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Variable past marking in Tristan da Cunha English: A probabilistic grammar approach

Author: Milan Markovic
Student ID Nr.: 14-707-012

Examiner: Prof. Dr. Daniel Schreier
English Department
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1 Introduction

Since the late 1960s, the absence of morphological marking in verbs referencing past states and events has been subject to an ever-increasing interest of researchers from various fields of linguistics. Thus, commenting on the general popularity of this linguistic feature, Hackert (2008:127) notes that "no other morphological variable except the copula has played as prominent a role in sociolinguistics and creole studies as the variation between inflected and unmarked past-temporal reference verbs." This "typically mesolectal mechanism" (Patrick 1999:223) has been investigated in numerous English-based creoles, including Guyanese Creole (Bickerton 1975; Rickford 1986), Barbadian Creole (Blake 1997), Trinidadian Creole (Winford 1992; Kang 1994), Jamaican Creole (Patrick 1992; Patrick 1999), Urban Bahamian Creole (Hackert 2004; 2008), Gullah (Weldon 1996), and Nigerian Pidgin English (Poplack & Tagliamonte 1996), as well as in other non-creole varieties where English is spoken as a first and as a second language, such as African American Vernacular English (Fasold 1972), Maori English (Holmes, Bell & Boyce 1991), Nigerian English (Alo & Mesthrie 2008), East African Englishes (Schmied 2008), Black South African English (van Rooy 2008), Singapore English (Gut 2009), and Samaná English (Tagliamonte & Poplack 1988; Tagliamonte 1991; Tagliamonte & Poplack 1993; Poplack & Tagliamonte 2001). Furthermore, in addition to its wide recognition in the field of dialectology and creole studies, variable past marking has received a considerable amount of attention in the studies of second language acquisition, where it has been researched on Vietnamese immigrants in America (Wolfram & Hatfield 1984), as well as Chinese (Bayley 1996), and Spanish (Adamson et al. 1996) learners of English.

The present study examines the usage of this linguistic feature in a small and remote speech community located on the island of Tristan da Cunha, which, even though "sociodemographically and politically insignificant," is "particularly suitable for studies on contact-induced language change and variationist sociolinguistics" (Schreier 2016:216). The unmarked verb is one of the most prominent features of Tristan da Cunha English (TdCE), where it frequently surfaces in environments which necessitate a past temporal interpretation. This type of linguistic behavior is demonstrated in the following excerpt taken from the TdCE data, which shows that verb stems constitute the majority of all verbs employed in this context.

(1) INT: Do you remember anything of that incident, Glenn?

RES: Well, uh {CG} she arrived at Tristan in January, but I couldn't exac' tell the date. When she **arrive** Tristan she was about three, four miles off shore. She had some sails take in, she had a foresail, mainsail and her gun-sail all glued up. She **come** in off the settlement and she **square** her way down between the islands. She was steerin' south-wes', as you gotta steer south-west around the islan', but as she got to the bluff, she **steer** s- -- she actually **steer** south, but we didn't know she was the Copenhagen 'till this other ship **come** out and **look** -- **inquire** about her. When this other ship **come** inquire about her, we could tell it straight away what kind of ship. She's a five-mas' bark with a white ban' aroun' her. But I don't think anything could happen to her around -- in Tristan waters.

(Glenn/1899/12)

As a result, the aim of the present study is to establish a grammar of quantitative relations which guide the usage of the marked and the unmarked verb form and, in doing so, provide an account for this seemingly random pattern of variation.

However, it is important to note that the current investigation is not the first one which examines this linguistic phenomenon in TdCE. The first mention of this feature makes a very brief appearance in Zettersten's (1969) descriptive study, which is based on the collection of interviews made during the islanders' two-year stay in England, following the eruption of the volcano on the Tristan da Cunha. Listing a variety of morphosyntactic features which are common in TdCE, Zettersten (1969:84) notes:

> A very typical feature of the Tristan dialect is the use of uninflected forms in the preterite. This is the case both with strong and weak verbs, although there are more examples of strong verbs in the present material.

While the presence of preterit unmarking in TdCE is only mentioned in passing in Zettersten's study, it is taken up in considerably more detail by Schreier (2003:169–194), who investigates the variation between marked and unmarked verb forms in conjunction with the semimodal *useta*, which, as he contends, is "a structure endemic to Tristan da Cunha" (Schreier 2003:171). In his variationist sociolinguistic study, Schreier analyzes the speech of six old and non-mobile Tristanian speakers, who were born during the period of island's deepest isolation from the

outside world, which lasted until the break of the Second World War, seeking to establish "a connection between non-standard tense marking and the *useta went* structures" (Schreier 2003:176).

Following Schreier's (2003) approach, the current investigation retains the variationist framework and restricts the scope of its analysis to the speech of those Tristanians who were born during Tristan's hyperisolation phase, when schooling was extremely limited and there was no formal education system present on the island (Evans 1994). However, some of the notable differences between the two studies are that the current one focuses on the variation in past marking in its entirety, and investigates this sociolinguistic variable on a substantially larger scale in terms of the number of speakers who are included in the analysis (N=28). In addition, another methodological area where the two studies diverge is that the current one employs multivariate analysis as the primary quantitative method in order to establish the relationship which a set of independent variables has on the variably marked verb. Therefore, in an attempt to identify and account for the patterns of variation between the two alternating verb forms, the present investigation sets out to provide the answers to the following research questions:

1. Which factors have a significant effect on variable past marking in TdCE?
2. What is the magnitude of the effect which these factors have on the variation?
3. Are there any additional factors which have an influence on the variation?

The study is structured as follows: Section 2 traces this linguistic feature across the previous research literature and provides an overview of the relevant theoretical concepts which were identified in the previous studies of the variation in past tense marking. Section 3 outlines the historical development of the Tristan community and the dialect/language contact scenario on the island, that led to the formation of TdCE. Section 4 provides a description of the TdCE family of corpora, which serves as the main object of analysis in the current study, while Section 5 gives a brief account of the statistical quantification techniques and recounts the methodological procedures that were applied during analysis. Finally, an in-depth report of these statistical tests is presented in Section 6, which is followed by Section 7, where the results of the analyses are discussed and contextualized.

2 Previous research

2.1 At the intersection of two competing grammars

The initial studies of variable past marking in African American Vernacular English (Labov et al. 1968; Wolfram 1969; Fasold 1972) were mainly focused on syllable-final consonant cluster deletion, which is a surface-level phonological phenomenon where the phonemes /t/ and /d/, as well as other stop sounds, may be dropped from pronunciation if they are immediately preceded by a consonant of the same voicing (Hackert 2008:128). This deletion rule, however, does not apply only to the consonant clusters which surface in the preterit and past participle forms of regular verbs (e.g. *passed - pass, asked - ask*), but to other parts of speech as well (e.g. *past - pas', and - an', England - Englan'*). As a consequence, the loss of the *-ed* allomorph was interpreted as conditioned solely by a general phonotactic process, which operates universally across all English varieties, and which is present in the speech of both native as well as non-native speakers of English (Tagliamonte & Temple 2005).

However, the Standard English (StE) perspective was called into question by Bickerton (1975), who, in his analysis of Guyanese Creole, found that verbs denoting punctual and anterior events have a higher predisposition to receive the past tense marking in the speech of certain mesolectal speakers (Bickerton 1975:149–150). Contrary to the early studies, which attempted to account for this linguistic phenomenon merely as a by-product of syllable-final consonant cluster deletion, Bickerton (1975:159) argued that grammatical constraints supersede the phonological ones, which, in turn, merely serve the purpose of masking the presence of the former. Thus, shifting the focus onto the domain of grammar, Bickerton's pioneering work provided a theoretical foundation for the subsequent analyses of this linguistic feature (e.g. Rickford 1987; Winford 1992; Patrick 1999; Poplack & Tagliamonte 2001; Hackert 2004; 2008; Biewer 2015), which, as Poplack and Tagliamonte (2001:103) point out, "now typically encompass a number of fine distinctions according to *Aktionsart*, propositional aspect and temporal relations, in addition to the traditional accounts of phonological and morphological conditioning."

The two diametrically opposed perspectives briefly outlined above illustrate the complexity and the diversity of the processes which govern the usage of this sociolinguistic variable, which is described as positioned in "divergent dialect situations" (Winford 1992:142), and "at the intersection of variable processes" (Patrick 1991:171). Therefore, the absence of overt past tense morphology in the main verb may be the result of an underlying grammar or

an outcome of syllable-final consonant deletion. In other words, as Hackert (2008:129) puts it, the variation in past tense marking is located in a position "in which standard English […] and nonstandard varieties and/or creoles interact with each other," where "identical surface variants may result from structurally different grammars."

2.2 At the intersection of two competing approaches

Moving up from phonology to syntax, we encounter yet another problematic area, which is that of establishing the scope of variation between the marked and the unmarked variant as "semantically equivalent ways of saying the same thing" (Labov 1982:18). Thus, while establishing semantic parity rarely presents a problem in the analysis of a phonological variable, such as the alternation of two allophones which comprise a single lexical unit, this process is not as straightforward in the case of a variable which alternates on the level of morphosyntax, where "[t]he substitution of different forms often leads to very subtle semantic distinctions, and there is frequently cause for debate as to whether or not there is any change" (Sankoff 1982:681–682). There are two major approaches in delineating the closed set of variants which comprise the envelope of variation: the form-based approach, in which the variable is defined by a set of its underlying forms; and the function-based approach, where the semantic equivalence is established on the basis of the grammatical or discourse environment (Walker 2010). Accordingly, the same premise holds true in the case of variable past marking, where, as Poplack and Tagliamonte (2001:90) point out, "circumscribing the variable context may take either form or function as the point of departure, depending on the goals of the analysis."

While certain researchers chose to include analytic structures, such as the ones containing auxiliaries, modals, *used to*, and preverbal markers, in their analyses (e.g. Tagliamonte 1991; Tagliamonte & Poplack 1993), most place them outside of the scope of their investigations, and focus exclusively on a number of morphological transformations, which do not transcend the level of the main verb (e.g. Bickerton 1975; Singler 1984; Rickford 1986; Tagliamonte & Poplack 1988; Winford 1992; Kang 1994; Blake 1997; Patrick 1999; Poplack & Tagliamonte 2001; Hackert 2004; 2008; Biewer 2015). The same form-based approach, which disregards all periphrastic structures that are frequently employed to refer to past situations in TdCE, such as the *would* and *used to* constructions, as well as the preverbal markers *did* and *done*, is adopted in the current study as well.

2.3 Tense

If the analysis of variable verbal marking is limited to main verbs only, establishing the scope of variation appears to be fairly intuitive and straightforward. However, even at this level of analysis, this has proven to be a controversial area, and a subject of frequent disagreements among researchers. The central issue, which renders the precise circumscription of the variable context an arduous task, stems from the fact that the unmarked verb, which represents "one of the most prominent features distinguishing creole languages," (Hackert 2004:64) is very versatile and highly dependent on "the pragmatic context and/or the complementary time adverbial specifications in the overall sentence for its appropriate interpretation" (Mufwene 1983:216). Hence, as Poplack and Tagliamonte (2001:114) point out, "[t]he creole zero-marked verb, which is said to encode absolute past, past before past, and past or present perfect […] is comparable in this respect to the wide range of interpretations available for the English simple past tense." The same premise holds true for TdCE, where verb stems are regularly used to indicate simple past (2a), present (2b), as well as present perfect (2c) and past perfect meanings (2d).

(2) a He **pass** on, I think we was too young when he -- he **pass** on. (David/1923/432)
b Sometimes he **look** like he's seventy an' other times he **look** like he's seventeen. (Sean/1916/12)
c Some people they don't know much about the compass, you see. They never **learn** the compass. (Ryan/1897/126)
d We no took no notice to it, because we never **see** anything like that before. (Anna/1916/371)

The principal characteristic of the variable is that it includes only those verbs denoting states and events which have transpired in the past. Therefore, in order to establish a reliable set of criteria for the inclusion of tokens into the analysis, it is necessary to provide a precise definition of what the term 'past' entails. Commenting on this notion, Comrie (1985:41) invokes the concept of a timeline, and notes that "past tense locates a situation to the left of that present moment time point." In a similar vein, Biber et al. (1999:454) point out that "[p]ast tense most commonly refers to past time via some past point of reference." Finally, Quirk et al. (1985:183) offer the most comprehensive definition of the past by stating that "[t]he event/state must have taken place in the past, with a gap between its completion and the present

moment." In other words, using Reichenbach's (1947) three-point model, the point of the event (*E*) and the point of reference (*R*) need to be in concision with each other, and located at some point which is prior to the moment of speech (*S*). This arrangement is illustrated in Figure 1.

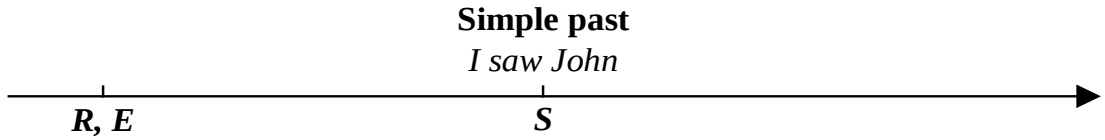

Figure 1. Reichenbach's absolute past structure (adapted from Reichenbach 1947:290)

As shown in the examples (2b-d) above, the unmarked verb does not conform to the absolute past requirement categorically. It can also be employed to refer to situations which have occurred in the present (2b), past situations which share a connection to the present moment (2c), as well as past situations which are relative to some past point of reference (2d). However, it is not only the unmarked variant which exhibits this type of inconsistent behavior, as its marked counterpart can also indicate a number of meanings which bear no relation to the past. Thus, examining the form-function relationship of the verb system in StE, Biber et al. (1999:452) note:

> [T]here is no one-to-one correspondence between form and meaning in the verb phrase. Rather, a single structural variant can represent quite different meanings; and similar meanings can be expressed by different structural variants. This complex mapping between form and meaning is especially apparent in the marking of time distinctions.

According to Quirk et al. (1985:187–188), the preterit form regularly occurs in indirect speech or thought as a result of the optional backshift rule (3a), where the verb in the subordinating clause assumes the temporal properties of the reporting verb. It also appears in constructions in which the tentative attitude of the speaker is expressed, where the optional usage of the preterit is considered to be more polite (3b). Lastly, the preterit tense is also employed in hypothetical constructions, where meanings which run contrary to the beliefs or expectations of the speaker are conveyed (3c).

(3) a Did you say you **had** no money?
b I **wondered** if you could help us.
c If you really **worked** hard, you would soon get promoted.

(all examples from Quirk et al. 1985:187–188)

Therefore, as the examples (3a-c) illustrate, the mere presence of past tense morphology cannot be used as a reliable diagnostic for the inclusion of tokens into the scope of the variation. As a result, all of the constructions presented above need to be categorically excluded from the analysis of the variation in past tense marking, due to the fact that they contain the usage of the marked variant and, therefore, do not satisfy the absolute past requirement.

2.4 Aspect

While the focus of the previous section was on tense, the present one focuses on a number of aspectual distinctions of the dependent variable. Thus, while it is an absolute prerequisite that a certain event or state has occurred and completed in the past, there are no requirements regarding their internal structure. The distinction between tense and aspect is described by Comrie (1976:5), who notes:

> [T]ense is a deictic category, i.e. locates situations in time, usually with reference to the present moment, though also with reference to other situations. Aspect is not concerned with relating the time of the situation to any other time-point, but rather with the internal temporal constituency of the one situation […].

As the above excerpt shows, tense and aspect constitute two distinct grammatical categories, which operate simultaneously and independently of each other, and, in doing so, each contribute to the overall meaning which is conveyed by the verb phrase.

In her analysis of variable past marking in Urban Bahamian Creole, Hackert (2004) adopts Smith's (1997) taxonomy concerning different aspect types, where he distinguishes between lexical or situation aspect and grammatical or viewpoint aspect. Thus, while lexical aspect defines a situation as either an activity (4a) or a state (4b), grammatical aspect describes it "with a particular perspective or focus, rather like the focus of a camera lens" (Smith 1997:2), where it either gives either a full (4c) or a partial view (4d) of the situation. These two types of aspect will be discussed in further detail in the ensuing sections.

(4) a The bird flew.
b The bird was in flight.
c Mary walked to school.
d Mary was walking to school.

(all examples from Smith 1997:xiv-2)

2.4.1 Lexical aspect

A general account of situations which are considered stative is provided by Smith (1997), who notes that they constitute "the simplest situation type," (1997:19) which includes "the ascription of concrete and abstract properties of all kinds, possession, location, belief and other mental states, dispositions, habits, etc." (Smith 1997:32). Focusing on the internal constitution of statives, Smith (1997:32) further notes:

> States consist of an undifferentiated period without internal structure. They have no dynamics, and require external agency for change. The initial and final endpoints of a state are not part of the state: they are distinct situations, constituting changes of state.

In a similar vein, Comrie (1976:49) points out that "unless something happens to change that state, then the state will continue," as opposed to a dynamic situation, which "will only continue if it is continually subject to a new input of energy." In other words, "[t]o remain in a state requires no effort, whereas to remain in a dynamic situation does require effort" (Comrie 1976:49).

However, one of the problematic areas pertaining to the analysis of this grammatical constraint is that not all researchers use the same definition of stativity. Namely, adopting a purely lexical approach, all English verbs can be classified as either stative or dynamic according to their *Aktionsart*, or their inherent semantic properties. The stativity value of a verb can be ascertained by employing a set of empirical tests, involving the progressive, the imperative, and the pseudo-cleft constructions (see Binnick 1991:173–174 for a detailed discussion). The same method has also been adopted in some studies of variable past marking (e.g. Winford 1992; Tagliamonte & Poplack 1993; Poplack & Tagliamonte 2001). According to Hackert (2004:161), the advantage of such an approach is that it is easily replicable, since one verb can possess only one stativity value. However, the necessity to include the additional contextual information into the analysis becomes apparent if the verb *have*, which can hold different stativity values depending on the environment in which it occurs, is taken into

consideration. Thus, while *have* is usually stative in meaning (5a), where it denotes possession, it can also be employed as a dynamic verb (5b), in which case it indicates an activity.

(5) a Well, one what I **had** there for fishing boat was about the smartest one out of them. (Ryan/1897/441)

b Old F. and daddy **had** lunch, they **had** Christmas together and I went out -- useta go out with them grubbin' the grub. (Emma/1918/168)

As the examples (5a,b) illustrate, establishing the verb's stativity value purely on the basis of its semantic properties is insufficient, as "the identification of stative verb situations must go beyond the level of the individual verb" (Hackert 2004:162). In other words, as Smith (1997:17) points out, "[t]he situation type of a sentence is conveyed by the verb and its arguments," or more specifically, its "characteristic patterns of co-occurrence with adverbials, aspectual viewpoints, and other forms." Accordingly, Smith (1997:18) distinguishes between two different types of situations: a basic-level situation; and a derived-level situation, or a situation type shift. Even though the sentences (6a) and (6b) appear to be structurally very similar, the main difference between the two lies in the stativity value which the verb *know* holds. Thus, while in (6a) *know* has a stative meaning, the presence of a temporal adverbial in (6b) overrides its default stativity value consequently rendering it dynamic. Therefore, while (6a) represents a basic-level situation, (6b) illustrates an example of a situation type shift.

(6) a Bill knew the truth.

b Suddenly Bill knew the truth.

(all examples from Smith 1997:xiv-2)

The same approach, which takes the verb's entire argument frame into consideration, is followed by the majority of analysts (e.g. Bickerton 1975; Patrick 1999; Hackert 2004; Biewer 2015). Correspondingly, it is the one adopted in the present investigation as well.

Lexical aspect has proven to be one of the more controversial topics among researchers who study the variation in past tense marking. For the most part, this controversy is rooted in Bickerton's findings, where verb stativity was found to be the principal factor which determines the temporal reading of the unmarked verb in English-based creoles. Namely, according to Bickerton (1981:58):

> [T]he tense particle expresses [+Anterior] (very roughly, past-before-past for action verbs and past for stative verbs); the modality particle expresses [+Irrealis] (which includes futures and conditionals); while the aspect particle expresses [+Nonpunctual] (progressive-durative plus habitual-iterative). The stem form in isolation expresses the unmarked term in these three oppositions, i.e., present statives and past nonstatives.

However, Bickerton's claim that stative verbs are marked for the past tense more frequently has repeatedly been shown to be inaccurate in the subsequent investigations of this sociolinguistic variable. Specifically, in their analysis of Early African American English, Tagliamonte and Poplack (1993) discovered that the increased marking rate of stative verbs is the result of two individual lexical items: *be* and *have*, which comprise the majority of statives, and nearly categorically appear in their marked form. Hence, according to Tagliamonte and Poplack (1993:189), "when […] these lexically invariant verbs [are removed] from the original configuration of the data sets, the factor of stativity […] is no longer selected as significant." Similar results were confirmed by Winford (1992), Patrick (1999), and Biewer (2015), who also found *have* to be the primary culprit for the increased marking rate of the stative category. On the other hand, Hackert (2004:166) found that stative verbs show a slight tendency toward marking over nonstatives even when *have* (as well as *think*) is excluded from the analysis. The disparity of these findings indicates that individual lexical items, particularly those which occur very frequently in the data, have the ability to drastically influence the behavior of entire categories. In fact, Patrick (1999:159) goes as far as to contend that "studies of stativity which do not pay close attention to such a common and exceptional verb may be suspect."

2.4.2 Grammatical aspect

In StE, grammatical aspect can be indicated by a range of periphrastic constructions, as well as morphologically, through affixation. Similarly, in English-based creoles, grammatical aspect can be expressed analytically (e.g. the preverbal markers *bin* and *done*), as well as synthetically (e.g. the progressive *a-* prefix). However, grammatical aspect also be conveyed by the marked and the unmarked verb form alone. This usage is illustrated in the examples (7a,b), where the verb stem indicates a perfective (7a) and a habitual (7b) meaning. These two grammatical aspect types will be discussed further in the following two subsections.

(7) a One of the barrels of oil **roll** on the deck as the ship **roll**, and he **catch** a rope to jump out the way. (Glenn/1899/109)

b He couldn't do anything, so we **cook** something. Sometimes only **boil** potatoes. (Martha/1895/264)

2.4.2.1 The perfective

According to Hackert's (2004:66) findings, in Urban Bahamian Creole, the unmarked verb most frequently appears as the instantiation of the perfective, which is primarily characterized by its *boundedness*. As Comrie (1976:16) points out, "perfectivity indicates the view of a situation as a single whole, without distinction of the various separate phases that make up that situation." Building on Comrie's definition of the perfective, Smith (1997:66) notes that "[t]he span of the perfective includes the initial and final endpoints of the situation [as] it is closed informationally." As a result, the perfective typically appears in conjunction with the verbs denoting situations which have occurred in the past. Furthermore, contrasting the notion of duration with this grammatical aspect type, Dahl (1985:78) contends that "[m]ore often than not, the event will be punctual, or at least, it will be seen as a single transition from one state to its opposite, the duration of which can be disregarded."

What the definitions presented above seem to imply is that the perfective, due to its boundedness, is incompatible with states, since their internal temporal schema does not include initial or final endpoints (Hackert 2008:136). Therefore, as Bybee et al. (1994:92) point out, "when perfectives do apply to stative predicates, the effect is usually to signal a present state, not a past one." Nevertheless, as the previous analyses of variable past marking have revealed (e.g. Hackert 2004; Biewer 2015), unmarked statives also possess the ability to assume a past temporal reading. This interpretation of stative verbs is a common occurrence in TdCE as well, as illustrated in the examples (8a,b).

(8) a The boy took the money, he **know** where the money was, he took the money with him. (Glenn/1899/269)

b I **like** it in England, in one way. But I was wanna get back out to Tristan, in another way, you know. (Gloria/1930/748)

Moreover, the perfective aspect regularly appears with verbs denoting states in StE, where these situation types need not necessarily be informationally closed, thus allowing either an open or a closed interpretation (Smith 1997:70). This is demonstrated in the sentence (9a), which allows either of the two possible extensions (9b,c).

(9) a Jennifer knew Turkish.
b ...but she has forgotten it all (closed)
c ...and she still knows it (open)

(all examples from Smith 1997:70)

What all this goes to show is that, even though the "default reading [of the perfective] is past for nonstatives and present for statives, […] the presence of temporal indicators in the form of adverbials or other contextual information may override this interpretation, causing statives to assume a past meaning" (Hackert 2004:67–68).

2.4.2.2 Habituals

According to Comrie's (1976:25) taxonomy, the habitual aspect (as well as the progressive) falls into the general category of the imperfective. Unlike the perfective, which views the situation from the outside, the defining characteristic of the imperfective is that it makes "explicit reference to the internal temporal structure of a situation, viewing a situation from within" (Comrie 1976:24). In addition, unlike the perfective, which describes a situation in its totality, the imperfective presents only a "part of a situation, with no information about its end points" (Smith 1997:73). Hence, while the perfective is informationally closed, "imperfectives are open informationally" (Smith 1997:73).

As is the case with the perfective, the habitual aspect is not restricted to dynamic verbs only, since verbs denoting states can also be subject to this grammatical aspect type. Namely, even though "[d]efinitions of habituality commonly involve iterativity" (Hackert 2004:73), repetition is by no means an obligatory prerequisite for a habitual interpretation of a stative. In fact, as Comrie (1976:27) points out, "a situation can be referred to by a habitual form without there being any iterativity at all." An important distinction in this regard according to Hackert (2004:168) lies in the secondary meaning of *used to*, which Leech (1987:53) describes as follows:

> [*U*]*sed to* has no equivalent present construction **uses to*, and can only have durative past meaning. Because of its state or habit meaning, it typically implies a contrast with a present state or habit, which can be expressed by a verb in the Simple Present: *I used to be rich* ('... but now I am poor').

Correspondingly, the habitual aspect can also be assigned to verbs referencing stative situations if those situations allow for a contrastive interpretation "in terms of personal life" or "in terms of the community at large" (Hackert 2004:169).

The effect which grammatical aspect has on the variation in past tense marking is commonly regarded as a distinguishing feature of the English-based creoles (Poplack & Tagliamonte 2001:132; Biewer 2015:233). Therefore, according to Bickerton's (1975:150) findings, certain speakers of Guyanese Creole who gravitate toward the acrolectal side of the dialect continuum will still retain and make use of unmarked verb forms in [-punctual] environments. These results are confirmed by Winford (1992:335), who points out that "[t]he habituality of the situation […] is enough to override the normal requirement for (ed), in favor of Ø." In a similar vein, the subsequent analyses this variable (e.g. Rickford 1987; Poplack & Tagliamonte 2001; Hackert 2004; Biewer 2015) have found habituality to be a significant factor which has a promoting effect on the loss of overt past tense morphology. For instance, Hackert (2004:170) observes that "habituality very strongly disfavors the application of past inflection" in Urban Bahamian Creole, while Biewer (2015:242) notes that "grammatical aspect that has the strongest effect on verbal past tense marking" in the varieties of English spoken on Fiji, Samoa, and the Cook Islands.

2.5 Morphological verb categories

The focus of the current section is on verb morphology, which, as the previous analyses of variable past marking have shown (e.g. Winford 1992; Patrick 1999; Poplack & Tagliamonte 2001; Hackert 2004), has a particularly strong effect on variable verbal unmarking. In fact, according to Patrick (1999:226), "the morphological category of the verb is the strongest and most significant of all linguistic factors in structuring the variation between inflection and non-marking." However, as in the case of lexical aspect, not all analysts follow the same categorizations in their investigations this grammatical constraint (see Hackert 2004:139–141 for a detailed discussion). This, in turn, hinders the comparability of the results obtained from different analyses of this variable.

For instance, Bickerton (1975:142–146) distinguishes between irregular verbs whose preterit form ends in a vowel (e.g. *see, grow*), irregular verbs whose preterit form ends in a single consonant (e.g. *give, catch*), irregular verbs whose preterit form ends in a consonant cluster (e.g. *tell, feel*), regular syllabic verbs which end with an apical stop (e.g. *start, end*), and regular non-syllabic verbs which end with a vowel or a consonant other than an apical stop (e.g. *die, ask*). Fasold (1972:54), on the other hand, distinguishes between a variety of irregular verb classes: those which undergo a vowel change only (e.g. *give, fall*), those which undergo a vowel change with the addition of the word-final consonant or a consonant cluster (e.g. *buy, leave*), those in which the final consonant is devoiced to /t/ (e.g. *send, build*), those where the final consonant is replaced (e.g. *have, make*), those which remain invariant in form throughout the paradigm (e.g. *cut, beat*), and, finally, those whose entire stem is supplanted by another (*be, go*). Building on Fasold's (1972) classification, Winford (1992:320) singles out irregular verbs whose preterit form ends with a consonant cluster, while combining all the others into a single category. In addition, Winford distinguishes between regular verbs whose stem ends with a vowel (e.g. *die, try*), those whose stem ends with an apical stop (e.g. *decide, start*), and those whose preterit form ends with a consonant cluster containing a final apical stop (e.g. *miss, talk*). As a result, Winford's (1992) taxonomy has been adopted in a number of studies of the variation in past tense marking (e.g. Weldon 1996; Blake 1997; Hackert 2004). Thus, while retaining Winford's categorization of regular verbs, Hackert (2004:141) differentiates between three major types of irregular verbs: those involving a vowel change only (e.g. *give, fall*), those featuring a vowel change with the addition of a final apical stop (e.g. *buy, give*), and a class of doubly marked verbs, which employ a vowel change as well as the addition of a word-final consonant cluster (e.g. *tell, feel*). However, some researchers employ a completely different categorization scheme in their analyses. For example, Poplack and Tagliamonte (2001) partition all irregular verbs according to the relationship which exists between the stem, the preterit, and the past participle form, where "stem = participle, […] preterite = participle, […] and stem ≠ preterite ≠ participle" (Poplack & Tagliamonte 2001:131).

It is generally accepted that certain verbs which tend to occur frequently in natural discourse, particularly those which have distinctive marking patterns, need to be analyzed in isolation from their respective morphological categories. However, no consensus has yet been reached among researchers as to which of these verbs in particular should be given a separate treatment. For instance, Patrick (1999) distinguishes between *have, do, go,* and *say,* arguing that these "are among the commonest verbs in English, and all are irregular forms" (1999:227). On the other hand, Hackert (2004;2008) also differentiates between *make* and *get*, since,

according to her findings, "*make* shows a marking pattern that is diametrically opposed to that of *have*" (Hackert 2008:144) despite belonging to the same morphological category of replacive verbs. As a result, combining the two in a single group would obscure the marking propensities of both verbs. In regard to *get*, Hackert's decision to treat this verb as a category of its own is motivated by its versatile nature. Specifically, as Hackert (2008:145) points out, "[o]n the one hand, there is nonstative and variably past-inflected *get* in passive constructions or as a resulting copula," while "[o]n the other hand, there is stative *get*, which usually occurs in its inflected form *got*." Thus, even though its stative equivalent does not comprise the envelope of variation, Hackert (2008:146) hypothesizes that "stative *got*, through its evident relation to nonstative *get* […] has an elevating effect on the past-marking frequency of the latter."

Unlike irregular verbs, which undergo a number of morphological transformations, all regular verbs in StE "express past tense inflectionally by adding a single productive suffix *-ed*, both in the preterit and in the past participle" (Schreier 2003:172). Most studies of the variation in past tense marking follow Winford's (1992:320) classification of regular verbs, since those verbs whose stem ends with an apical stop are generally found to be marked at a different rate in comparison to those whose stem ends with a vowel. In addition, Winford's third regular verb category, comprising verbs whose stems end with a consonant other than an apical stop, is also affected by the phonological reduction process of syllable-final consonant cluster deletion, resulting "in the surface absence of apical stops […] in underlying morpheme-final consonant clusters /Ct/ and /Cd/, or /CCt/ and /CCd/" (Patrick 1999:123–124). As a consequence, this regular verb class falls under the influence of two linguistic constraints, which simultaneously affect the variation between the marked and the unmarked variant. The inhibiting effect that this kind of phonotactic conditioning has on the loss of the *-ed* suffix has been confirmed in a number of studies of the variation of past tense marking (e.g. Bickerton 1975; Patrick 1991; 1999; Winford 1992; Kang 1994; Weldon 1996; Poplack & Tagliamonte 2001; Hackert 2004; Biewer 2015).

2.6 Temporal disambiguation

One of the more popular beliefs among creolists is that English-based creoles have a strong tendency to minimize redundancy in syntax through their reliance on the surrounding contextual material for disambiguation (DeCamp 1974:16; Mufwene 1983:219; Tagliamonte & Poplack 1993:182–183). In this regard, temporal adverbials and temporal conjunctions are

said to play a fundamental role, as "they narrowly restrict possible interpretations and thus make morphological marking redundant" (Hackert 2004:172). It is commonly hypothesized that the presence of a temporal marker constitutes a factor which promotes the loss of overt past tense morphology. In accordance with this hypothesis, in TdCE, verb stems regularly surface in the environments which contain a temporal marker, as the examples (10a-c) illustrate.

(10) a When -- <u>when we **come** back to the ship</u> he **tell** us that the Tristania was at Gough and she was catching plenty fish. (Liam/1934/197)
b He **trouble** with heart failure <u>for eight years</u>. (Ivy/1928/217)
c We had earth trembles and, er -- <u>sometimes</u>, you know, it **shake** all the cups down. (Gloria/1930/557)

As Bickerton (1975:150) contends, "temporal clauses […] are favourable environments for the deletion of aspectual markers, and it would seem that for at least some speakers this deletion-rule may generalise to include tense marking also." In addition, Bickerton (1975:160) also maintains that the presence of an adverbial has a stimulating influence on verbal marking, by noting:

> [W]here time-adverbs occur in a sentence, mid- to upper-mesolectal speakers characteristically use the past form, even when they have a very low overall rate of past insertion; conversely, where there is no adverbial, the past form is less frequently realised.

Hence, according to Bickerton's observations outlined above, the two types of temporal indicators should have an opposing effect on the variation: promoting verbal marking in the environments which include an adverbial, while constraining it in subordinate clauses containing a temporal conjunction.

The influence of temporal disambiguating factors on variable past marking has not received the equal amount of attention in comparison with the grammatical and phonological constraints which were discussed in the previous sections. Despite the general popularity of Bickerton's findings, it is only relatively recently that researchers have sought to quantify the influence which temporal conjunctions and temporal adverbials have on the variably marked verb (e.g. Tagliamonte 1991; Tagliamonte & Poplack 1993; Poplack & Tagliamonte 1996; Tagliamonte 1999; Poplack & Tagliamonte 2001; Hackert 2004; Biewer 2015). One of the

difficulties regarding the precise definition of this discourse constraint resides in the fact that the influence of adverbial indicators transcends the scope of a single utterance. This means that a wider discourse context, including the speech of the interviewer and other interlocutors, needs to be taken into consideration as a possible source of temporal disambiguation. Furthermore, as Tagliamonte (1991:165) points out, "the definition or characteristics of such contextual indicators have never been circumscribed, nor is there an explanation of the means by which such features serve to indicate tense."

Nevertheless, despite these methodological shortcomings, Tagliamonte and Poplack (1993:189–190) discovered that temporal adverbials show no significant effect on the variation in Samaná English, while temporal conjunctions have a slight promoting influence. On the other hand, Patrick (1999:263), who examined variable verbal marking across different types of clauses in Urban Jamaican Creole, found no significant differences in the marking rates of verbs which are located in temporal clause environments. These results were confirmed by Hackert (2004:174), who found that the presence of a temporal conjunction does not significantly affect the dependent variable in Urban Bahamian Creole. In addition, Hackert (2004:178–179) also found that the general presence of an adverbial shows no discernable effect on the variation. However, upon closer investigation of different adverbial types based on Quirk et al.'s (1985:481–482) semantic classification, she discovered that adverbials of duration favor the occurrence of past tense morphology, while adverbials of frequency tend to inhibit it. Finally, in her analysis of South Pacific Englishes, Biewer (2015:244) found that the presence of an adverbial shows a slight constraining influence on verb marking in Fiji English and the Cook Islands English, while it shows no significant effect in Samoan English. Similarly, when investigating the influence of different types of adverbials, Biewer (2015:245) also discovered that duration adverbials favor verb marking, as opposed to frequency adverbials, which show a disfavoring effect.

3 Tristan da Cunha

3.1 Topography and demographics

The island of Tristan da Cunha, presented in Figure 2, is renowned for its geographically isolated location. Its seclusion, which is unsurpassed, even merits a mention in the Guinness Book of Records, carrying the title of "the remotest inhabited island in the world" (1998:101). Tristan da Cunha is situated in the very center of the South Atlantic Ocean, in latitude 37° 5' 5'' south and longitude 12° 16' 4'' west, mid-way between South Africa and South America (Gane 1932:21). It is the largest island in an archipelago of four volcanic mountains, "dating from the Tertiary era" (Brander 1940:30). With its formation period estimated at roughly one million years, Tristan da Cunha is the youngest in the group of the four islands (Ashworth & Vestal 2001). Whereas the islands of Inaccessible, Nightingale, and Tristan da Cunha are grouped together geographically, the Gough Island is situated some 400 kilometers to the South (Schreier 2002a:76).

Figure 2. Aerial view of the island captured by the International Space Station (2013)

Covering approximately 50 square kilometers, Tristan da Cunha has the shape of a symmetrical volcanic cone, which rises in the ocean bottom with an altitude of 5,500 meters (2,000 of which are above sea level), with its main crater is roughly one and a half kilometers in circumference at the summit, forming a shallow lake of about 150 meters in diameter (Brander 1940:13–14). Despite being considered extinct and inactive throughout its history, the Tristan volcano's most recent eruption occurred in 1961, forcing a temporary evacuation of the entire island's population. A comprehensive account of the island's geophysical features is provided by Brander (1940:14), who notes:

> The flanks of the peak of Tristan end in precipitous cliffs, 1,000 to 2,000 feet in height, which rise directly from the sea on all sides, except in the north-west quadrant, where there is an irregular flat plain, 100 to 200 feet above sea-level, 4 ½ miles in length and, on an average, half a mile in width. This terminates on the seaward side in a range of low cliffs, dropping abruptly to the beach.

Figure 3. Edinburgh of the Seven Seas (2015)

Tristan da Cunha is the only island in the archipelago which is permanently populated. The north-western plateau, which is about 15 kilometers long, two and a half kilometers wide, and approximately 30 meters above the sea level, accommodates the island's only permanent

settlement, Edinburgh of the Seven Seas (Gane 1932:21), which is shown in Figure 3. The closest permanently inhabited location, which lies roughly 2,000 kilometers to the north, is the island of St. Helena (Schreier 2016:205). According to the demographic data collected in March 2017, there are a total of 260 islanders currently residing on Tristan da Cunha, with the additional 49 non-Tristanian people living on the island, including expatriate workers and their families (2005). All of the island's permanent inhabitants have British nationality, and the official language spoken is English, thus rendering the Tristan community "one of the smallest communities around the world in which English is spoken natively" (Schreier 2016:205).

3.2 Socio-historical development of the Tristan community

Tristan da Cunha got its name after the Portuguese admiral Tristão da Cunha, who discovered the island archipelago in 1506. Its name first appeared on an anonymous map of circa 1509, under the inscription: *Ilhas que achou tristam da cunha* (islands which were discovered by Tristao da Cunha), later appearing in several Portuguese charts of 1520 to 1534 (Brander 1940:24). However, the Portuguese were not interested in the colonization of the island and did not pursue an organized settlement policy (Schreier 2002b:76). As a result, the island was rarely frequented by travelling seamen during most of the 16th century. Sailing along the coasts of Africa and following the routes of the Portuguese ships, the English and the Dutch became familiar with the its existence in the early 17th century (Brander 1940:24). However, even though the Dutch were the first ones to achieve a landing in 1643, they found the island unfavorable, and after their second exploratory trip in 1669 failed, the Dutch East India Company abandoned all plans of its colonization (Schreier & Lavarello-Schreier 2011:16). Close to the end of the 18th century, the American fishing and whaling industry extended to the South Atlantic Ocean, and the island of Tristan da Cunha was used as an occasional resort of sealers and whalers (Brander 1940:50).

Tristan de Cunha was finally settled and became a part of British colonial empire in 1816, when the British dispatched a military garrison consisting of "five officers, three non-commissioned officers and 35 rank-and-file soldiers" (Schreier 2003:46). Their reasoning for the annexation of Tristan da Cunha was twofold. Namely, during the Anglo-American war, the island was frequently being used as a base by the United States men-of-war and privateers to attack and capture British vessels (Brander 1940:54). The second reason, however, was more political in nature. After his defeat in Waterloo in 1815, Napoleon Bonaparte was exiled to the island of St. Helena for the remainder of his life, and the British admiralty was concerned that

his allies might make an attempt to bring him back to Europe (Schreier 2002b:76). Nevertheless, after less than a year of their stay on Tristan, the British reconsidered their decision, and all the army personnel was ordered to return to England. During the withdrawal of the garrison in November 1817, several of its members asked for and obtained permission to stay and settle on Tristan da Cunha: William Glass, a Scottish officer from Kelso, Scotland along with his South African wife and their two children, as well as two stonemasons from Plymouth, England, Samuel Burnell and John Nankivel (Schreier 2003:47). Over time, the number of inhabitants increased with the arrival of shipwrecked sailors and castaways. According to Schreier's (2002b:77) findings, these British colonizers consisted of Richard 'Old Dick' Riley, from Wapping, East London, and Alexander Cotton, from Hull, Yorkshire, who both arrived to the island in the early 1820s. During the late 1820s and 1830s, Tristan da Cunha's population saw another increase with the arrival of a group of women from St. Helena and three settlers from Denmark and Netherlands (Schreier 2016:206). However, not much information is available on these St. Helenian women, other than that one of them was a negress, while the others were mulattoes, and that one of the women arrived on the island with four of her children (Brander 1940:131). During the following years, with the renaissance of the wailing industry during the 1830s and 1840s, travelling ships frequently visited Tristan da Cunha to barter in exchange for supplies and fresh water, which resulted in the arrival of a number of American whalers, some of whom settled permanently on the island (Schreier 2002a:150).

However, the period from 1860 onwards was marked by growing isolation of the islanders from the outside world, which lasted close to the second half of the 20th century. The peak of the American whale trade in the 1840s and 1850s, followed by its steep decline in the second half of the 19th century and the opening of the Suez Canal in 1869, drastically reduced the number of ships in the South Atlantic Ocean (Schreier 2003:53). As a consequence, the Tristan da Cunha was left in a state of near complete isolation from the rest of the world. A coherent description of this period is provided by Brander (1940:163), who writes: "[i]n the long winter, from March to October, a ship was a rare sight. A merchantman might at times be seen passing. Often for three or four months not a ship touched at the island." The sheer extent of the island's segregation from the rest of the world at the beginning of the 20th century is reflected in the fact that the Tristan community did not receive any mail whatsoever for more than 10 years (Evans 1994). In addition, one missionary who was sent to the island in 1920s reported that very few of the innovations from the outside world had arrived to Tristan da Cunha (Schreier 2016:206). This, in turn, resulted in a drastic decrease of the new settlers. The

only new additions to the Tristan community in the second half of the 19th century were one weaver from Yorkshire, who left after only a few years spent on the island, and two Italian sailors, who got shipwrecked in 1892 (Schreier 2002b:77).

The Second World War brought an end to Tristan's era of isolation. In April 1942, the British government, in cooperation with South African engineers and Air Force personnel, issued an order to install a naval station on the island, for the purpose of constructing a metrological and a wireless station (Schreier 2003:57). The presence of the British military forces on Tristan da Cunha had a profound effect on the lives of the islanders, as many of the offices decided to bring their families along, and the island saw an influx of new settlers. The community infrastructure was considerably improved, since the soldiers built their housings with a running water supply, sewage system, and electricity (Schreier & Lavarello-Schreier 2011:41). Furthermore, the establishment of the military base brought about far-reaching economic changes to the community when a South African fishing company founded a crawfish industry on the island, which employed the large majority of the Tristan workforce, bringing about the end of the traditional subsistence economy and ushering the era of a paid labor force economy (Schreier 2002a:150). Even though all of the military personnel was evacuated after the end of the Second World War, the South African government still kept control over the meteorological station, thus preserving Tristan's connection with the outside world as well as its contact with the supply ships, which continued making regular visits to the island (Schreier 2003:57–58). In a few words, the post-WWII image of Tristan da Cunha was vastly different compared with the one from the beginning of the 20th century.

Nevertheless, all of these advancements were eclipsed by the single, most dramatic event in the history of the island, which had wide-ranging consequences on the lives of its inhabitants. Namely, on the ninth of October in 1961, the Tristan volcano erupted just two hundred meters to the east of the settlement, bringing the lava flow in the direction of two landing beaches (Schreier 2003:59). Due to the immediateness of the threat the volcano posed to the community, the entire island population had to be urgently evacuated to England. Thus, with enough time to collect only the most essential of their belongings, the islanders were transported to Cape Town, where they spent two weeks before finally arriving in Southampton on the third of November 1961 (Schreier 2003:59). A few months later, they were settled in Calshot Camp, which is a former Royal Air Force station located near Southampton (Schreier & Lavarello-Schreier 2011:46). However, after only two years spent in England, the islanders expressed their desire to return to their homes on Tristan. Eventually, a ballot was held, where 148 Tristanians voted in favor of their immediate return, with only five people opting to stay

in England, and nearly all of the island's population was transported back to Tristan da Cunha in 1963 (Schreier 2003:59).

The eruption of the volcano on Tristan da Cunha and the events which followed suit had an immense impact on the lifestyle of the Tristanian people, as they provided them a chance to gain immediate exposure to the cultural standards other than the ones to which they were previously accustomed to. Thus, as Schreier (2002a:151) points out, the islanders were quick to adapt to the norms of the Western lifestyle, and embrace modern clothing, dances, and entertainment. In addition, the community's contact with the outside world was considerably improved as well. During the early 1980s, an overseas teaching program was started, which gave the Tristan adolescents an opportunity to pursue their secondary education off the island (Evans 1994). Furthermore, the late 1990s also brought about substantial advances in the telecommunications area on Tristan da Cunha with the availability of electronic mail, internet access, and satellite telephone and television (Schreier 2002b:78).

3.3 Tristan da Cunha English

The language of Tristan da Cunha represents one of the remotest varieties of the English language in the world, with its geographically closest neighbors of South African English and St. Helenian English (StHE) located more than 2,000 kilometers away (Schreier 2006:32). The TdCE variety is distinctive for a number of reasons, one of which lies in the relative recency of its origin. Being slightly older than the Falkland Islands and New Zealand Englishes, but a generation younger than South African and Australian English, TdCE represents one of the youngest varieties of English (Schreier 2010:245). Another characteristic feature of the TdCE dialect is that it was formed "under tabula rasa conditions" (Schreier 2016:206), which makes it an ideal test-tube environment for understanding how different languages and dialects mix and interact with each other. As noted in Section 3.2, the island was uninhabited prior to its colonization by the British in 1816, which excludes any influence of indigenous languages and/or varieties of English. In addition, the initial settlement of the island was followed by a period of very low contact of the islanders with the outside world. Hence, as Schreier (2003:62) contends:

> [C]ontact and koinéization processes occurred in a linguistic melting pot in extremis. The Tristan colony was at all times small and fairly stable (apart from some social restructuring and out-migration). The community has remained remarkably cohesive, and the networks involving the individual members have at all times been extraordinarily dense and multiplex.

Lastly, each of the input varieties which gave birth to the TdCE variety can be determined with relative ease, since the backgrounds of the entire island's population are well-documented in a genealogical tree produced by Crawford (1982:90–91).

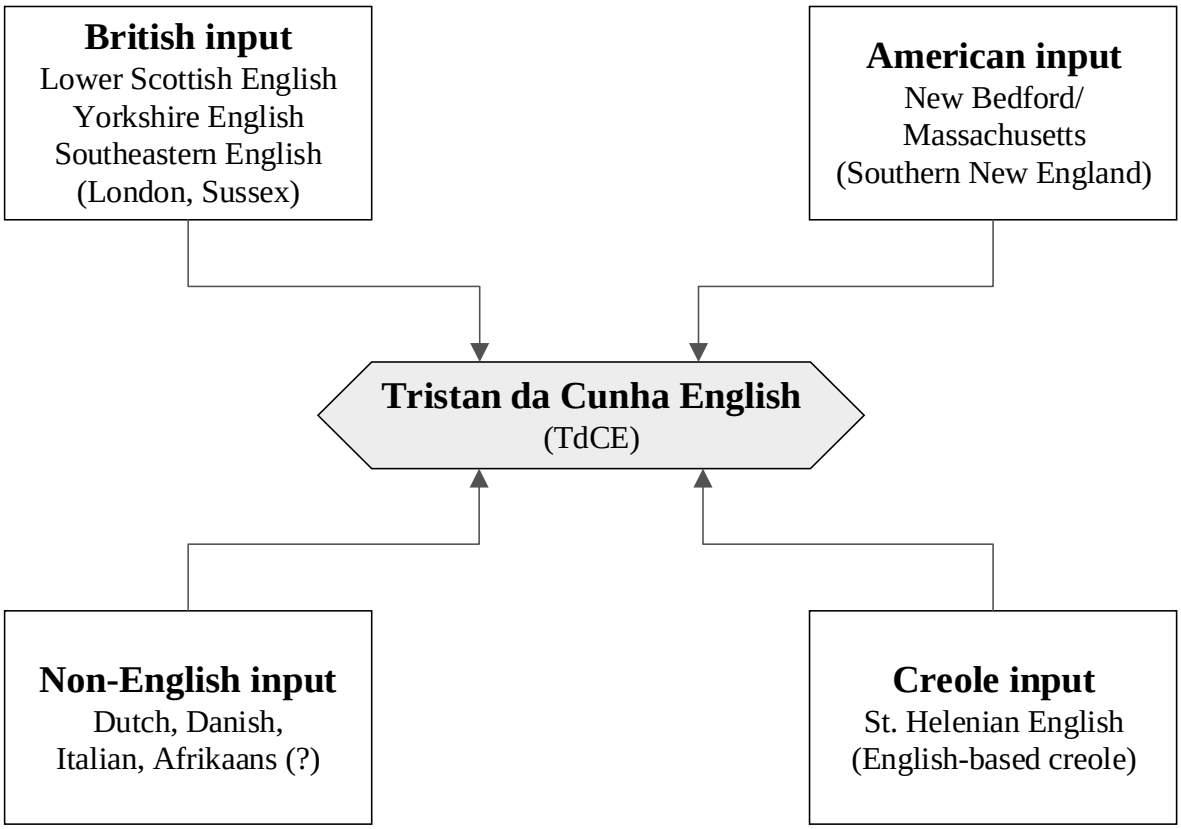

Figure 4. TdCE language/dialect contact scenario (adapted from Schreier 2002a:151)

The migration patterns that occurred during the early settlement stage of the Tristan community all point in the direction of a composite contact scenario involving three distinct contact types, which include dialect, language, and creole contact (Schreier 2003:62). As presented in Figure 4, the dialect contact type involves a number of British and American varieties, in correlation with the two major colonizer groups who first arrived to Tristan da Cunha. According to Schreier's (2002a:153) findings, the British settlers came various parts of England (Hull, Yorkshire, East London, Hastings, Sussex), and the Scottish Lowlands (Kelso), while the American settlers arrived mainly from New Bedford, Massachusetts area. However,

the influence between these two settler groups was not equally distributed in the newly founded colony. In addition to their stay on the island being considerably longer, the arrival of the British colonizers on the island predates that of their American cohorts, who arrived to Tristan in 1830s and 1840s, when a substantial British group had already settled (Schreier 2002b:79). As a consequence, the general character of the TdCE dialect has come to bear a much closer resemblance to the British English dialects as opposed to the American ones.

The second type of contact involves language contact between "English, Dutch, Danish, Italian, and quite plausibly Afrikaans" (Schreier 2002b:79), which resulted from the arrival of a number of nonanglophone settlers to the island during the nineteenth century. Specifically, according to Schreier (2002b:79–80):

> The Dane Peter Petersen settled on Tristan da Cunha in the mid-1820s; another Danish sailor, Peter Møller, and a Dutchman, Pieter Willem Groen, arrived in 1836; and two Italian seamen (the last nonanglophone settlers) arrived at a much later stage, namely in 1892. Another settler who may not have had native competence in English is Maria Glass (née Leenders), who grew up in the Afrikaans-speaking community in the Cape Town area […].

However, notwithstanding the amount of impact which these languages had during the formation of TdCE, English remained the only language spoken on Tristan da Cunha. Some of the plausible reasons why these non-English speakers had a non-lasting impact of on the emerging new dialect are that they were numerically restricted, did not arrive as a compact group, and settled considerably later than the British settlers (Schreier 2002b:80). As a consequence, these nonanglophone arrivals were relatively quickly assimilated into the young English-speaking community.

The third and the final input component, which is that of the creole contact type, is not as easy to ascertain and evaluate as the previous two. The nature and the amount of the influence which StHE had during the formation of TdCE is difficult to pinpoint with absolute precession for two reasons, the first one being whether StHE can be considered a creole variety at all. Therefore, according to Hancock (1991), StHE can indeed be classified as an English-based creole, which shares certain similarities with the Atlantic creoles. In a similar vein, Schreier (2008) argues that, "it is not exaggerated to say that StHE is an English-based creole after all," while adding that "the most plausible (yet also the most careful) option is to place StHE somewhere to the left side on the cline from non-creole to creole, perhaps on a par with varieties such as St. Kitts/Nevis and Bahamian English" (Schreier 2008:246). Another problematic area resides in determining the amount of impact which StHE had on the newly

developing dialect. Judging by the number of linguistic features the two dialects have in common, the influence of StHE on TdCE during its formative phase had to be substantial. Specifically, as Schreier (2016:207) puts it:

> The existence of creole-type features in TdCE (such as high rates of consonant cluster reduction; absence of *-ed* past-tense marking, Schreier (2005:152); /v/ realized as [b]; copula absence with locatives and adjectivals, Schreier (2008); etc.) point to the legacy of a creolized form of English from St. Helena.

These findings strongly indicate that the group of five women who arrived to Tristan from St. Helena in 1827 had a very important role in the Tristan community (Schreier 2002b:80), which was in the early developmental stage at the time. However, as mentioned in Section 3.2, not much is known about this group of female migrants. The little information which is available indicates that they all "arrived as a compact group," "spoke English," and "that some of them (if not all) were non-white" (Schreier 2002a:153).

In sum, the historical and linguistic evidence presented in the current section all points to the fact that TdCE was heavily influenced by two major settler groups: the British and the American colonizer group, as well as the group of women who arrived from the island of St. Helena. The third group of settlers, whose native language was not English, on the other hand, do not appear to have left a big impact on the overall shape of the TdCE dialect.

4 The corpus of Tristan da Cunha English

The TdCE family of corpora consists of four different collections of recordings which span the period from 1961 to 2010. The first group of interviews (1961-1962) was made in Calshot Camp near Southampton by the London University College (UCL) in association with the British Broadcasting Corporation (BBC) following the volcano's eruption and the evacuation of the islanders to England. These interviews were conducted by the BBC journalists and linguists, "all of whom were highly educated and had Received Pronunciation accents" (Schreier 2016:207–208). As a result, the interviews collected during this time are more formal in nature in comparison with the ones from the other periods. In total, the BBC/UCL corpus consists of approximately four hours' worth of recordings with about 30 speakers of the TdCE dialect, who were interviewed either individually or in smaller groups.

The second set of interviews (1963-1970) was made by the Swedish painter Roland Svensson (1910-2003) and the Norwegian sociologist Prof. Dr. Peter Munch (1908-1984). Svensson made multiple visits to the island and became strongly attracted to the Tristan lifestyle, where he took part in the everyday life with the islanders. Likewise, as a member of the Norwegian expedition, Munch visited Tristan da Cunha in 1937 and 1938 in order to conduct a sociological inquiry of the Tristanian community. Combined, the Svensson/Munch corpus contains roughly 23 hours of recording time, including both individual as well as group interviews with approximately 50 Tristanians. These interviews were conducted in the relaxed setting of the residents' households and are, therefore, much less formal, covering "all sorts of incidents in the late 19th and early 20th centuries (including ghost stories, mysterious sightings of missing ships, information on the earliest settlers on Tristan, etc.), and collected reminiscences of islanders" (Schreier 2016:208).

The Schreier corpus (1999-2010) comprises of recordings which were made by Prof. Dr. Daniel Schreier, who initially spent six months doing fieldwork in the Tristanian community in 1991 as a part of his sociolinguistic study of TdCE (Schreier 2003). Following his first visit to Tristan da Cunha, Schreier conducted further interviews with the islanders during his two subsequent visits to the island in 2002 and 2010. In total, the Schreier corpus consists of roughly 50 hours of recordings with about 70 speakers of TdCE, which "were conducted either individually or in groups of up to four, in settings that were chosen by the interviewees" (Schreier 2002a:154).

Finally, the Scottish corpus (2006) comprises approximately 12 hours of recorded material and the total of 17 interviews, which vary in length, ranging from 15 to 80 minutes.

These recordings were all conducted in the local residences of the members of the Tristanian community for the original purpose of collecting "data that would eventually provide an oral history of Tristan da Cunha" (Schreier 2016:209).

Year of recording	Marked (N)	Total (N)	Marked (%)
1961	127	226	56%
1962	218	495	44%
1963	56	136	41%
1965	89	155	57%
1970	191	414	46%
1999	296	711	42%
2006	945	1772	53%
2010	630	1387	45%
Total	**2552**	**5296**	**48%**

Table 1. Overall verb marking rates by year of recording

As reported in Table 1, the preliminary analysis of the variation between marked and unmarked verb forms across the above described corpora reveals that the speakers of TdCE show very little conscious use of this linguistic feature and/or willingness to accommodate their interlocutors. As a result, all of the four components were retained, including the more formal BBC/UCL corpus. However, since the current study focuses on the speech of the Tristanians who were born during the island's hyperisolation phase, only those informants who were born between 1876 and 1939 were selected for the analysis. This, in turn, meant limiting the number of speakers to a total of 28 (17 male, 11 female), thereby producing a sample size of 119,077 words or a little over 18 hours of recorded material. The overall distribution of the speakers whose speech was examined is presented in Table 2.

	Male speakers	Born	Female speakers	Born
	Aaron	1889	Jean	1876
	Wilson	1889	Martha	1895
	Ryan	1897	Grace	1906
	Glenn	1899	Anna	1916
	Nathan	1900	Emma	1918
	Wayne	1902	Faith	1921
	Josh	1904	Irma	1925
	Sean	1910	Ivy	1928
	Kyle	1922	Gloria	1930
	Henry	1923	Jessie	1938
	David	1923	Chloe	1939
	Leon	1926		
	Ethan	1928		
	Brandon	1931		
	Ben	1932		
	Liam	1934		
	Logan	1937		
Total	**N=17**	**1889-1937**	**N=11**	**1876-1939**

Table 2. Overview of TdCE speakers according to their sex and year of birth

5 Methodology

5.1 Variable rules analysis

One of the main principles of variationist sociolinguistics is that the choices which we make in our everyday language are not a product of mere chance, but are instead conditioned by a number of different linguistic and social factors, such as "the phonological environment, the syntactic context, discursive function of the utterance, topic, style, interactional situation or personal or sociodemographic characteristics of the speaker or other participants" (Sankoff 1988:1150). These regularities, which govern the choice of one linguistic variant over another, allow certain statistical generalizations to be extrapolated from the seemingly random and unstructured speech data. In other words, as Tagliamonte (2006:130) puts it, "[i]f a given feature tends to have a fixed effect independent of the other aspects of the environment, then this can be formulated mathematically." The collection of these statistical inferences, which describe the usage of a linguistic variable across various inter- and extralinguistic contexts, constitutes "a set of quantitative relations which are the form of the grammar itself" (Labov 1969:759).

However, the data acquired from naturally occurring discourse is not amenable to analysis using common statistical analysis techniques due to its typically uneven distribution (Patrick 1999:81). For instance, the ANOVA test, which is usually used with the data obtained from experimental procedures, requires an equal distribution of tokens, and is, therefore, unsuitable for the type of data which is normally used in the studies of language variation. As a result, the variable rule program (Varbrul) (Cedergren & Sankoff 1974), was developed by the combined efforts of a number of mathematicians through several iterations of technical improvements (Tagliamonte 2006:139). Using a maximum likelihood algorithm, Varbrul performs multivariate analysis in order to determine the relative strength which a set of independent variables or factor groups has on the dependent variable. Due to its ability to parse extremely disproportionate data, Varbrul has become "one of the most appropriate methods available for conducting statistical analysis on natural speech" (Sankoff 1988:987). Therefore, in accordance with its long-standing tradition in sociolinguistic studies, Varbrul is the primary quantification tool used in the present analysis as well.

The results of the Varbrul analysis provide information on the so-called "three lines of evidence," (Poplack & Tagliamonte 2001:93) which include: the statistical significance of a factor group; the relative strength of different factors within a factor group; and the relative

ordering of factor groups according to the amount of influence which they exert on the dependent variable. In addition, the values of each individual factor are reported using three different types of metrics, that describe its strength in terms of: the raw number of rule applications; the relative frequency of rule applications; and its relative factor or probabilistic weight. The factor weight (f.w.) is the key output of the variable rule analysis, since it reports the influence of each factor in the two or more factor groups independently of the other factors (Young & Bayley 1996:271). This value is reported in values ranging from 0 to 1, where a value above the 0.5 threshold indicates that a particular factor has a favoring effect on the application of a rule, while a value below it signifies a disfavoring effect. As a result, the factor weights which are closer to the two values representing categoricality indicate a stronger effect on the dependent variable in comparison to those which are closer to the middle range of the spectrum.

When parsing linguistic data, Varbrul performs a stepwise or a step-up/step-down analysis during which each factor group is individually added and then removed from the model until the most significant model fit is reached. During this procedure, all the factor groups which significantly affect the dependent variable (at the probability level of $p<.05$) are retained, while the ones which are calculated to have a statistically insignificant effect are dropped. Upon the completion of the analysis, all the factor groups which significantly contribute to the variation are arranged in decreasing order based on their relative strength. Finally, Varbrul also calculates the log likelihood statistic, in which "[f]igures closer to zero represent better models than log likelihoods further removed from zero" (Bayley 2013:94).

5.2 Count and don't count cases

The current section presents an overview of the 'Count and Don't Count cases,' or linguistic structures which do not satisfy the criteria for the inclusion into the analysis. As already mentioned in Sections 2.3 and 2.4, both the marked and the unmarked variant can indicate a range of meanings, where some of these meanings fall outside of the scope of variation. These contexts will be discussed in the subsections below.

5.2.1 Lexical finite verbs

Most studies of this type of variation focus on the morphological changes which occur in the main verb. Accordingly, only lexical finite verbs were included in the analysis, thus excluding

all past participles, as well as a variety of non-standard constructions, such as the ones shown in the examples (12a-e).

(12) a We **didn't had** electric and gas, nothing till after we came here. (Chloe/1939/210)
b You **ain't got** that thing on, is you? (Anna/1916/454)
d Then I had **to got** a torch and show him along the road. (Martha/1961/11)
e They say every time you light a fire up, the thing **would wen'** on top of the chimney and blow the fire out. (David/1923/225)

Following Hackert (2004;2008), the primary verb *have* was included in its usage both as a main verb, and as a semimodal *have to*[1]. The second primary verb *do* was included only as a main verb, while all instances of *do*-support occurring in questions and negations, as well as the use of *did* functioning as a stranded operator, were discounted. On the other hand, the third primary verb *be* was categorically excluded, since "the variable occurrence of this verb in both copula and auxiliary use constitutes a field of investigation separate from the present one" (Hackert 2008:143). Likewise, all modal verbs were omitted from the counts, due to their lack of ability to assume the function of the main verb.

5.2.2 Ambiguous temporal reference

All instances of unmarked verbs, occurring in contexts in which the past temporal reference could not be established with absolute certainty, as in (13), were excluded from the analysis.

(13) INT: Mhm, did you go to -- the church?
RES: Yeah, we **go** to church every Sunday. (Ivy/1928/325)

5.2.3 Present perfect and past perfect meanings

As pointed out in section 2.3, the creole unmarked verb can also indicate present perfect and past perfect meanings, which, as such, do not conform to Reichenbach's definition of absolute past. In general, this particular usage was not considered to form the envelope of variation. However, all the instances in which the dependent variable was specified by the adverbs *ever*, *never*, and *always*, as well as *already*, *yet*, and *just* were exempted from this rule, since "[b]oth

[1] The contracted form *hadda*, however, was not included in the analysis.

of these uses […] focus not upon a situation that began in the past and persists into the present but upon a situation that is seen as having taken place entirely in the past" (Hackert 2008:141).

5.2.4 Preverbal markers and non-standard marking

Despite their frequent occurrence in TdCE, all the constructions containing preverbal markers, such as in (14a,b) were categorically excluded.

(14) a Well, they did, the island-men **did wen'** on strike a few times. (Irma/1962/797)
b He**'s done forgot** that now. (Sean/1910/128)

Likewise, a small number of irregular verbs, occurring with the regular verb *-ed* suffix, as in (15), were also discounted.

(15) And the doctors **tooked** him out of hospital, put him right on the ship to send about. (Irma/1925/80)

5.2.5 The progressive aspect

In addition to the perfective and habitual aspect, a few instances of verb stems indicating the progressive meaning, such as in (16), were also identified in the data. However, unlike Hackert (2004:121), who retains these as a separate category, they were not considered in the present analysis due to their extremely low count (N=11).

(16) And the win' kept liftin', liftin', liftin'. More win' **come** all the time. (Nathan/1900/65)

5.2.6 The verb get

According to Quirk et al. (1985:720), The verb *get* is a particularly versatile one, since it can constitute a number of functional classes. As Hackert (2004:132) observes, "[a] fundamental divide […] runs along the stative/non-stative distinction and determines separation of the various structures into 'Count' and 'Don't Count' cases." Hence, all the instances of the stative *get* (17a) were discounted, including only those instances in which *get* has a nonstative meaning (17b). In addition, the nonstative *get* can also function as a "resulting copula" (Quirk et al. 1985:161) (17c), as well as in "catenative verb constructions" (Quirk et al. 1985:146) (17d). These two constructions were also included in the envelope of variation.

(17) a You could say nearly every house on Tristan **got** a wireless set. (Sean/1916/399)
b He -- he **got** it from South Africa, but he -- he -- they bring it out on a ship. (Anna/1916/517)
c I enjoy that. Right up till I **got** sick an' then I had to went to hospital then. (Irma/1925/228)
d Yeah, we useta have religious teaching because we useta go, uh -- had the bible, you know. And we **got** to learn a passage of the bible, each child. (Anna/1916/39)

5.2.7 Direct and reported speech

All verbs occurring in reported speech environments were retained in the analysis, since the backshift rule is optional in StE "when the time-reference of the original utterance is valid at the time of the reported utterance" (Quirk et al. 1985:1027). On the other hand, all instances appearing in quoted speech were categorically excluded.

5.2.8 Hypothetical meanings

Most analysts (e.g. Poplack & Tagliamonte 2001; Hackert 2004; 2008; Biewer 2015) restrict the scope of their analyses to factual situations and exclude all the verbs which appear in irrealis contexts, since they constitute "non-temporal uses of past tense morphology" (Poplack & Tagliamonte 2001:115). Accordingly, all the constructions indicating hypothetical meanings, such as in (18), were discounted.

(18) If we never **drink** that oil, we never **arrive**. (Ben/1932/28)

5.2.9 Passive voice

All the verbs appearing as part of the standard passive construction, which is formed with the auxiliary verb *be*, as in (19a), were categorically excluded. On the other hand, all instances of *get*-passive constructions, such as in (19b), were retained in the analysis. However, even though both verbs which form this construction can be marked for past tense, only the second or the main verb was taken into consideration as a viable resource for the variation data.

(19) a I **was married** and I had children when the war broke out. (Anna/1916/337)
b And where I was stayin' -- was a camp where a lot of people **got kill** in that camp. (Gloria/1930/636)

5.2.10 Serial verb constructions

Even though not particularly frequent, another creole feature which was attested in TdCE is the serial verb construction (SVC). According to Winford (1993:212), SVCs are comprised of "verbs or verb phrases linked in unbroken sequence, sharing core arguments, in the same tense, aspect or mood, agreeing in positive/negative polarity, and with no intonational or grammatical marking of clause boundaries." As illustrated in the example (20), each of the verbs in the SVC can be marked for the preterit tense. Following Hackert's (2004:137) approach, only the matrix verb was taken into consideration, thus excluding all the following serial verbs from the counts.

(20) I **went took** ol' W. up 'cause I useta work with old people. (Gloria/1930/545)

5.2.11 Neutralizing phonological environment

All instances of regular nonsyllabic verbs occurring in phonological environments which precede an apical stop, such as in (21a,b), were disregarded, since these environments have a strong tendency to mask the potential presence of the *-ed* suffix.

(21) a {LG} We don't know what **happen** to 'em. (Faith/1921/792)

b And they **carry** down on the san' they come put a stretch to carry on, she had both legs broke. (Emma/1918/81)

5.2.12 Invariable verbs

Irregular verbs which remain invariant throughout the paradigm, such as *hit*, *set*, or *cost* were omitted from the counts, since they exhibit no morphological changes between the marked and the unmarked variant.

5.2.13 Speech disfluency

According to Biber et al. (1999:1052), "dysfluency is a normal accompaniment of spontaneous speech." Naturally, this phenomenon is very frequent in the TdCE data as well. Hence, all the tokens which were affected by ellipsis and false starts, such as in (22a), were categorically excluded. On the other hand, in the case of repeats (22b), only the final instance was taken into consideration.

(22) a Before we came -- before we **lef'** England to come back to Tristan. (Sean/1910/314)

b 'Cause they tell -- **told** us that. (Joy/1938/418)

5.3 Language-internal conditioning factors

While the focus of the previous section was on establishing a reliable set of criteria for the inclusion of tokens into the scope of analysis, the current one deals with a number of language-internal conditioning factors which were found to have an influence on the dependent variable in the previous studies of variable past marking.

5.3.1 Morphological verb categories

The membership to a particular morphological category was examined first. The current investigation adopts Hackert's (2004:141) classification, which was originally proposed by Winford (1992:320) in his investigation of Black English Vernacular and Trinidadian English. Correspondingly, all irregular verbs were divided into three major categories based on the type of the morphological transformation which they undergo in their formation of the past tense. The first category of irregular verbs comprises of verbs which employ a vowel change only (VC) (e.g. *see*, *come*). The second irregular verb class includes verbs which feature a vowel change and the addition of a final apical stop (VC+) (e.g. *buy*, *think*), while the third category consists of doubly marked verbs[2] (DM), or the irregular verbs whose preterit formation involves a vowel change and the appearance of a consonant cluster which terminates with an apical stop (e.g. *keep*, *tell*). Like the majority of analysts who investigate the effect of verb morphology on this sociolinguistic variable (e.g. Blake 1997; Patrick 1999; Hackert 2004; 2008), a small number of verbs which form past by devoicing their final consonant (e.g. *build*, *send*) were excluded from the analysis. In addition to their overall low token count, these verbs are also subject to syllable-final consonant cluster reduction at a rate of 52%, which results in the appearance of ambiguous surface forms (e.g. *buil'*, *sen'*). Finally, as pointed out in Section

[2] As Hackert (2004:142) points out, "[s]trictly speaking, both *tell*/*told* and *buy*/*bought* verbs are doubly marked, as both categories make use of a vowel change and final apical stop. The term has become established, however, for the former only."

5.2.12, a number of irregular verbs which retain the same form throughout the paradigm (e.g. *hit*, *set*), was not taken into consideration.

In regard to the exceptional verb type, the verbs *go* and *have* were treated as separate classes. Other than being two of the most frequent verbs, comprising roughly one quarter of all the verbs in the current sample, both of these verbs also have distinctive past formation patterns. In addition to *be*, which is not considered as a part of the present study, *go* is the only verb in the English language which forms the preterit tense by substituting one form for another. Similarly, *have* and *make* are the only two verbs in English which encode the past by replacing the final consonant. Thus, even though *make* does not appear nearly as frequently in the data as *have*, it was also assigned the status of an exceptional verb. Another two verbs which were distinguished as separate classes are *do* and *say*. While *say* is a very frequent verb in the sample (N=388), *do* is frequently used as a preverbal marker and as a part of the interrogative and negative constructions. Lastly, the verb *get* was also analyzed separately. As pointed out in Section 5.2.6, *get* can assume a number of different meanings and syntactic functions due to its multifunctional nature, which, in turn, may carry an effect on its marking behavior across those contexts which are included in the scope of variation. Moreover, this verb is also one of the more frequent verbs in the data (N=395).

All regular verbs were categorized according to the phonological properties of their stem forms. Specifically, those verbs with stems ending in an apical stop (e.g. *start*, *land*) were classified as the members of the syllabic regular category (-ED). In addition, all the regular verbs with stems which end in a consonant other than an apical stop (e.g. *change*, *look*) were assigned to the consonant-final class (C-D), as opposed to those whose stems end with a vowel, which were assigned to the vowel-final category (V-D) (e.g. *play*, *die*). The classification of regular verbs according to the categories described above was to a certain extent dependent on the general phonological character of the TdCE dialect, which, according to Schreier (2003:210), is "firmly non-rhotic and conforms to practically all other varieties of Southern Hemisphere English." As a result, certain regular verbs, such as *appear* and *fire* were classified as the members of the V-D nonsyllabic class. The overview of all the morphological categories which were distinguished in the present analysis is reported in Table 3.

Morphological category		Example	Past formation
		go/*went*	suppletion
		have/*had*	C > /d/
		make/*made*	C > /d/
		do/*did*	V > V/d/
		say/*said*	V > V/d/
		get/*got*	V > V
Vowel change	VC	*see*/*saw*	V > V
Vowel change plus consonant	VC+	*buy*/*bought*	V(C) > V/t,d/
Doubly marked	DM	*keep*/*kept*	VC > VC/t,d/
Vowel-final nonsyllabic regular	V-D	*play*/*played*	add /d/
Consonant-final nonsyllabic regular	C-D	*change*/*changed*	add /t,d/
Syllabic regular	-ED	*start*/*started*	add /ɪd/

Table 3. Overview of exceptional verbs and major morphological verb categories (adapted from Hackert 2004:141)

5.3.2 Regular verbs and syllable-final consonant cluster deletion

In addition to verb morphology, the loss of the past tense marking as a consequence of syllable-final consonant cluster deletion was also included in the investigation. However, not all morphological verb classes were coded and examined for the influence of the preceding and the following environment. Specifically, none of the irregular verb classes were taken into account, since irregular verbs "are operated on by diverse processes [and] there is no reason to expect the surrounding phonetic context to influence their realization" (Patrick 1999:230). Similarly, the verbs belonging to the syllabic regular type were also excluded from the analysis since they form the preterit tense through the addition of the /ɪd/ allomorph, that does not result in the emergence of word-final consonantal clusters. Therefore, only non-syllabic regular verbs were taken into consideration as potential cases where /t,d/ deletion may have an observable effect on the variation between the marked and the unmarked verb form.

In accordance with Patrick's (1999:238–240) method, the C-D and V-D non-syllabic regular classes, were combined into a single verb group and coded for both environments. For the preceding environment, a division was made between vowels and two different types of consonants, which, according to Patrick's (1999:131) findings, have shown an opposing effect on the appearance of syllable-final apical stops. Specifically, sibilants, stops, and nasals, which have a promoting influence on /t,d/ deletion, were combined into one consonant category, while non-sibilant fricatives and laterals, which have an inhibiting effect, were assigned to another. Glides and liquids, which, according to Patrick (1999:130), "have intermediate effects on

deletion" were not included in the tabulation. The following phonological environment, on the other hand, was partitioned into three separate categories containing a consonant, a vowel, and a pause.

5.3.3 Lexical aspect

Due to the inconsistencies of findings between the previous analyses of variable past marking, the effect of lexical aspect on the dependent variable was examined next. In the current investigation, the stativity value of a verb was not established purely on the basis of its semantic properties. As pointed out in Section 2.4.1, this approach has proven to be problematic, since certain stative verbs can assume a dynamic reading depending on the environment in which they occur. Therefore, in order to determine whether a particular verb should be coded stative or dynamic, the verb's entire argument frame, that manifests itself in the form of "adverbials, aspectual viewpoints, and other forms," (Smith 1997:17) was also taken into consideration.

According to Winford (1992:332) "[p]erception verbs such as *hear*, *feel*, *see*, and *smell* also freely appear in the progressive in mesolectal CEC." Furthermore, as Hackert (2004:163) points out, "creolists among themselves are undecided as to the nature of verbs of perception." Even though this particular semantic type does not surface frequently in contexts indicating the progressive meaning in TdCE, the current study follows Winford (1992) and Hackert (2004) and assigns all the verbs of perception to a separate class, in order to assess whether their marking rates pattern differently in comparison with the rest of the verbs contained in the stative category.

5.3.4 Grammatical aspect

In addition to the verbs indicating perfective states and events, habitual meanings were also included in the examination of the effect which grammatical aspect has on the variation, since the previous studies have revealed that habituality has a strong inhibiting effect on the presence of overt past tense morphology. As Hackert (2008:149) contends, "[h]abitual verb situations […] may be argued to form part of the envelope of variation if they are clearly marked via a grammatical aspect factor group." In accordance with this claim, the two types of grammatical aspect were treated as independent, separate categories. Additionally, a few instances of unmarked verbs indicating a progressive reading were also identified in the data. However, as mentioned in Section 5.2.5, these were excluded from the present analysis due to their low token count.

Since the current investigation excludes all periphrastic constructions and focuses entirely on the aspectual relations which are indicated in the main verb alone, the appropriate grammatical aspect values were determined by a number of "semantic-syntactic co-occurrence restrictions" (Hackert 2004:167). Specifically, according to Dahl (1985:97), the habitual interpretation of a verb is possible in the environments which allow the addition of the adverb *usually*. In a similar vein, Bybee et al. (1994:156) note that the semimodal *used to* and the modal *would* may be used in conjunction with the verbs expressing habituality without any discernable change in meaning. Correspondingly, all verbs denoting actions were coded as habitual if their meaning in discourse was unaffected by the hypothetical insertion of *usually*, *used to*, and *would*. However, as mentioned in Section 2.4.2.2, this method is applicable to dynamic verbs only, since it involves actions which are iterative in nature. Hence, all verbs denoting states were assigned a habitual reading if a speaker wanted to describe a "contrast with what happened later in the speaker's life [that] led to [their] present situation," or "a contrast […] in terms of the community at large" (Hackert 2004:169). An example of such stative verb, that was coded as habitual, is provided below.

(23) Tristan was just was almost like you comin' Cape Town. Because we **had** plenty of meat, plenty of pork, you see, but only seventy people on the island. (Aaron/1889/20)

5.3.5 Temporal disambiguation

The creolist hypothesis that temporal adverbials and temporal conjunctions may affect the presence of past tense morphology by rendering it redundant was also assessed. Even though some analysts (e.g. Tagliamonte & Poplack 1993:182) use a much more detailed categorization scheme by distinguishing between a variety of different conjunctions, the current investigation adheres to Bickerton's (1975) pioneering approach, which was subsequently adopted by a number of other researchers (e.g. Patrick 1999:186; Hackert 2004:147), where all the verbs appearing in temporal clause environments were coded as [+temporal], while the rest were assigned to a general [-temporal] category. All forms of conjunctions employed in StE to indicate a temporal relationship (e.g. *when*, *whenever*, *once*, *any time*, *until*, *before*, *after*, *while*, *since*, *as soon as*, *soon as*, etc.) were taken into account. In addition, some of the non-standard conjunctions, which were identified in the data (e.g. *time*, *given*), were also retained in the tabulation.

On the other hand, the investigation of temporal adverbials involved a two-step approach. During the first stage, the verbs which are directly referenced by a temporal adverbial within an utterance were assigned to the [+adverbial] category, while the rest were classified as [-adverbial] in order to assess the potential influence of the general presence of a temporal adverbial. Following Tagliamonte and Poplack (1993) and Hackert (2004), a verb was coded as specified by a temporal adverbial "no matter whether it occurs in a clause containing a temporal adverbial […] or in conjunction with a finite clause expressing a temporal relation" (Hackert 2004:177). This is illustrated in the example (24), where both *come* and *eat* were coded as [+adverbial].

(24) See, after the rats **come** on the island, they **eat** all the tussock grass away. (Ryan/1897/52)

In the second part of the analysis, the [+adverbial] category was investigated in more detail, by distinguishing between different types of temporal adverbials. In accordance with Quirk et al.'s (1985:481–482) semantic distinction, all temporal adverbials were divided into adverbials of time position, duration adverbials, and frequency adverbials. The fourth adverbial class, relationship adverbials proper (Quirk et al. 1985:579), which includes the adverbs *already*, *still*, and *yet* as its only members, was excluded from the analysis since the number of these adverbs in the sample was very low (N=9). On the other hand, the adverb *then* was separated from the other adverbials of time position and assigned to a separate category due to its exceptionally high frequency (N=354, 25%). Likewise, following Hackert's (2004) approach, the adverbs *ever* and *never* were also treated as a separate class, since "these are adverbs which may refer either to a past point in time or to a time span that includes the moment of speech" (Hackert 2004:177). Finally, in those cases where more than one temporal adverbial was present in a single utterance, only the more specific instance was counted in order to maintain the compatibility of findings with the previous analyses of this discourse constraint. For instance, only the second adverbial (the temporal clause) was taken into consideration in the following example.

(25) An' then, when they went plantin' it, they got they donkeys and took it out and plantin' it that way. (David/1923/271)

5.4 Speaker sex

In addition to the grammatical, phonological, and discourse factors, the biological distinction according to speaker sex was also selected as an external factor which potentially influences the variation between the marked and the unmarked variant in TdCE. All the informants were divided into two major groups containing 17 male and 11 female speakers, whose usage of the two alternating verb forms was examined in general terms, as well as in correlation with the language-internal factors, described in the previous sections.

5.5 Data extraction, coding, and analysis

In order to obtain the linguistic data required for the analysis, a total of 28 interviews with the residents of the Tristan community were transcribed and tagged for different parts of speech using the Stanford log-linear part-of-speech tagger (Toutanova et al. 2003). The collection of tagged interviews was then analyzed using the concordancer software, where all preterits and verb stems (tagged _VBD and _VB, respectively) were manually inspected and treated in accordance with the set of criteria outlined in Section 5.2. This method yielded the total of 5,296 instances of the variable, which were then coded for the phonological, grammatical, discourse, and social conditioning factors that were identified as relevant in the previous studies of the variation in past tense marking. Finally, a tab-delimited text file containing the coded tokens was imported into Rbrul (Johnson 2009), which is an implementation of the Varbrul algorithm for the R statistical environment, where a series of binominal logistic regression tests was carried out in order to uncover the regularities that govern the variation between the marked and the unmarked verb form in TdCE. The results of these statistical tests will be presented in the following sections.

6 Findings

6.1 General overview

A general investigation of the data reveals that verb stems denoting states and events which have occurred in the past are very common in TdCE. So common, in fact, that unmarked verb forms account for the majority of all the tokens that were examined in the current sample. As illustrated in Figure 5, verbs carrying no morphological marking appear at the overall rate of 52% (N=2744), as opposed to those marked for the preterit tense, which are slightly less frequent, occurring at the rate of 48% (N=2552).

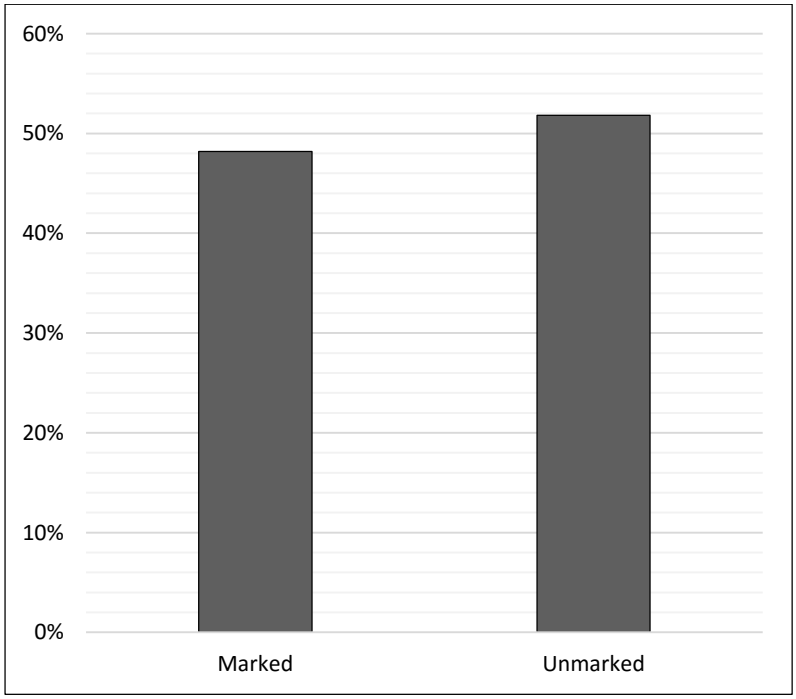

Figure 5. Overall distribution of marked and unmarked verb forms

A closer inspection of the marking rates between individual speakers, which is presented in Figure 6, reveals that the variation between the two alternating variants is present in the speech of all the informants who were examined in the study. In addition, the initial findings reveal that there is a considerable amount of inter-speaker variability. These wide fluctuations range from Ethan and Ryan, who mark all their verbs approximately one quarter of the time (26% and 27%, respectively), to Henry and Cloe, who mark roughly two thirds of their verbs (66% and 67%), with the rest of the speakers' rates falling anywhere in-between

these two extremes. As a result, no groups of speakers who use this linguistic feature in a similar manner can be distinguished at this level of the analysis. Therefore, in order to account for this seemingly unstructured pattern of variation between the two alternating verb forms, a set of findings related to language-internal and language-external conditioning factors will be presented in the following sections.

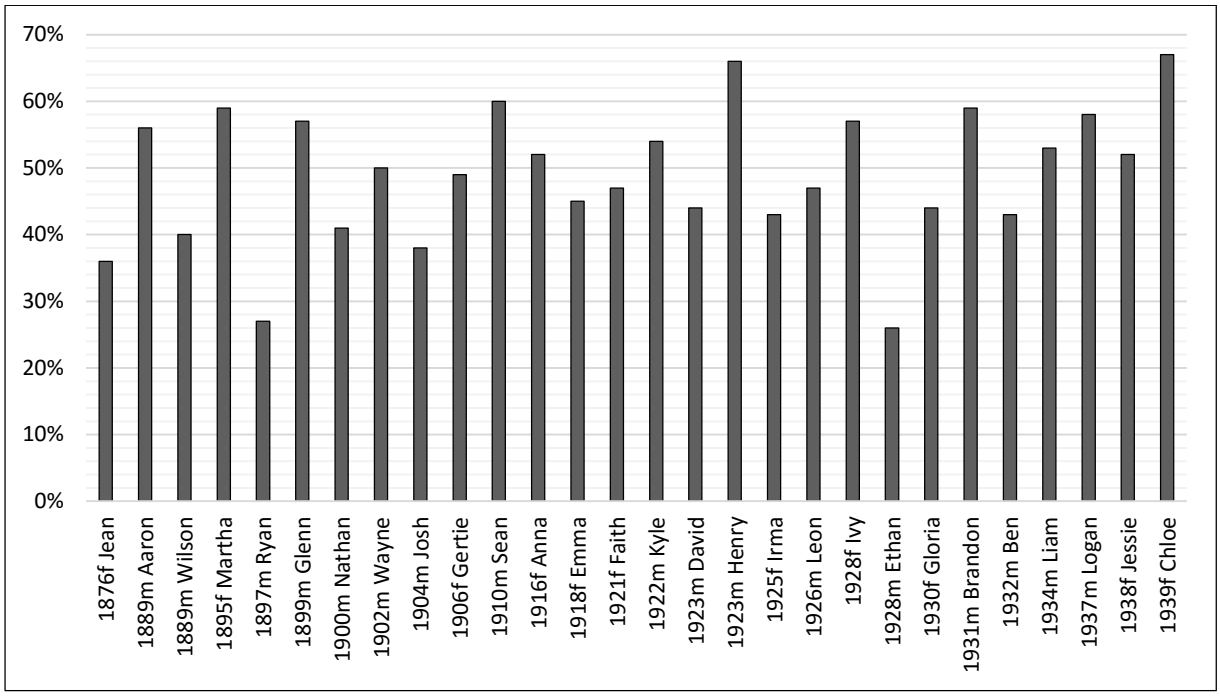

Figure 6. Overall verb marking rates by individual speaker

6.2 Morphological verb categories

Table 4 presents the marking rates of the exceptional verbs and the major morphological verb categories for the entire population of 28 speakers. In this analysis, no data exclusions were made, and all the major factor groups were retained in the statistical model. The default application value chosen for each of the tests in the current study is that of the marked variant. Having the highest probability value (p=~0), the verb morphology factor group is selected as the one which exerts the highest amount of influence on the dependent variable in comparison to all the other factor groups, both linguistic and social.

Morphological category	N	%	f.w.
have	740	99%	0.99
go	596	88%	0.89
get	395	75%	0.76
do	29	69%	0.73
make	63	29%	0.29
say	388	14%	0.11
DM	374	58%	0.56
VC+	193	38%	0.4
VC	1347	32%	0.31
V-D	284	30%	0.28
-ED	241	27%	0.24
C-D	646	5%	0.06
Total/P_i	**5296**	**48%**	**0.37**
			Log. likelihood: -2304.054

Table 4. Verb marking rates of exceptional verbs and major morphological categories

The Varbrul analysis of exceptional verbs reveals striking differences between the six individual lexical items in terms of their probabilities to retain their past tense markings. Thus, with the extremely high probabilistic weight of 0.99, the replacive *have*, which is the most frequent verb in the sample (N=740, 14%), exhibits a particularly strong preference toward marking, which is almost at a categorical level. Even though not as frequent as *have*, the suppletive *go* (N=596, 11%) also shows a very high tendency to be marked for the past tense, with the factor weight of 0.89. In addition to *have* and *go*, another verb which occurs very frequently is *get* (N=395, 7%). With its probability of marking calculated at 0.76, this verb shows a clear predisposition to appear in its preterit form. The exceptional verb *do* displays an almost identical marking pattern to that of *get*. However, while its probabilistic weight of 0.73 remains just barely within the area of statistical significance (p=.05), its low token count (N=29) necessitates a very cautious interpretation. On the other hand, *make*, which is the only other replacive verb in addition to *have*, exhibits an opposing marking behavior in comparison to *have* by gravitating strongly toward verb stems, with the factor weight of 0.29. Even though *make* does not occur anywhere near as frequently as its morphological equivalent (N=63), its distribution of tokens still retains a very high statistical significance level (p=.002). Finally, the exceptional verb *say*, which is yet another very frequent verb in the data (N=388, 7%), shows an extremely strong propensity toward shedding its preterit morphology, with the marking probability of only 0.11.

Unlike exceptional verbs, the three major morphological categories of irregular verbs do not display such drastic marking differences in comparison to each other. According to the results of the initial Varbrul analysis, the only irregular verb category which has a slight predisposition to be marked for the past tense is that of DM verbs, with the marking probability of 0.56. On the other hand, with the somewhat lower factor weight of 0.4, the VC+ class shows a slight preference toward verb stems, while the biggest irregular verb category (N=1347, 25%), comprising verbs which encode the past tense through a vowel change alone, displays a slightly stronger tendency in the same direction, with the probabilistic weight of 0.31. However, the chi-squared test indicates that the difference in the marking probabilities between the latter two irregular verb groups does not meet the minimum level of statistical significance (p=.13).

Regarding the marking rates of the regular verb type, the initial findings reveal that each of the three regular verb categories show a very strong predisposition toward the loss of the *-ed* suffix. Specifically, with their respective factor weights of 0.28 and 0.24, both the syllabic -ED and the non-syllabic V-D class show a nearly indistinguishable marking pattern. On the other hand, with the probabilistic weight of mere 0.06 and only 33 tokens marked for the past tense in the entire category (N=646), the non-syllabic C-D class displays an extreme preference toward uninflected verb forms, which very narrowly approaches the level of categorical use. Correspondingly, this group of regular verbs is the only one of the three whose distribution of tokens shows a marking distinction which is statistically highly significant (p<.001).

However, the analysis of individual lexical items across the three irregular verb classes reveals a number of verbs which display a divergent marking behavior in comparison with the overall marking rates of their respective morphological categories. As presented in Table 5, the most frequent deviant verb in the VC category, which accounts for nearly one half of its tokens (N=631, 47%), is *come*. With the marking frequency of only 16%, this verb shows a very strong tendency toward verb stems. On the other hand, *take*, which is the second most frequent verb in that morphological category (N=232, 17%), exhibits a diametrically opposed behavior to that of *come*. Namely, *take* shows a particularly high predisposition toward marking, appearing in its preterit form at the overall rate of 92%. In addition, despite not occurring nearly as frequently as *come* or *take*, the verbs *see, give,* and *know* all display a similar marking pattern, that strongly gravitates toward the use of verb stems, with their respective marking frequencies of 11%, 6%, and 14%. Finally, the least frequent member of the VC category, which highly significantly (p<.001) deviates from the group's overall marking rate, is *break*. Like *take*, this

verb also shows an extremely strong propensity to retain its past tense morphology, appearing in its preterit form at the frequency of 94%.

Morphological category	Verb	Marked (N)	Total (N)	Marked (%)
VC	*come*	100	631	16%
	take	214	232	92%
	see	12	112	11%
	give	5	79	6%
	know	7	51	14%
	break	31	33	94%
	Overall	**435**	**1347**	**32%**
VC+	*think*	29	39	74%
	hear	5	38	13%
	Overall	**73**	**193**	**38%**
DM	*tell*	17	154	11%
	leave	119	120	99%
	Overall	**215**	**374**	**57%**

Table 5. Overview of deviant irregular verbs by morphological class

Even though it constitutes the smallest morphological class, the VC+ irregular verb category contains two lexical items which, despite their general lack of prominence, both display idiosyncratic marking patterns. One of these verbs, which highly significantly ($p<.001$) deviates from the overall mean of the group, is *think*. This verb shows a clear preference toward preterit forms, with the relative marking frequency of 74%. The second deviant member in the VC+ class, which is almost as frequent as *think,* but exhibits an opposing behavior, is *hear*. Having its rate of marking calculated at only 13%, this verb also significantly ($p=.003$) diverges from the rest of the verbs in the VC+ category, with its very strong predisposition to surface as a verb stem.

The final morphological category, consisting of irregular verbs which are doubly marked, also includes two deviant lexical items, which appear frequently in the sample. These are *tell* and *leave*, which combined constitute the large majority of all the verbs included in this morphological class (N=274, 75%). Unlike most of DM verbs, which gravitate toward the usage of marked forms, *tell* (N=154) shows a notable tendency in the opposite direction, with the marking rate of only 11%. Therefore, the unmarked variant of this verb constitutes the vast majority of verb stems contained in the DM class (N=137, 86%). On the other hand, the verb *leave* (N=120) appears almost exclusively in its marked form, with only one unmarked instance

identified in the entire dataset. As a result, the preterit form of this verb accounts for approximately one third of all the verbs which are marked for the past tense in the entire DM category (N=119, 32%).

Due to the high number of idiosyncratic items identified during the analysis of lexical content, the entire sample was re-analyzed with the verbs *break, come, give, hear, know, leave, see, take, tell,* and *think* excluded from the counts. The results of the revised Varbrul analysis are presented in Table 6. The new findings reveal that the remainder of the irregular verbs belonging to the VC and the VC+ category have marking rates which are practically indistinguishable. Specifically, with the identical factor weight values of 0.29, both of the two classes display a clearly defined predisposition toward verb stems. On the other hand, with the exclusion of the above mentioned lexical items, the marking differences between the DM category and the remainder of irregular verbs become much more pronounced, since the verbs in this group now show a much stronger tendency toward marked forms, as evidenced by the probabilistic weight of 0.85.

Morphological category	**N**	**%**	**f.w.**
DM	100	79%	0.85
VC	209	32%	0.29
VC+	116	34%	0.29
			Log. likelihood: -1326.863

Table 6. Verb marking rates of irregular verb categories (*break, come, give, hear, know, leave, see, take, tell,* and *think* excluded)

Naturally, the presence of lexical items with idiosyncratic marking tendencies is not limited to the irregular verb type. Even though each of the three morphological categories of regular verbs display a strong propensity toward unmarking, the verb *erupt* shows a marking pattern which highly significantly ($p<.001$) deviates from the rest of the verbs in the syllabic -ED class. Despite its generally low frequency of occurrence (N=22, 9%), its inflected form accounts for nearly one third of all the tokens which are marked for the past tense in the group. Hence, with its high inflection rate of 86%, *erupt* artificially increases the overall marking rate of the entire -ED category. Likewise, the verb *marry*, which is the second most frequent verb in the V-D nonsyllabic class (N=45, 16%), has a similar elevating effect, due to its exceedingly high inflection rate of 96%.

Morphological category	N	%	f.w.
-ED	219	21%	0.2
V-D	239	17%	0.18
C-D	646	5%	0.06
			Log. likelihood: -2217.075

Table 7. Verb marking rates of regular verb categories (*erupt* and *marry* excluded)

Table 7 reports the marking rates of the three regular verb categories with the verbs *erupt* and *marry* removed from the calculations. Compared to the initial analysis, which is presented Table 4, the syllabic -ED and nonsyllabic V-D classes have retained their similar inflection patterns, with no significant differences between the two verb groups (p=.35). However, there is a slight decrease in the marking probabilities of both the -ED (0.24 vs. 0.2) and the V-D class (0.28 vs. 0.18), which is highly significant in the case of the latter (p<.001). On the other hand, the C-D nonsyllabic category remains unaffected by the exclusions of the two deviant verbs, with its extremely low probabilistic weight of 0.06.

In sum, the collection of findings presented in the current section reveal that, even though the membership of a particular morphological category represents a factor which exerts the highest amount of influence on the variation between the marked and the unmarked verb form on statistical grounds, a number of individual lexical items possesses the ability to override this grammatical constraint by assuming a marking pattern of their own, which, in certain cases (e.g. *come, take, tell, leave*), radically departs from that of their equivalents that share the same morphological profile.

6.3 Lexical aspect

The investigation of the effect which lexical aspect has on the dependent variable included all of the grammatical, discourse, and social factor groups. The marking rates of the three major categories which constitute of the lexical aspect factor group are presented in Table 8. The preliminary findings of the Varbrul analysis indicate that the distinction according to lexical aspect highly significantly contributes to the variation in the statistical model (p=7.76e-07[3]). The probabilistic values calculated for this factor group reveal that stative and nonstative verbs share an almost identical marking pattern, which slightly gravitates toward the usage of

[3] This number is expressed in scientific notation or standard index form. Converted into the decimal number format, it holds the value of 0.000000776.

marked forms. On the other hand, verbs of perception display a contrasting behavior by gravitating toward verb stems, with the reported probabilistic weight of 0.34. However, a comparison of the factor weight and the raw marking frequency calculated for the stative category reveals a notable discrepancy between these two types of metrics. Specifically, while the former is calculated at 0.59, the latter shows a remarkably high value of 86%. This inconsistency is indicative of the distorting effect of individual verbs, whose idiosyncratic marking preferences skew the overall marking rate of the stative verb class.

Lexical aspect	**N**	**%**	**f.w.**
Stative verbs	792	86%	0.59
Nonstative verbs	4291	43%	0.58
Verbs of perception	213	16%	0.34
Total/P_i	**5296**	**48%**	**0.37**
			Log. likelihood: -2304.054

Table 8. Verb marking rates by lexical aspect type

The analysis of lexical content reveals that the verb *have* is the principal lexical item which contributes to the inflated marking frequency of the stative verb class. In addition to being the most frequent verb in the data, *have* shows a near-categorical predisposition to be employed in its preterit form. Furthermore, as pointed out in Section 2.4.1, one of the defining characteristics of this verb resides in its versatile nature, as it is able to assume both stative and nonstative meanings, depending on whether it denotes a possession or an action.

Lexical aspect	**Marked (N)**	**Total (N)**	**Marked (%)**
Stative *have*	637	646	99%
Nonstative *have*	94	94	100%
Total	**731**	**740**	**99%**

Table 9. Distribution of *have* according to its stativity

Table 9, which shows the distribution of *have* across the two lexical aspect categories, reveals that the large majority of its tokens (N=637, 87%) appear as the members of the stative category. Since the chi-squared test reports that the differences in distribution of *have* across the two verb classes are statistically insignificant (p=.25), the entire dataset was re-examined with this verb excluded from the counts. The results of the revised Varbrul analysis are reported in Table 10.

Lexical aspect	N	%	f.w.
Stative verbs	146	30%	0.6
Nonstative verbs	4197	42%	0.57
Verbs of perception	213	16%	0.34
Total/P_i	**4556**	**40%**	**0.29**
			Log. likelihood: -2258.407

Table 10. Verb marking rates by lexical aspect type (*have* excluded)

With the exclusion of *have* from the data, the overall marking frequency of the stative category drops from its original high rate (86%) to a much lower one (30%), and the number of tokens is drastically reduced (N=646, 82%). However, the stative and nonstative classes still retain their similar factor weights (0.6 and 0.57, respectively). Hence, as these new findings reveal, *have* is not the only idiosyncratic verb which has a negative effect on the marking behavior of the categories contained in the lexical aspect factor group.

Lexical aspect	Verb	Marked (N)	Total (N)	Marked (%)
Nonstative verbs	*come*	100	631	16%
	go	526	596	88%
	get	298	395	75%
	say	53	388	14%
	take	214	232	92%
	tell	17	154	11%
	leave	119	120	99%
	have	94	94	100%
	give	5	79	6%
	Overall	**1838**	**4291**	**43%**
Stative verbs	*have*	637	646	99%
	know	7	44	16%
	think	26	36	72%
	like	0	21	0%
	Overall	**680**	**792**	**86%**
Verbs of perception	*see*	12	112	11%
	hear	5	38	13%
	look	0	27	0%
	feel	14	16	88%
	Overall	**34**	**213**	**16%**

Table 11. Overview of deviant irregular verbs by lexical aspect type

Table 11 reports the total of 17 verbs whose marking patterns differ in comparison with the ones of their respective morphological classes. Since the marking behavior of most of the deviant lexical items in the nonstative category was already described in the previous section, they will not be the subject of a detailed discussion in the present one. In brief, the most frequent of these are *come, go, get,* and *say,* with the verbs *take, tell, leave,* and *give* occurring in lesser frequencies. Combined, these verbs comprise the majority (N=2689, 63%) of the tokens included in the nonstative group. Other than *have*, the two of the most frequent lexical items in the stative category are verbs of cognition *know* (N=44) and *think* (N=36). Despite belonging to the same semantic type of statives, these verbs show opposing marking patterns, which significantly deviate from that of the stative category (*know*: $p<.001$, *think*: $p=.02$). Namely, with the marking frequency of only 16%, *know* has a clear predisposition to be employed as a verb stem, while *think*, which is marked at the rate of 72%, shows strong a preference toward preterit usage. In addition to these irregular verbs, another distinctive stative member is the nonsyllabic regular verb *like,* which, even though not frequent (N=21), appears exclusively in its unmarked form. On the other hand, the marking behavior of the category containing verbs of perception is rather difficult to ascertain with precision, since all of its prominent members have marking patterns which gravitate toward the extremes. The most frequent lexical item, which comprises a little over a half of all the verbs in this class (N=112, 53%), is the verb *see*. Surfacing in its preterit form at mere 11% (N=12), *see* exerts an exceedingly high amount of influence on the entire category by drastically decreasing its marking rate. Moreover, the verbs *hear* and *look*, while nowhere near as frequent, both share a very strong tendency toward unmarking, with the latter occurring categorically as a verb stem. Lastly, *feel* is the least frequent verb of perception (N=16) which significantly diverges from its overall frequency ($p<.001$), by being marked for the past tense at the very high rate of 88%.

Lexical aspect	**N**	**%**	**f.w.**
Stative verbs	45	22%	[0.52]
Nonstative verbs	1592	26%	[0.49]
Verbs of perception	20	15%	[0.48]
Total/P_i	**1657**	**26%**	**0.4**
			Log. likelihood: -748.646

Table 12. Verb marking rates by lexical aspect type (*come, feel, get, give, go, have, hear, know, leave, like, look, say, see, take, tell,* and *think* excluded)

The results of the final Varbrul analysis in which all the idiosyncratic verbs were excluded are presented in Table 12. According to the new findings, the difference between the marking rate and the probabilistic weight of the stative verb class has been resolved. In addition, the initial marking differences between the verbs of perception and other stative verbs has also disappeared. Most importantly, however, the difference between the stative and nonstative categories in terms of their marking probabilities, has been rendered nonexistent. As a result, the entire lexical aspect factor group was rejected during Varbrul's stepwise run as statistically insignificant (p=.95), as indicated by the square brackets surrounding the factor weight values, thus showing that the distinction according to the lexical aspect type carries no effect on the variation between the marked and the unmarked variant.

6.4 Grammatical aspect

The Varbrul analysis presented in Table 13, which included the same factor groups as those of verb morphology and lexical aspect, indicates that grammatical aspect has a substantial effect on the dependent variable. In fact, with an extremely high level of statistical significance (p=1.85e-25), this factor group emerges as the second strongest one, closely following that of verb morphology. As indicated by the factor weight of 0.62, perfectivity has a strong promoting effect on the presence of past tense morphology. Conversely, with the considerably lower marking probability of 0.38, habituality shows a clear constraining influence on verbal marking. However, as it was the case with the analysis of lexical aspect, the incongruity between the raw marking frequencies and the factor weight values is evident in this case as well. Thus, while the two grammatical aspect types show opposing probabilistic weights, their marking rates remain at a level which is nearly identical. Again, these findings are indicative of the distorting effect, caused by individual lexical items with idiosyncratic marking properties.

Grammatical aspect	**N**	**%**	**f.w.**
Perfective	3874	48%	0.62
Habitual	1422	47%	0.38
Total/P_i	**5296**	**48%**	**0.37**
			Log. likelihood: -2304.054

Table 13. Verb marking rates by grammatical aspect type

	Perfective			Habitual		
Verb	**Marked (N)**	**Total (N)**	**Marked (%)**	**Marked (N)**	**Total (N)**	**Marked (%)**
have	378	378	100%	353	362	98%
say	53	386	14%	0	2	0%
tell	17	152	11%	0	2	0%
leave	119	119	100%	0	1	0%
see	12	93	13%	0	19	0%
Total	**579**	**1128**	**51%**	**353**	**386**	**91%**

Table 14. Overview of deviant verbs by grammatical aspect type

Table 14 reports the five high-frequency verbs which were removed from further analysis due to their obscuring effect on the relative marking rates of the grammatical aspect factor group. Even though *have* is the most frequent verb in the sample, and the only verb among the ones presented above whose allocation of tokens between the perfective and the habitual category is statistically significant (p=.002), it's extremely high marking rate has a considerable masking effect on the overall marking rates of both categories[4]. Another two idiosyncratic verbs which were identified as problematic are *say* and *tell*. In addition to their very strong predisposition to surface as verb stems (14% and 11%, respectively), these verbs are used in almost exclusively in perfective contexts (99%, each), thereby deflating the overall marking rate of the perfective category. On the other hand, the verb *leave* has an almost identical distribution as *say* and *tell* but displays a marking behavior which is diametrically opposed compared to these two verbs, which, as a consequence, carries an elevating effect on this verb class. The final lexical item, which was discounted on the basis of its characteristic pattern which gravitates strongly toward unmarking, as well as its statistically insignificant distribution of tokens (p=.57), is the verb *see*.

Grammatical aspect	**N**	**%**	**f.w.**
Perfective	2746	47%	0.64
Habitual	1036	31%	0.35
Total/P_i	**3782**	**43%**	**0.32**
			Log. likelihood: -1830.682

Table 15. Verb marking rates by grammatical aspect type (*have*, *leave*, *say*, *see* and *tell* excluded)

[4] Interestingly, however, despite being marked for past at an overall rate of 99%, the entirety of *have*'s unmarked tokens (N=9) appear in habitual contexts.

The revised Varbrul analysis of grammatical aspect, with the verbs *have*, *leave*, *say*, *see*, and *tell* excluded from the counts, is presented in Table 15. With the exclusion of these unevenly distributed lexical items, which account for 29% (N=1128) of the tokens in the perfective and 27% (N=386) of the tokens in habitual category, the grammatical aspect factor group still retains its extremely high significance level (p=2.6e-32). Furthermore, the probabilistic weights assigned to the perfective and the habitual category still remain very similar to those from the initial analysis of this grammatical constraint, indicating that habituality has a disfavoring effect on verbal marking, as opposed to perfectivity, which promotes it. However, one major difference between the two analyses is that the earlier inconsistency between the marking rates and the factor weight values in both categories has been resolved, as the two sets of metrics now show values which are approximate.

	Perfective			**Habitual**		
Verb	**Marked (N)**	**Total (N)**	**Marked (%)**	**Marked (N)**	**Total (N)**	**Marked (%)**
go	417	430	97%	109	166	66%
take	180	185	97%	34	47	72%
get	234	285	82%	64	110	58%
come	93	535	17%	7	96	7%
Total	**924**	**1435**	**64%**	**214**	**419**	**51%**

Table 16. Verb marking rates of most frequent lexical items by grammatical aspect type

The general pervasiveness of the effect which habituality has on the presence of past tense morphology in TdCE is clearly observable if the marking rates of individual verbs which occur frequently in the data are examined in correlation with the two types of grammatical aspect. As reported in Table 16, the suppletive verb *go*, which is one of the most frequent verb in the sample (N=596, 11%), and which gravitates strongly toward preterit forms, shows a highly significant (p<.001) decrease in its marking frequency (97% to 66%) when occurring in habitual contexts. The same highly significant behavior (p<.001) can be discerned if the verbs *take* (97% to 72%) and *get* (82% to 58%), which are yet another two highly frequent lexical items, are compared across the perfective and habitual categories. Finally, with the overall marking proportion of only 16% and the highest number of unmarked tokens in the sample (N=531, 21%), even the verb *come* shows a statistically significant (p=.01) drop in its marking rate (17% to 7%) when employed in situations indicating habitual states and events.

6.5 Syllable-final consonant cluster deletion

The present section examines the conditioning effect which the preceding and the following phonological environment have on the presence of past tense affixation. As previously noted in Section 5.3.2, the analysis of this phonological constraint was restricted to non-syllabic regular verbs. In addition to the two phonological factor groups, the lexical and the grammatical aspect factor group were also included in the analysis. Since the non-syllabic class does not contain any idiosyncratic verbs which occur at extremely high frequencies, it provides a solid testing ground for the re-assessment of the effect that the two types of aspect have on the dependent variable.

	N	**%**	**f.w.**
Preceding phonological environment			
Vowels	283	29%	0.77
Fricatives and laterals	109	7%	0.4
Stops, sibilants, and nasals	536	5%	0.3
Following phonological environment			
Pauses	104	20%	0.55
Vowels	416	14%	0.55
Consonants	408	10%	0.39
Lexical aspect			
Nonstative verbs	841	13%	[0.54]
Stative verbs	87	7%	[0.46]
Grammatical aspect			
Perfective	593	16%	0.58
Habitual	335	7%	0.42
Total/P_i	**928**	**13%**	**0.1**
			Log. likelihood: -298.358

Table 17. Verb marking rates of V-D and C-D verbs combined

As the results of the Varbrul analysis presented in Table 17 reveal, both the preceding and the following phonological environment significantly influence the variation between the marked and the unmarked variant. Carrying the highest significance value (p=8.79e-20) out of the four factor groups included in this statistical model, the preceding environment factor group emerges as the strongest one. Thus, with the probabilistic weight of 0.77, the preceding vowels show a clear favoring effect on the presence of the past tense suffix, as opposed to the two consonant types, which show a constraining influence on the presence of verb inflection. While

this effect is slightly weaker in the preceding environments containing non-sibilant fricative and lateral phonemes, it is slightly more pronounced in those containing stops, sibilants, and nasals (0.4 vs. 0.3, respectively). Nevertheless, since the overall marking rate of non-syllabic regular verbs is generally very low (13%), the chi-squared test of the absolute values shows that the difference in marking between the two consonant classes overshoots the level of statistical significance by a huge margin (p=.3).

Even though not nearly as strong as the preceding environment, the following environment also exerts a significant amount of influence (p=.01) on the variation between the two alternating verb forms. In this case, the findings show that vowels have a marking pattern which is identical to that of pauses. Specifically, both of the two classes show a slight promoting influence toward the retention of past tense inflection, with the factor weight of 0.55. On the other hand, the following consonant sounds have a constraining effect, as indicated by their probabilistic weight of 0.39. Furthermore, with the probability level of p=.05, the difference in marking between the vowel and the consonant category remains just barely statistically significant, which shows that these results are not an outcome of mere coincidence.

As for the two aspect types which were also retained in the calculations, the findings corroborate the ones which were presented in Section 6.3, showing that lexical aspect has no statistically significant effect on the variation, since this entire factor group was dropped during Varbrul's stepwise procedure. On the other hand, the influence of grammatical aspect on verbal marking still remains significant (p=.01) despite the generally low inflection rates of non-syllabic verbs, confirming that perfective situations have a tendency toward marking, as opposed to the habitual ones, which gravitate toward stem forms.

	N	**%**	**f.w.**
Preceding phonological environment			
Fricatives and laterals	109	7%	[0.55]
Stops, sibilants, and nasals	536	5%	[0.49]
Following phonological environment			
Vowels	313	7%	[0.65]
Consonants	273	5%	[0.56]
Pauses	59	2%	[0.3]
Total/P_i	**645**	**6%**	**0.04**
			Log. likelihood: -133.78

Table 18. Verb marking rates of C-D verbs only

The following stage of the analysis of phonological environment focused on the C-D non-syllabic verbs exclusively, since this is the only morphological type where the absence of the past tense suffix can be interpreted as an outcome of the general phonotactic process involving the deletion of syllable-final apical stop sounds. The overall marking rates of C-D verbs in correlation with the preceding and the following phonological environment are presented in Table 18. Even though the probabilistic weight values reported for the two categories show that non-sibilant fricatives and laterals show a slight preference toward marked verb forms over sibilants, nasals, and stops, the entire preceding phonological environment factor group was rejected during Varbrul's step up/step down run as statistically insignificant (p=.34). By the same token, despite the slight marking difference between the following vowels and the following consonants, the following phonological environment factor group was also removed, due to its statistically insignificant effect on the variation (p=.18). These results are hardly surprising since the entire C-D regular verb category is marked at the overall rate of only 6% (N=33). However, what these findings unequivocally demonstrate is that the loss of past tense morphology does not occur as a result of syllable-final consonant cluster deletion.

6.6 Temporal disambiguation

6.6.1 Temporal conjunctions

The influence which the presence of a temporal conjunction has on the variation in past tense marking was investigated next. Here, as well, all the major linguistic and social factor groups were retained, and no data exclusions were made. As the raw marking frequencies shown in Table 19 reveal, only a small fraction of the tokens included in the sample were found to occur in the environments following a temporal conjunction (N=675, 15%). Despite the identical marking rate of 48%, the comparison of the factor weight values between the [+temporal] and the [-temporal] category shows that those verbs which do not occur as a part of the temporal clause construction have a very weak tendency to receive the past tense mark, as opposed to those embedded under a temporal conjunction, which show a slight propensity toward verb stems. However, regardless of these miniscule differences, the entire [±temporal] factor group was rejected during Varbrul's step up/step down analysis as statistically insignificant (p=.27), which shows that the general presence of a temporal conjunction has no observable effect on the variation in past tense marking.

Temporal conjunction	**N**	**%**	**f.w.**
[-temporal]	4621	48%	[0.52]
[+temporal]	675	48%	[0.48]
Total/P_i	**5296**	**48%**	**0.36**
			Log. likelihood: -2301.607

Table 19. Verb marking rates according to the presence of a temporal conjunction

6.6.2 Temporal adverbials

The investigation of temporal adverbials included the same factor groups as that of temporal conjunctions. During the first phase of the analysis, which examined the general influence of a temporal adverbial on the variation, no portion of the data was discarded. The overall verb marking rates in conjunction with the presence and the absence of a temporal adverbial are reported in Table 20. As it was the case with temporal conjunctions, the [+adverbial] and the [-adverbial] category are marked for the past tense at an identical rate of 48%. In a similar vein, the comparison of the factor weight values reveals minimal marking differences between the two [±adverbial] classes. As a result, the entire factor group was removed during Varbrul's stepwise run due to its statistical insignificance (p=.24) in comparison with the other factor groups included in the statistical model.

Temporal adverbial	**N**	**%**	**f.w.**
[-adverbial]	3074	48%	[0.51]
[+adverbial]	2222	48%	[0.49]
Total/P_i	**5296**	**48%**	**0.36**
			Log. likelihood: -2301.607

Table 20. Verb marking rates according to the presence of a temporal adverbial

Temporal adverbial type	**N**	**%**	**f.w.**
[-adverbial]	3074	48%	[0.54]
Adverbials of time position	1432	49%	[0.54]
then	354	47%	[0.51]
ever and *never*	190	58%	[0.51]
Duration adverbials	127	39%	[0.47]
Frequency adverbials	110	39%	[0.42]
Total/P_i	**5287**	**48%**	**0.32**
			Log. likelihood: -2296.477

Table 21. Verb marking rates by temporal adverbial type

Table 21 presents the verb marking rates in correlation with the different types of adverbials distinguished in the present study. As pointed out in Section 5.3.5, relationship adverbials proper (*already, still, yet*) were not retained in the tabulations due to their extremely low count (N=9). In this case, the findings show that those verbs specified by an adverbial of time position (other than *then*) have an identical marking behavior, which gravitates slightly toward marked forms, in comparison with those verbs that are not referenced by a temporal adverbial at all. In addition, *then*, which is the most frequent adverb of the time position, and the adverbs *ever* and *never* appear to share a very similar marking pattern, that appears to be almost neutral to the potential presence of preterit morphology. On the other hand, duration and frequency adverbials display a slight propensity toward verb stems, with the former following a somewhat stronger trend in that direction. Nevertheless, even with a more granular distinction such as the present one, the adverbial type factor group still did not manage to meet the minimum level of statistical significance (p=.43) and was, therefore, dropped during Varbrul's stepwise procedure as well. Hence, as the above findings conclusively demonstrate, neither the general presence of a temporal adverbial nor that of a particular temporal adverbial type correlate with the variably marked verb in any statistically significant manner.

6.7 Speaker sex

Finally, the relationship between the variation in past tense marking and the language-external constraint of speaker sex was also assessed in statistical terms. In addition to this factor group, all of the language-internal factor groups were also included in the analysis, and no part of the data was removed. The general effect which sex has on the presence of past tense morphology is reported in Table 22. Even though this biological factor group is retained as statistically significant, its somewhat lower probability value (p=.01) indicates that the influence of speaker sex is much weaker compared to some of the linguistic constraints described in the earlier sections, such as the division of verbs into morphological classes and the grammatical aspect type. Notwithstanding this factor group's relative strength (or lack there of), the results of the Varbrul analysis reveal that the female speakers show a marginally higher tendency toward the usage of marked forms with the probabilistic weight value of 0.52, over the male speakers, who, having their factor weight value calculated at 0.48, tend to mark their verbs for the preterit tense slightly less frequently.

Speaker sex	**N**	**%**	**f.w.**
Female	2756	50%	0.52
Male	2540	46%	0.48
Total/P_i	**5296**	**48%**	**0.37**
			Log. likelihood: -2304.054

Table 22. Verb marking rates by speaker sex

As established in Section 6.2, the membership to a particular morphological class represents the strongest linguistic factor which governs the variation between the marked and the unmarked variant in TdCE. In accordance with this finding, the effect of speaker sex was also examined in correlation with the 12 categories of exceptional verbs and morphological classes which were distinguished in the current study. Figure 7 presents the verb marking rates across the two independent variables. Unsurprisingly, with the identical probabilistic weights of 0.99 and no significant differences in marking, *have* shows a near-categorical propensity toward preterit usage in both sexes. Similarly, the verbs *get*, *do*, and *say* also show no significant dissimilarities between the male and the female informants, and each continue to follow their respective marking patterns. On the other hand, the verb *go* displays a marking difference with regard to speaker sex which is statistically significant (p=.003). Namely, with the marking probability of 0.93, *go* has a higher predisposition to appear in its marked form in males than it does in females, whose probabilistic weight is calculated at the slightly lower value of 0.86. In addition, another exceptional verb which shows a statistically significant distinction between the two sexes (p=.04) is *make*. While this verb generally gravitates strongly toward unmarking, it has a slightly higher tendency to be marked for the preterit tense in the female speakers, with the factor weight of 0.19, as opposed to their male cohorts, where its probability of marking is calculated at 0.16. However, since *make* is one of the least frequent exceptional verbs, with only 29 tokens in the male and 34 tokens in the female category, these results necessitate a very tentative interpretation.

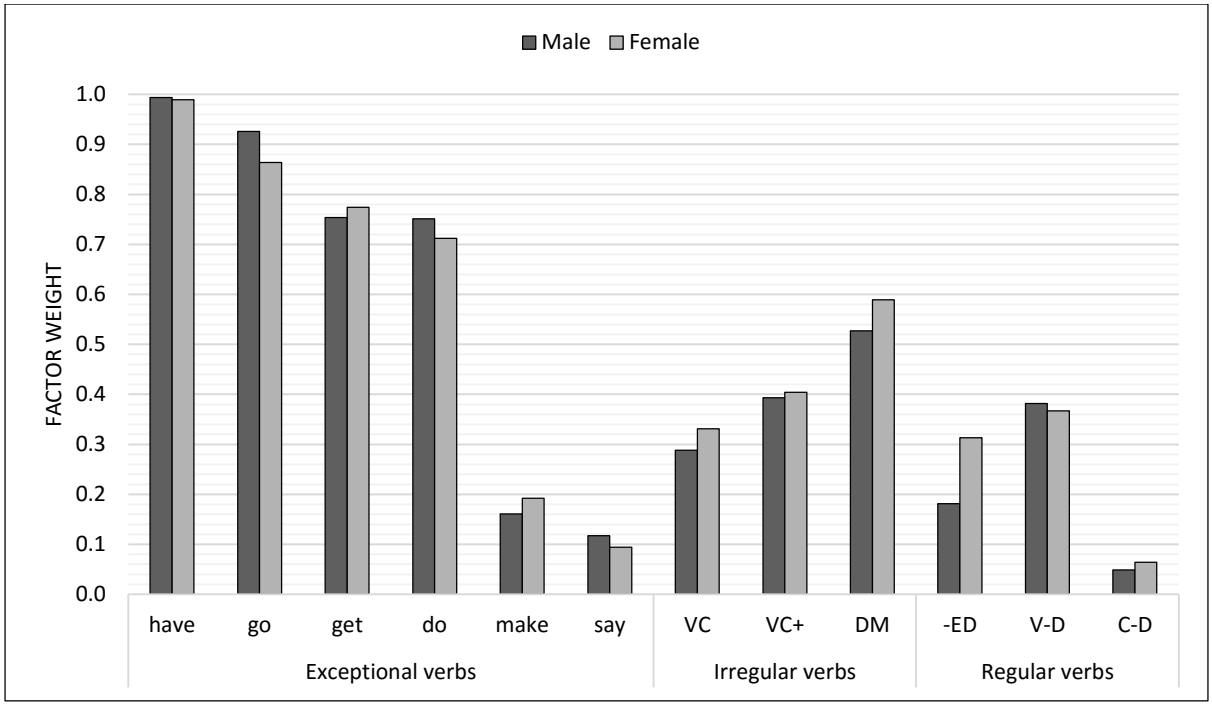

Figure 7. Verb marking rates of exceptional verbs and major morphological categories correlated with speaker sex

Even though each of the three major morphological categories of irregular verbs gravitate slightly more strongly toward marking in the female speaker category, the only morphological class which shows a statistically significant difference (p=.04) between the two sexes is that of the VC verbs. Therefore, while the male speakers tend to mark this verb type with the probability level of 0.29, their female cohorts show a slightly higher tendency toward preterit forms, with the factor weight value of 0.33. Lastly, even though the two non-syllabic regular verb classes show very similar marking propensities between the two sexes, females have a significantly higher (p=.003) predisposition to mark the verbs of the syllabic type, as indicated by the factor weight of 0.31, over males, whose probability of marking is at a somewhat lower level of 0.18.

	Perfective			**Habitual**		
	N	**%**	**fw**	**N**	**%**	**fw**
Male	1982	46%	0.58	558	49%	0.42
Female	1892	51%	0.64	864	47%	0.36
Total	**3874**	**48%**	**0.62**	**1422**	**47%**	**0.38**

Table 23. Verb marking rates of grammatical aspect in correlation with speaker sex

In addition to verb morphology, the speaker sex factor group was also investigated in correlation with the independent variable of grammatical aspect. According to the findings reported in Table 23, the influence of the biological male-female distinction is observable in this case as well. Specifically, even though both groups of speakers gravitate toward marked verb forms in perfective contexts, females exhibit a significantly higher predisposition in that direction ($p<.001$), with the factor weight of 0.64, as opposed to males, whose probability of marking is at the slightly lower value of 0.58. On the other hand, in the habitual aspect category, the marking behavior between the two sexes is reversed, with the male speakers showing a higher predisposition toward marked forms compared to the female ones. However, according to the chi-squared test, this dissimilarity does not meet the minimum level of statistical significance ($p=.38$).

In short, even though not particularly salient, most of the findings presented in the current section indicate that the marking differences between the two sexes go hand in hand with the more general trend which is usually reported in sociolinguistic studies of women as the main proponents of language change, who "tend to use more of the standard forms than men do, [as opposed to] men [who] use more of the vernacular forms than women do" (Holmes 2013:163).

7 Discussion

In the preceding section, multivariate analysis was employed in order to examine how a number of inter- and extralinguistic constraints interact with the variation in past tense marking in TdCE. The language-internal conditioning factors which were included in the investigation were those of verb morphology, lexical and grammatical aspect, the preceding and the following phonological environment, as well as the function of time disambiguation cues in the form of temporal conjunctions and temporal adverbials. In addition, the language-external constraint of speaker sex was also selected as a factor which potentially bears influence on the behavior of the dependent variable. The present section will discuss the results of these analyses in more detail.

The membership to a particular morphological class, which has continually been proven to be the strongest constraint which governs the variation between the marked and the unmarked verb form in the previous studies of this sociolinguistic variable, emerged as the strongest one in the present study as well. In fact, verb morphology remained the strongest factor group in each of the Varbrul analyses which included this grammatical constraint. The investigation of exceptional verbs showed that their marking rates are very similar to the ones reported in the earlier studies of English-based creoles (e.g. Winford 1992; Patrick 1999; Hackert 2004), with the exceptional verbs *have*, and *go*, showing the highest predisposition toward marked forms, as opposed to *say*, showing the least. Moreover, the analysis of the three major irregular verb classes revealed that their overall marking behavior is affected to a high degree by a number of individual lexical constituents, whose idiosyncratic marking patterns skew the marking rates of the entire morphological categories. The removal of these verbs from the data showed that VC and VC+ verbs display an identical propensity to surface as verb stems. However, even though each of the three irregular verb categories "fall under a single morphological rule" (Hackert 2008:146), where a vowel change alone is a sufficient indicator for the presence of past tense morphology (Winford 1992:320), further examination revealed that the class of DM verbs exhibits a marking behavior which radically differs in comparison with the other two irregular verb categories, in its particularly strong tendency to retain the preterit morphology.

On the other hand, with the global marking rate of only 19%, the majority of verb stems were found to appear in regular verbs. The analysis of the individual members which comprise the three regular verb categories uncovered two deviant lexical items, which, despite their somewhat lower token counts, have notably high inflection rates. One of these is the syllabic

verb *erupt*, whose idiosyncratic behavior is particularly interesting from the standpoint of its acquisition. One plausible explanation that may account for this verb's marking pattern, which strongly gravitates toward the StE usage, is that it may have been acquired during the islanders' two-year stay in England and subsequently brought back into the speech community following their return to Tristan da Cunha. The second lexical item, which shows an even stronger preference toward inflection is the nonsyllabic verb *marry*, which may have acquired its marking pattern through the association with its nominal equivalent, *marriage*. However, even with the removal of these two idiosyncratic verbs from the analysis, the -ED and V-D categories still maintained very similar inflection patterns, with no statistically significant differences in their marking probabilities. On the other hand, the lowest marking frequency of the C-D nonsyllabic class, which is regularly reported in the studies of English-based creoles (e.g. Rickford 1986; Winford 1992; Patrick 1999; Hackert 2004), was attested in the current analysis as well.

Table 24 presents the findings from the previous studies in Guyanese Creole (Bickerton 1975; Rickford 1986), Trinidadian Creole (Winford 1992), Barbadian Creole (Blake 1997), and Jamaican Creole (Patrick 1999), which were originally compiled by Patrick (1999:244). The data from the studies of Gullah (Weldon 1996), Urban Bahamian Creole (Hackert 2004), and TdCE was subsequently added to this collection. In order to maintain the compatibility of data with these studies, the VC and VC+ categories were collapsed into a single irregular verb (IRR) class, which also includes the exceptional verbs *do*, *get*, and *say*. The suppletive *go* and the replacives *have* and *make*, however, were not included. The shortcomings of this type of analysis are highlighted by Patrick (1999:244), who notes that "[t]his comparison, while the most direct, is also the most difficult since analysts do not all use the same categories, define them similarly, or make the same exclusions." Since these methodological challenges were described at length by Patrick (1999:244–246), they will not be discussed any further in the present study.

Variety/Lect	IRR	DM	-ED	V-D	C-D
Barbadian white and black	16%	16%	11%	15%	3%
Gullah	36%	9%	29%	34%	27%
Guyanese-1 Lower mesolect	N/A	N/A	44%	4%	
Guyanese-2 Upper mesolect	35%	35%	60%	37%	24%
Guyanese-3 Bonnette	54%	62%	17%	70%	7%
Jamaican Veeton Low	9%	10%	25%	21%	1.5%
Jamaican Veeton Mid	29%	74%	51%	31%	21%
Jamaican Veeton High	72%	76%	74%	87%	38%
Trinidadian Lower working	33%	35%	16%	35%	8%
Trinidadian Upper working	60%	56%	52%	49%	23%
Trinidadian Lower middle	85%	89%	81%	72%	64%
Tristan da Cunha English	**37%**	**58%**	**27%**	**30%**	**5%**
Urban Bahamian Creole	67%	64%	46%	34%	18%

Table 24. Comparison of verb marking rates across different varieties (adapted from Patrick 1999:244)

A general examination of the marking frequencies across the major verb classes indicates that the TdCE dialect generally exhibits a typical creole-like behavior. However, a closer inspection of each of the morphological classes individually reveals that it also shares no close similarities with any of the six creole varieties. Specifically, with the overall marking rates which are comparable across the IRR, -ED, and V-D categories, TdCE appears to bear the closest resemblance to Gullah. However, a further comparison of the marking rates between the DM and the C-D category reveals that there are also considerable differences between the two varieties. Therefore, if the DM verb category is taken into account, TdCE most closely resembles the upper working stratum of Trinidadian Creole. On the other hand, in terms of its extremely low inflection rate of the C-D nonsyllabic verb type, TdCE is roughly comparable with Barbadian Creole and the lower mesolectal stratum of Guyanese Creole.

Contrary to Bickerton's (1975:159) claim that phonological patterns merely serve the purpose of masking the grammatical factors, the analysis of this constraint revealed that both the preceding and the following phonological environment have a significant influence on the presence of the *-ed* allomorph. This effect is much stronger in preceding environments, where suffixation is at a much higher rate in contexts which follow a vowel, as opposed to the ones following a consonant. Even though the influence of the following phonological environment is comparatively much weaker, the results revealed that verb stems are more likely to emerge in pre-consonantal contexts in comparison to those which precede a vowel or a pause. Most

importantly, however, when the analysis was restricted to the environment containing C-D verbs only, both the preceding and the following environment became statistically insignificant, indicating that the loss of the past tense allomorph does not occur as a consequence of syllable-final consonant cluster deletion. These findings fall in line with those of Schreier (2003:178), who, in his separate investigation of this type of nonstandard verb marking, notes that "we are not dealing with a mechanism of phonological reduction," further adding that "*-ed* absence must be a grammatical process."

The analysis of lexical aspect revealed that the seemingly high marking rate of stative verbs is merely an artifact caused by individual lexical items with marking patterns which do not conform to the ones of their respective categories. In other words, as Hackert (2004:165) puts it, "it is the inflectional behavior of particular lexical items which causes the strong propensity of stative verb situations to be past-inflected rather than the other way round." As established in a number of previous studies, the most frequent of these verbs is *have*, which is marked for past at an extremely high rate and occurs mainly as the member of the stative class, thereby drastically increasing its overall marking frequency. However, in addition to *have*, a remarkably large number of other verbs with idiosyncratic marking rates were discovered in the categories containing stative verbs and verbs of perception, which, in the case of the latter, make up a huge majority (N=193, 91%) of the tokens contained in the group. The removal of these lexical items from the analysis resulted in the disappearance of all marking differences which were previously observed between the three categories, thus proving that the distinction according to the lexical aspect type is irrelevant.

The division according to the grammatical aspect type, however, proved to be a major influencing factor, coming second only after verb morphology in terms of its relative strength. The analysis revealed that verbs denoting perfective meanings have a much higher predisposition to be marked for past relative to the ones which appear in habitual contexts. In fact, the influence which habituality has on variation in TdCE is so strong that its effect is clearly observable when the marking rates of some of the most frequent verbs are compared in correlation with the perfective/habitual distinction. Therefore, in addition to verb morphology, grammatical aspect constitutes yet another grammatical constraint that exposes the creole-like nature of the TdCE dialect. As Winford (1992:338) points out, the increased marking rates of verbs occurring in perfective contexts are a characteristic feature of English-based creoles which have undergone the decreolization stage:

> As they shift toward the acrolect, TC speakers, like their GC counterparts, preserve Ø much more in the habitual past function than in specific past contexts. This pattern of use is arguably diagnostic of a pattern of decreolizing change in which perfective Ø gradually yields to {ed} to mark past reference.

On the other hand, Poplack and Tagliamonte (2001:149–150) offer an additional interpretation in their attempt to account for the low marking frequencies of habituals in Early African American English, by noting that "contamination of the preterite data with tokens of deleted *would* – which are indistinguishable from zero preterites – may well be responsible for the favoring effect of habitual aspect on zero realization of past temporal reference," which implies that this particular type of marking behavior might not be exclusive to creole varieties.

As far as the influence of time disambiguating factors is concerned, neither the general presence of temporal conjunction nor that of a temporal adverbial showed any discernable effect on the variation. Even though frequency adverbials were found to have a slight constraining influence on verbal marking, the analysis of different types of temporal adverbials revealed that neither of the semantic classes affect the dependent variable in any manner which is statistically significant. However, as previously mentioned in Section 2.6, the exact effect of these two types of temporal indicators is very hard to assess in quantitative terms since their ability to narrow the verb's temporal reading transcends the level of the individual utterance. A further problem resides in the fact that adverbials and temporal conjunctions generally do not occur frequently in natural speech, which is also the case with the data used in the present analysis, where roughly one third of the verbs are directly referenced by an adverbial, while only 12% of them occur in environments following a temporal conjunction.

According to Trudgill (2000:62), the conditioning effect which sex has on the variation constitutes "the single most consistent finding from sociolinguistic work around the world in the past thirty years." In accordance with this claim, the influence of this biological distinction on variable past marking is observable in TdCE as well. However, the speaker sex factor group was found to have the weakest effect on the dependent variable in relation to all the other factor groups which were retained as significant during the Varbrul analysis. Nevertheless, despite these minimal marking differences between the two sexes, the female speaker group still emerged as the one which gravitates slightly more toward the acrolect compared to the male group. Although weak, the same trend remained consistent for the most part when this biological constraint was correlated with verb morphology, where the female speakers showed a slightly higher tendency to mark the verbs of the VC and the -ED type. In addition, the examination of verb marking rates in conjunction the grammatical aspect factor group revealed

a similar relationship between the two sexes, with the female speakers showing a somewhat higher predisposition to mark the verbs used in perfective contexts as opposed to their male cohorts. Thus, even though these results generally prove that women "tend to use more of the standard forms than men do," (Holmes 2013:163) speaker sex proved to be an exceptionally weak operating constraint. The nature of these findings is hardly surprising since social networks which are "dense and multiplex," (Schreier 2003:62) such as the one found on Tristan da Cunha, have "an intrinsic capacity to function as a norm-enforcement mechanism" (Milroy & Milroy 1985:359).

However, the investigation of verb morphology and the two major aspect types revealed yet another linguistic constraint which continuously repeatedly kept surfacing as the one holding the highest amount of influence on the behavior of the dependent variable: the membership to a particular lexical class. Specifically, the analysis showed that nearly all categories, distinguished in the three factor groups, were affected by a number of high-frequency lexical items, which override the marking behavior of the entire categories by assuming an independent marking pattern. In her study of Urban Bahamian Creole, Hackert (2008:147) observes a similar effect and points out that "[l]exical identity […] underlies not only the inflectional behavior of particular morphological verb categories but also the effect that stativity has on past marking." Likewise, Poplack and Tagliamonte (2001:141) also encounter the same type of correlation in African American Vernacular English and note:

> [T]he division into verb classes, though perhaps a good gauge of prescribed verb conjugations, is not particularly explanatory of the behavior of the verbs within them. Instead, the apparent effect of verb class reflects the varying lexical tendencies of its members, some of which favor the stem form and others the marked variant, and these are compounded by their differential representation in the data.

According to the findings reported in Table 25, the most frequent of the deviant verbs in the current sample belong to the irregular verb type. Thus, in addition to *have* and *go*, whose propensity toward preterit usage is regularly reported in numerous studies, another very frequent idiosyncratic verb is *come*, which, according to Poplack and Tagliamonte (2001:134), "is a stereotype of non-standard English dialects," since the variation in its marking has been attested in England (London English, Wheatley Hill English), Northern Scotland (Buckie Scots), the US (Appalachian English, Ozark English, and Alabama English), and Canada (Vernacular Nova Scotian English) (Tagliamonte 2001:45). Moreover, this verb's propensity to surface as a verb stem is also reported in Samoan and Cook Islands Englishes (Biewer

2015:247). Another very frequent verb, whose tendency toward unmarking has been observed in a number of Caribbean creoles (e.g. Rickford 1986; Winford 1992; Patrick 1999; Hackert 2004), is *say*.

Verb	Marked (N)	Total (N)	Marked (%)
have	731	740	99%
leave	119	120	99%
take	214	232	92%
go	526	596	88%
get	298	395	75%
come	100	631	16%
say	53	388	14%
tell	17	154	11%
see	12	112	11%
give	5	79	6%
Total	**2075**	**3447**	**60%**

Table 25. Marking rates of most frequent lexical items

In addition to the irregular verbs presented above, the divergent marking rate of *erupt* and *marry* demonstrates that the influence of the lexical identity constraint, albeit to a much lesser degree, extends to the regular verb type as well. As a result, these idiosyncratic lexical items constitute yet another viable area for further cross-varietal comparisons. In other words, as Hackert (2008:147–148) puts it:

> What should be compared across varieties in addition to overall frequencies of past inflection and marking rates according to verb category, thus, is the marking behavior of individual lexical items. This is not meant to suggest that "every word has its own pattern," as the fact that most verbs can actually be subsumed under overarching morphological categories shows; nevertheless, such a comparison should yield interesting results.

In conclusion, a question which naturally poses itself is how did this particular linguistic feature, which is diagnostic of English-based creoles in the mesolectal stage of decreolization, reach such widespread adoption in a geographically isolated dialect, whose principal donor varieties are of British and American origin. The most likely scenario is that this verb marking behavior occurred primarily as a consequence of dialect transfer, where it was first introduced into the young English-speaking community by the group of women who arrived to the island from St. Helena in 1827. This hypothesis is in agreement with the one provided by Schreier

(2003:109), who, in his analysis of third person singular unmarking in contemporary TdCE, contends:

> The women from St Helena […] had a considerable impact on the directionality of new-dialect formation on Tristan da Cunha, and I maintain that StHE, whatever its form and status, functioned as a vital role model for the first generations of native Tristanians.

A further realistic development is that variable past marking, like third person singular zero, was additionally "reinforced by the non-Anglophone sailors from other parts of Europe who settled on the island around the same time" (Schreier 2003:108), since this type of linguistic behavior involves learning processes typically associated with second language acquisition. In any case, the prominent nature of this linguistic feature in TdCE strongly suggests that the early British and American input varieties did not have a major impact during the koinéization of the emerging new dialect, and that they were subject to a substantial amount of simplification and levelling. In other words, as Schreier (2003:188) points out, "[t]he occurrence of bare roots in preterit contexts in TdCE […] is so extensive […] that there is no way a contact scenario involving British or US American input varieties only may be offered to account for it." Therefore, as a result of the strong connection it shares with StHE, the dialect spoken on Tristan da Cunha has come to bear much more resemblance to English-based creole varieties, as opposed to the ones which are spoken in Great Britain and the US.

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