rating
1	She/her used for inanimate referents	C
2	He/him used for inanimate referents	C
3	Alternative forms/phrases for referential (non-dummy) it	?
4	Alternative forms/phrases for dummy it	? [D]
5	Generalized third person singular pronoun: subject pronouns	? [D]
6	Generalized third person singular pronoun: object pronouns	? [D]
7	Me instead of I in coordinate subjects	B
8	Myself/meself instead of I in coordinate subjects	C
9	Benefactive "personal dative" construction	C
10	No gender distinction in third person singular	? [D]
11	Regularized reflexives paradigm	B
12	Object pronoun forms serving as base for first and/or second person reflexives	C
13	Subject pronoun forms serving as base for reflexives	? [D]
14	No number distinction in reflexives	C
15	Absolute use of reflexives	?
16	Emphatic reflexives with own	? [D]
17	Creation of possessive pronouns with prefix fi- +personal pronoun	? [D]
18	Subject pronoun forms as (modifying) possessive pronouns: first person singular	? [D]
19	Subject pronoun forms as (modifying) possessive pronouns: first person plural	? [D]
20	Subject pronoun forms as (modifying) possessive pronouns: third person singular	? [D]
21	Subject pronoun forms as (modifying) possessive pronouns: third person plural	? [D]
22	You as (modifying) possessive pronoun	? [D]
23	Second person pronoun forms other than you as (modifying) possessive pronoun	? [D]
24	Object pronoun forms as (modifying) possessive pronouns: third person singular	C
25	Object pronoun forms as (modifying) possessive pronouns: third person plural	C
26	Object pronoun forms as (modifying) possessive pronouns: first person singular	C

Feature number	Name of feature	BerE rating
27	Object pronoun forms as (modifying) possessive pronouns: first person plural	? [D]
28	Use of us + NP in subject function	C
29	Use of us in object function with singular referent	? [D]
30	Non-coordinated subject pronoun forms in object function	? [D]
31	Non-coordinated object pronoun forms in subject function	? [D]
32	Distinction between emphatic vs. non-emphatic forms of pronouns	? [D]
33	Independent possessive pronoun forms with added nasal	? [D]
34	Forms or phrases for the second person plural pronoun other than you	B
35	Forms or phrases for the second person singular pronoun other than you	? [D]
36	Distinct forms for inclusive/exclusive first person non-singular	? [D]
37	More number distinctions in personal pronouns than simply singular vs. plural	? [D]
38	Specialized plural markers for pronouns	? [D]
39	Plural forms of interrogative pronouns: using additional elements	C
40	Plural forms of interrogative pronouns: reduplication	? [D]
41	Singular it for plural they in anaphoric use	C
42	Object pronoun drop	C
43	Subject pronoun drop: referential pronouns	B
44	Subject pronoun drop: dummy pronouns	B
45	Insertion of it where StE favours zero	C
46	Deletion of it in referential it is-constructions	C
47	Deletion of it in non-referential it is-constructions	C
48	Regularization of plural formation: extension of -s to StE irregular plurals	C
49	Regularization of plural formation: phonological regularization	C
50	Plural marking via preposed elements	? [D]
51	Plural marking via postposed elements	? [D]
52	Associative plural marked by postposed and them/them all/dem	C
53	Associative plural marked by other elements	C
54	Group plurals	C
55	Different count/mass noun distinctions resulting in use of plural for StE singular	C
56	Absence of plural marking only after quantifiers	C
57	Plural marking generally optional: for nouns with human referents	B
58	Plural marking generally optional: for nouns with non-human referents	B
59	Double determiners	? [D]
60	Use of definite article where StE has indefinite article	C
61	Use of indefinite article where StE has definite article	? [D]

Feature number	Name of feature	BerE rating
62	Use of zero article where StE has definite article	B
63	Use of zero article where StE has indefinite article	B
64	Use of definite article where StE favours zero	C
65	Use of indefinite article where StE favours zero	C
66	Indefinite article one/wan	? [D]
67	Demonstratives for definite articles	? [D]
68	Them instead of demonstrative those	B
69	Yon/yonder indicating remoteness	? [D]
70	Proximal and distal demonstratives with 'here' and 'there'	? [D]
71	No number distinction in demonstratives	C
72	Group genitives	C
73	Existential construction to express possessive	? [D]
74	Phrases with for + noun to express possession: for-phrase following possessed NP	? [D]
75	Phrases with for + noun to express possession: for-phrase preceding possessed NP	? [D]
76	Postnominal phrases with bilong/blong/long/blo to express possession	? [D]
77	Omission of genitive suffix; possession expressed through bare juxtaposition of nouns	C
78	Double comparatives and superlatives	B
79	Regularized comparison strategies: extension of synthetic marking	C
80	Regularized comparison strategies: extension of analytic marking	C
81	Much as comparative marker	? [D]
82	As/to as comparative markers	? [C or D]
83	Comparatives and superlatives of participles	? [D]
84	Comparative marking only with than	? [D]
85	Comparative marking with more…and	? [D]
86	Zero marking of degree	? [C or D]
87	Attributive adjectival modifiers follow head noun	? [D]
88	Wider range of uses of progressive be + V-ing than in StE: extension to stative verbs	C
89	Wider range of uses of progressive be + V-ing than in StE: extension to habitual contexts	C
90	Invariant be as habitual marker	C
91	Do as habitual marker	? [D]
92	Other non-standard habitual markers: synthetic	? [D]
93	Other non-standard habitual markers: analytic	? [D]
94	Progressive marker stap or stay	? [D]
95	Be sat/stood with progressive meaning	? [D]
96	There with past participle in resultative contexts	?
97	Medial object perfect	? [D]

Feature number	Name of feature	BerE rating
98	After-perfect	? [C or D]
99	Levelling of the difference between present perfect and simple past: simple past for StE present perfect	C
100	Levelling of the difference between present perfect and simple past: present perfect for StE simple past	C
101	Simple present for continuative or experiential perfect	? [D]
102	Be as perfect auxiliary	B
103	Do as unstressed tense marker	? [D]
104	Completive/perfect done	C
105	Completive/perfect have/be + done + past participle	? [D]
106	"Sequential" or "irrealis" be done	? [D]
107	Completive/perfect marker slam	? [D]
108	Ever as marker of experiential perfect	? [D]
109	Perfect marker already	? [C or D]
110	Finish-derived completive markers	? [D]
111	Past tense/anterior marker been	? [C]
112	Anterior had + bare root	? [D]
113	Loosening of sequence of tenses rule	C
114	Go-based future markers	? [D]
115	Volition-based future markers other than will	? [D]
116	Come-based future/ingressive markers	? [D]
117	Present tense forms for neutral future reference	C
118	Is for am/will with 1st person singular	? [C or D]
119	Would for (distant) future in contrast to will (immediate future)	? [D]
120	Would in if-clauses	C
121	Double modals	? [C or D]
122	Epistemic mustn't	? [D]
123	Present tense forms of modals used where StE has past tense forms	? [C or D]
124	Want/need + past participle	? [D]
125	New quasi-modals: core modal meanings	? [D]
126	New quasi-modals: aspectual meanings	? [D]
127	Non-standard use of modals for politeness reasons	? [D]
128	Levelling of past tense/past participle verb forms: regularization of irregular verb paradigms	C
129	Levelling of past tense/past participle verb forms: unmarked forms	?
130	Levelling of past tense/past participle verb forms: past tense replacing the past participle	C
131	Levelling of past tense/past participle verb forms: past participle replacing the past tense form	C
132	Zero past tense forms of regular verbs	B

Feature number	Name of feature	BerE rating
133	Double marking of past tense	C
134	A-prefixing on ing-forms	? [D]
135	A-prefixing on elements other than ing-forms	? [D]
136	Special inflected forms of be	? [D]
137	Special inflected forms of do	? [D]
138	Special inflected forms of have	? [D]
139	Distinctive forms for auxiliary vs. full verb meanings of primary verbs	?
140	Other forms/phrases for copula 'be': before NPs	? [D]
141	Other forms/phrases for copula 'be': before locatives	? [D]
142	Other forms/phrases for copula 'be': before AdjPs	? [D]
143	Transitive verb suffix -em/-im/-um	? [D]
144	Use of gotten and got with distinct meanings (dynamic vs. static)	?
145	Use of gotten instead of got	C
146	Use of verbal suffix -ing with forms other than present participle/gerund	? [D]
147	Was for conditional were	B
148	Serial verbs: give = 'to, for'	? [D]
149	Serial verbs: go = 'movement away from'	? [D]
150	Serial verbs: come = 'movement towards'	? [D]
151	Serial verbs: constructions with 3 verbs	? [D]
152	Serial verbs: constructions with 4 or more verbs	? [D]
153	Give passive: NP1 (patient) + give + NP2 (agent) + V	?
154	Multiple negation/negative concord	A
155	Ain't as the negated form of be	B
156	Ain't as the negated form of have	B
157	Ain't as generic negator before a main verb	C
158	Invariant don't for all persons in the present tense	B
159	Never as preverbal past tense negator	C
160	No as preverbal negator	? [D]
161	Not as a preverbal negator	? [D]
162	No more/nomo as negative existential marker	? [D]
163	Was – weren't split	?
164	Amn't in tag questions	? [C or D]
165	Invariant non-concord tags	C
166	Invariant tag can or not?	? [D]
167	Fronted invariant tag	? [D]
168	Special negative verbs in imperatives	? [D]
169	Non-standard system underlying responses to negative yes/no questions	? [D]

Feature number	Name of feature	BerE rating
170	Invariant present tense forms due to zero marking for the third person singular	C
171	Invariant present tense forms due to generalization of 3rd person -s to all persons	C
172	Existential/presentational there's/there is/there was with plural subjects	B
173	Variant forms of dummy subject there in existential clauses	B
174	Deletion of auxiliary be: before progressive	C
175	Deletion of auxiliary be: before gonna	C
176	Deletion of copula be: before NPs	C
177	Deletion of copula be: before AdjPs	C
178	Deletion of copula be: before locatives	C
179	Deletion of auxiliary have	C
180	Was/were generalization	B
181	Agreement sensitive to subject type	? [D]
182	Agreement sensitive to position of subject	? [D]
183	Northern Subject Rule	?
184	Invariant be with non-habitual function	? [C or D]
185	Relativizer that or what in non-restrictive contexts	C
186	Which for 'who'	C
187	Relativizer as	? [D]
188	Relativizer at	? [D]
189	Relativizer where or a form derived from where	? [D]
190	Relativizer what or a form derived from what	B
191	Relativizer doubling	? [C or D]
192	Use of analytic or cliticized that his/that's, what his/what's, at's, who his instead of whose	? [C]
193	Gapping/zero-relativization in subject position	C
194	Resumptive/shadow pronouns	? [D]
195	Postposed one as sole relativizer	? [D]
196	Correlative constructions	? [D]
197	"Linking relative clauses"	? [D]
198	Deletion of stranded prepositions in relative clauses ("preposition chopping")	? [D]
199	Reduced relative phrases preceding head-noun	? [D]
200	Say-based complementizers	?
201	For-based complementizers	? [D]
202	Unsplit for to in infinitival purpose clauses	? [C]
203	For (to) as infinitive marker	C
204	As what/than what in comparative clauses	C
205	Existentials with forms of get	? [D]

Feature number	Name of feature	BerE rating
206	Existentials with forms of have	? [D]
207	Substitution of that-clause for infinitival subclause	? [D]
208	Deletion of to before infinitives	C
209	Addition of to where StE has bare infinitive	? [D]
210	Non-finite clause complements with bare root form rather than -ing form	? [D]
211	Clause-final but = 'though'	? [D]
212	Clause-final but = 'really'	? [D]
213	No subordination; chaining construction linking two main verbs (motion and activity)	?
214	Conjunction doubling: clause + conj. + conj. + clause	? [D]
215	Conjunction doubling: correlative conj.s	? [D]
216	Omission of StE prepositions	B
217	Use of postpositions	? [D]
218	Affirmative anymore 'nowadays'	? [D]
219	Adverb-forming suffixes -way and -time	C
220	Degree modifier adverbs have the same form as adjectives	B
221	Other adverbs have the same form as adjectives	B
222	Too; too much; very much 'very' as qualifier	? [D]
223	Other options for clefting than StE	?
224	Other possibilities for fronting than StE	C
225	Sentence-initial focus marker	? [D]
226	"Negative inversion"	C
227	Inverted word order in indirect questions	C
228	No inversion/no auxiliaries in wh-questions	B
229	No inversion/no auxiliaries in main clause yes/no questions	B
230	Doubly filled COMP-position with wh-words	? [D]
231	Superlative marker most occurring before head noun	? [D]
232	Either order of objects in double object constructions (if both objects are pronominal)	? [D]
233	Presence of subject in imperatives	? [D]
234	Like as a focussing device	?
235	Like as a quotative particle	B

2.2 Synchronic affiliations

Table A5. Number of shared features per variety as rated in the *eWave* (94 features, excluding **?** or **?** [D] ratings)

Variety ranking	Absolute number of shared features (N = 94 features)
Tristan da Cunha English	45
St. Helena English	41
Bahamian Creole	34
Jamaican English	32
Rural African American Vernacular English	32
Maltese English	30
Bahamian English	29
Earlier African American Vernacular English	28
Urban African American Vernacular English	26
North of England	25
Trinidadian Creole	24
Falkland Islands English	23
Southeast American Enclave dialects	22
Manx English	20
Newfoundland English	19
Colloquial American English	19
Southwest of England	19
Jamaican Creole	18
Vincentian Creole	18
Gullah	18
Welsh English	18
Southeast of England	17
British Creole	16
Appalachian English	15
Norfolk Island	15
Scottish English	13
Irish English	10
East Anglian English	9
Bajan	7
Orkney and Shetland	7
San Andrés Creole	5
Guyanese Creole	5
Belizean Creole	4

Table A6. Number of shared features per variety as rated in the *eWave* (104 features, excluding ? or ? [D] ratings, but including ? [C] and ? [C or D] ratings): collapsed feature groups A and B

Absolute number of shared features with feature groups A and B collapsed (*N* = 104 features)	**Variety ranking**
54	Tristan da Cunha English
50	St. Helena English
46	Rural African American Vernacular English
44	Bahamian Creole
43	Urban African American Vernacular English
40	Bahamian English
38	Southeast American Enclave dialects
37	Earlier African American Vernacular English
36	Trinidadian Creole
34	Jamaican English
34	Vincentian Creole
34	Newfoundland English
34	North of England
34	Maltese English
30	Gullah
29	Jamaican Creole
27	Appalachian English
25	Welsh English
24	Colloquial American English
23	Falkland Islands English
23	Southeast of England
23	Southwest of England
22	East Anglian English
21	Bajan
21	Manx English
20	Norfolk Island
19	Guyanese Creole
19	British Creole
19	Irish English
18	Scottish English
15	Belizean Creole
14	San Andrés Creole
11	Orkney and Shetland

2.3 Diachronic affiliations

Table A7. Number of shared features per variety as rated in the *eWave* (based on feature lists by Baker & Huber 2001 and the *eWave*; 24 features in total)

Variety ranking	Absolute number of shared features (N = 12 features)
Tristan da Cunha English	7
Bahamian Creole	6
Bahamian English	5
St. Helena English	5
Jamaican English	4
Earlier African American Vernacular English	4
Gullah	4
English dialects in the Southwest of England	3
British Creole	3
Newfoundland English	3
Urban African American Vernacular English	3
Appalachian English	3
Southeast American Enclave dialects	3
Norfolk Island	3
Rural African American Vernacular English	2
Colloquial American English	2
Falkland Islands English	2
Scottish English	2
English dialects in the Southeast of England	2
Jamaican Creole	1
Trinidadian Creole	1
Welsh English	1
East Anglian English	1
Maltese English	1
Barbadian Creole	no features
San Andrés Creole	no features
Belizean Creole	no features
Guyanese Creole	no features
Vincentian Creole	no features
Irish English	no features
Manx English	no features
English dialects in the North of England	no features
Orkney and Shetland	no features

Table A8. Number of shared features per variety as rated in the *eWave* (based on feature lists by Baker & Huber 2001 and the *eWave*; 24 features in total, excluding **?** or **?** [D] ratings, but including **?** [C] and **?** [C or D] ratings): collapsed feature groups A and B

Absolute number of shared features with feature groups A and B collapsed (*N* = 13 features)	**Variety ranking**
10	Tristan da Cunha English
8	Bahamian Creole
7	Bahamian English
7	St. Helena English
6	Earlier African American Vernacular English
6	Urban African American Vernacular English
6	Gullah
6	Southeast American Enclave dialects
5	Jamaican English
5	Rural African American Vernacular English
5	Newfoundland English
4	Appalachian English
4	British Creole
4	Norfolk Island
3	Trinidadian Creole
3	Colloquial American English
3	Welsh English
3	English dialects in the Southwest of England
3	English dialects in the Southeast of England
2	Barbadian Creole
2	Jamaican Creole
2	San Andrés Creole
2	Belizean Creole
2	Guyanese Creole
2	Vincentian Creole
2	Falkland Islands English
2	Scottish English
2	Irish English
2	English dialects in the North of England
2	East Anglian English
1	Manx English
1	Maltese English
no features	Orkney and Shetland

Appendix 3. Quantitative CCR results

Table CCR 1.1 Summary of the first mixed-effects logistic regression model for CCR in BerE, with collapsed factor levels sibilants and non-sibilant fricatives (= fricatives); the application value is absence of the final consonant

Consonant Cluster Reduction: Model 1.1				
Input probability 0.273				
Total N 4,572				
Deviance 5244.96				
Log likelihood −2622.48				
AIC 5266.961				
Df 11				
Factor groups	**Log odds**	**Tokens (N)**	**Proportion of application value**	**Factor weight**
Following environment	$p < 1.03e\text{-}86$			
Consonant	0.569	1567	0.510	0.639
Pause	0.256	642	0.436	0.564
Glide	0.118	403	0.412	0.529
Vowel	−0.943	1960	0.196	0.28
Effect size				*0.359*
Morphemic status	$p < 3.26e\text{-}19$			
Monomorphemic	0.465	3510	0.401	0.614
Ambiguous	0.008	191	0.319	0.502
Bimorphemic	−0.472	871	0.186	0.384
Effect size				*0.23*
Preceding environment	$p < 0.00174$			
Nasals	0.186	2154	0.393	0.546
Sibilants	0.145	1311	**0.340**	0.536
Liquids	0.020	675	**0.357**	0.495
Stops	−0.311	432	0.225	0.423
Effect size				*0.123*
Gender	$p < 0.0129$			
Male	0.205	2644	0.387	0.551
Female	−0.205	1928	0.315	0.449
Effect size				*0.102*
Random				Speaker
Not significant				Residence, Age group, Ethnicity

Table CCR 1.2 Summary of the first mixed-effects logistic regression model for CCR in BerE, with collapsed factor levels nasals and liquids (= nasals and liquids); the application value is absence of the final consonant

Consonant Cluster Reduction: Model 1.2				
Input probability 0.259				
Total N 4,572				
Deviance 5234.572				
Log likelihood −2617.286				
AIC 5256.572				
Df 11				
Factor groups	**Log odds**	**Tokens (N)**	**Proportion of application value**	**Factor weight**
Following environment	$p < 1.29e\text{-}84$			
Consonant	0.566	1567	0.510	0.638
Pause	0.249	642	0.436	0.562
Glide	0.113	403	0.412	0.528
Vowel	−0.928	1960	0.196	0.283
Effect size				*0.355*
Morphemic status	$p < 3.44e\text{-}15$			
Monomorphemic	0.412	3510	0.401	0.601
Ambiguous	0.032	191	0.319	0.508
Bimorphemic	−0.443	871	0.186	0.391
Effect size				*0.21*
Preceding environment	$p < 1.23e\text{-}05$			
Sibilants	0.359	1048	0.386	0.589
Nasals and liquids	0.256	2829	0.384	0.564
Stops	−0.223	432	0.225	0.444
Non-sibilant fricatives	−0.391	263	0.156	0.403
Effect size				*0.186*
Gender	$p < 0.0145$			
Male	0.202	2644	0.387	0.55
Female	−0.202	1928	0.315	0.45
Effect size				*0.1*
Random				Speaker
Not significant				Residence, Age group, Ethnicity

Table CCR 2.1 Summary of the second mixed-effects logistic regression model for CCR in BerE; the application value is absence of the final consonant

Consonant Cluster Reduction: Model 2.1				
Input probability 0.261				
Total N 3,831				
Deviance 4359.39				
Log likelihood −2179.695				
AIC 4381.39				
Df 11				
Factor groups	**Log odds**	**Tokens (N)**	**Proportion of application value**	**Factor weight**
Following environment	$p < 2.54e\text{-}69$			
Consonant	0.580	1291	0.514	0.641
Pause	0.175	516	**0.409**	0.544
Glide	0.156	346	**0.422**	0.539
Vowel	−0.911	1678	0.201	0.287
Effect size				*0.354*
Preceding environment	$p < 3.19e\text{-}10$			
Sibilants	0.495	880	0.399	0.621
Nasals	0.421	1825	0.399	0.604
Liquids	−0.025	536	0.325	0.494
Stops	−0.296	361	0.208	0.427
Non-sibilant fricatives	−0.596	229	0.127	0.355
Effect size				*0.266*
Morphemic status	$p < 1.3e\text{-}09$			
Monomorphemic	0.329	2939	0.400	0.581
Ambiguous	0.101	154	0.312	0.525
Bimorphemic	−0.430	738	0.183	0.394
Effect size				*0.187*
Random				Speaker
Not significant	Residence, Gender, Age group, Ethnicity, Education, Mobility			

Table CCR 3.1 Summary of the first mixed-effects logistic regression model for CCR in BerE, with only social factor groups included (residence, gender, age group and ethnicity) and collapsed factor levels; the application value is absence of the final consonant

Consonant Cluster Reduction: Model 3.1				
Input probability 0.347				
Total N 4,572				
Deviance 5919.318				
Log likelihood −2959.659				
AIC 5925.319				
Df 3				
Factor groups	**Log odds**	**Tokens (N)**	**Proportion of application value**	**Factor weight**
Gender	$p < 5.74e\text{-}08$			
Male	0.173	2644	0.387	0.543
Female	−0.173	1928	0.315	0.457
Effect size				*0.086*
Ethnicity	$p < 0.000477$			
African and Indian descent combined	0.11	2493	0.374	0.527
European descent	−0.11	2079	0.335	0.473
Effect size				*0.054*
Not significant				Residence, Age group

Appendix 4. Quantitative past *be* leveling results

Table *be* leveling 1.1 Summary of the first mixed-effects logistic regression model for past *be* leveling in BerE; the application value is leveling to *was*

Past *Be* Leveling: Model 1.1				
Input probability 0.054				
Total N 458				
Deviance 217.16				
Log likelihood −108.58				
AIC 267.16				
Df 25				
Factor groups	**Log odds**	**Tokens (N)**	**Proportion of application value**	**Factor weight**
Type of subject	$p < 2.94e\text{-}07$			
Existentials	2.223	64	0.578	0.902
Second person singular and plural	1.026	23	**0.217**	0.736
Third person plural conjoined NPs	0.056	13	**0.231**	0.514
Third person plural collective NPs	−0.549	21	**0.143**	0.366
Third person plural (ir)regular NPs	−0.584	116	**0.155**	0.358
First person plural	−0.871	70	**0.057**	0.295
Third person plural pronoun	−1.301	151	**0.093**	0.214
Effect size				*0.688*
Ethnicity	$p < 0.00378$			
Native American descent	0.866	22	0.545	0.704
African descent	0.598	217	0.240	0.645
European descent	−1.464	219	0.091	0.188
Effect size				*0.516*
Proximity of subject and verb	$p < 0.00423$			
Three intervening words	1.959	18	0.667	0.876
One intervening word	0.197	51	0.333	0.549
More intervening material	−0.230	19	**0.263**	0.443
Two intervening words	−0.686	18	**0.389**	0.335
No intervening material	−1.239	352	0.122	0.225
Effect size				*0.651*

Factor groups	Log odds	Tokens (N)	Proportion of application value	Factor weight
Age group	$p < 0.00878$			
1	1.879	71	0.549	0.867
4	0.218	100	0.180	0.554
3	−0.962	67	**0.090**	0.276
2	−1.135	220	**0.095**	0.243
Effect size				*0.624*
Residence	$p < 0.0278$			
W	4.372	27	0.444	0.988
SM	3.168	42	**0.167**	0.96
S	3.026	84	**0.381**	0.954
SD	1.849	54	**0.352**	0.864
P	1.430	89	**0.090**	0.807
Ber	1.256	66	0.045	0.778
SA	0.832	26	0.038	0.697
D	0.477	25	**0.080**	0.617
SG	−16.409	45	**0.000**	< 0.001
Effect size				*0.988*
Random				Speaker
Not significant				Gender, Polarity

Table *be* leveling 2.1 Summary of the second mixed-effects logistic regression model for past *be* leveling in BerE, with collapsed factor levels for all factors except gender, ethnicity and proximity of subject and verb; the application value is leveling to *was*

Past *Be* Leveling: Model 2.1				
Input probability 0.459				
Total N 392				
Deviance 161.12				
Log likelihood −80.56				
AIC 189.119				
Df 14				
Factor groups	**Log odds**	**Tokens (N)**	**Proportion of application value**	**Factor weight**
Type of subject	$p < 7.18e\text{-}06$			
Existentials	2.054	54	0.519	0.886
Second person singular and plural	1.390	23	0.217	0.801
First person plural	−0.503	66	**0.061**	0.377
Third person plural (ir)regular NPs	−0.504	97	**0.093**	0.377

Factor groups	Log odds	Tokens (N)	Proportion of application value	Factor weight
Third person plural collective and conjoined NPs	−0.797	25	**0.080**	0.311
Third person plural pronoun	−1.641	127	**0.039**	0.162
Effect size				*0.724*
Ethnicity	$p < 3.79e\text{-}05$			
African descent	2.093	173	0.191	0.89
European descent	−2.093	219	0.091	0.11
Effect size				*0.78*
Proximity of subject and verb	$p < 0.00037$			
Three intervening words	2.139	17	0.647	0.895
More intervening material	0.880	16	**0.250**	0.707
One intervening word	0.204	46	**0.304**	0.551
No intervening material	−1.302	301	**0.070**	0.214
Two intervening words	−1.922	12	**0.250**	0.128
Effect size				*0.767*
Age group	$p < 0.000492$			
1	3.478	18	0.556	0.97
4	−0.299	100	0.180	0.426
Intermediary age groups	−3.179	274	0.091	0.04
Effect size				*0.93*
Random				Speaker
Not significant				Residence, Gender, Education, Mobility

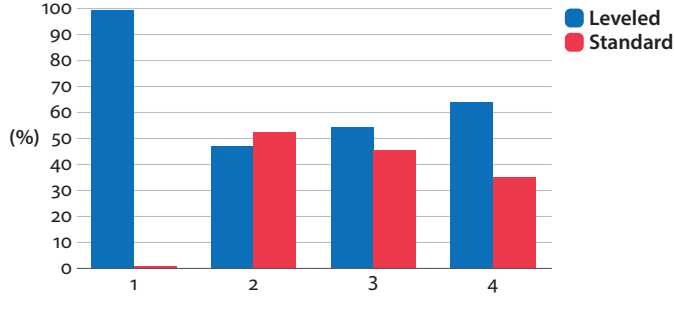

Figure A1. Nonstandard *was* and standard *were* rates according to age group in existential environments only

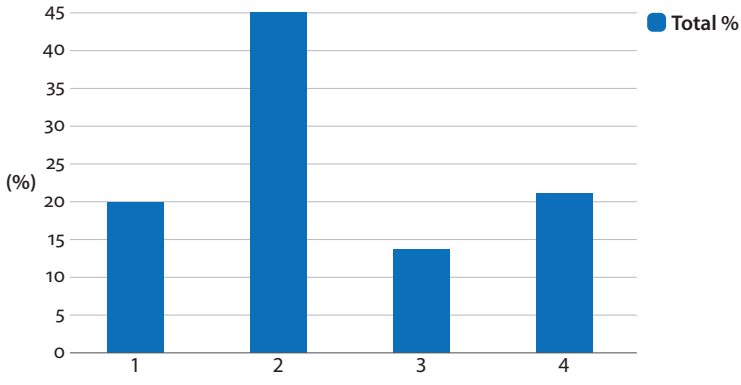

Figure A1a. Percentages of total token numbers according to age group in existential environments only

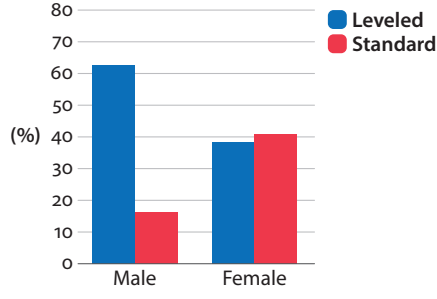

Figure A2. Nonstandard *was* and standard *were* rates according to gender in existential environments only

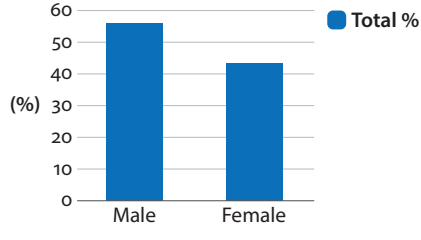

Figure A2a. Percentages of total token numbers according to gender in existential environments only

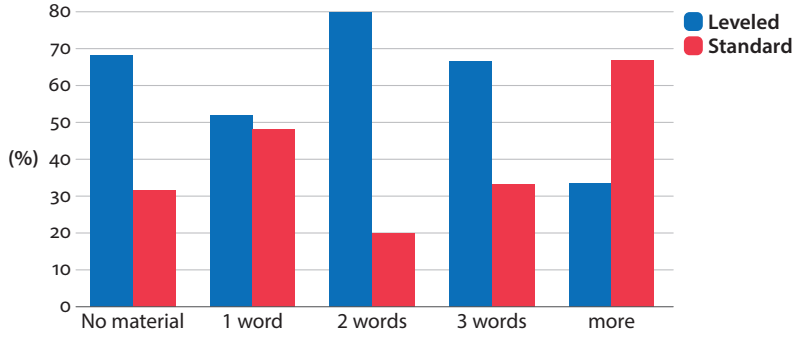

Figure A3. Nonstandard *was* and standard *were* rates according to intervening material in existential environments only

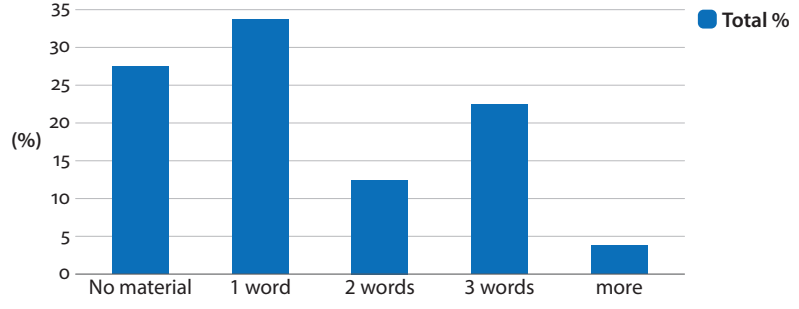

Figure A3a. Percentages of total token numbers according to intervening material in existential environments only

Index

Bermudian English. A sociohistorical and linguistic profile focuses on a hitherto severely under-researched variety of English. The book traces the origins and development of Bermudian English, so as to situate the variety within the canon of other lesser-known varieties of English, and provides a first in-depth description of its variable morphosyntactic structure. Relying on sociolinguistic interview data and combining qualitative, typological and quantitative, variationist analyses of selected morphosyntactic features, it sheds light on structural affiliations of Bermudian English and argues for a two-way transfer pattern where Bermudian English plays an important role in the development of a number of other English(-based) varieties in the wider geographical region. Complementing existing studies which document such varieties, this book contributes to the body of research that describes the diversity of English(-based) varieties around the globe, filling a notable gap.

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