Zero verb marking in Sranan*

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In the Surinamese creole language Sranan, verbs in finite clauses that lack overt TMA-marking are often considered to be ambiguous between past and present interpretations (depending on the lexical aspect of the verb involved) or they are analyzed as having a perfective value. In this paper, we claim that these verbs are in fact marked with zero and we investigate the various uses of this zero expression in relation to context and lexical aspect on the basis of corpus data and native speaker elicitations. It is shown that the existing analyses do not cover and unify all the various uses of the construction and we propose, as an alternative, to regard the zero form as present perfective marker, whereby tense and aspect are conceived of as fundamentally epistemic categories, in line with Langacker (1991). This combination of present tense and perfective aspect, which is regarded as infelicitous in typological studies of tense and aspect (cf. the 'present perfective paradox', Malchukov 2009), gives, in our view, rise to the various interpretations associated with zero. However, in all of its uses, zero still indicates that, at the most basic level, a situation belongs to the speaker's

conception of 'immediate reality' (her domain of 'inclusion'). This basic 'presentness' distinguishes zero from the past-tense marker ben*, which implies dissociation.*

1. Introduction

Sranan Tongo (henceforth Sranan) descends from the languages spoken on the Surinamese plantations in the 17th and 18th centuries and nowadays functions as the first language and *lingua franca* in Surinam (Smith 1987; Winford & Migge 2007). It is generally accepted that the West-African Gbe languages constitute its primary substrate languages (cf., e.g. Migge 1998; Winford & Migge 2007), whereas English and, to a lesser extent, Dutch and Portuguese are its most important lexifier or superstrate languages. As is typical of Atlantic English-based creole languages, tense, aspect, and modality in Sranan are expressed by means of a set of preverbal markers (possibly combined), but verbs in finite clauses can also come without overt TMA-marking, in which case, we argue, they are zero-marked. This zero form is, in our view, just as meaningful as overt grammatical markers (cf. Bybee, Perkins & Pagliuca 1994:90-91 on zero expressions). In fact, even though the actual (temporal and aspectual) interpretation of zero-marked verbs in Sranan crucially depends on their lexical aspect (or actionality) and on contextual cues, we argue in this paper that the zero form is not just a meaningless or even nonexistent item, but instead concretely contributes to the temporal and epistemic semantics of an utterance. We thus assume that any finite clause in Sranan by definition includes a *grounding* element (e.g. in the form of a tense of modal marker), i.e. an overt or covert element that epistemically and temporally anchors a situation in the

speaker's conception of reality (cf. Section 5.1; Langacker 1991:Chapter 6). While the positive semantic content of zero is recognized in other studies of creole TMA-systems as well (e.g. Bickerton 1975), there is either no attempt to unify the range of uses of the verb form in terms of one basic semantic value or, if one such meaning is proposed, the precise relation between this meaning and the concrete uses of zero-marked in context remains unspecified.

Our analysis is meant to fill this gap by proposing one core meaning (i.e. one semantic, invariant schema) for the zero verb form, which accounts for all of its uses as attested in actual (corpus) data. We argue, more particularly, that the zero expression indicates *epistemic immediacy in current reality*, as opposed to the preverbal particle *ben*, which we analyze as a marker of *nonimmediacy* (cf. Langacker's (1991) analysis of tense predications in English for a similar approach). We thus propose an essentially modal (epistemic) semantic schema of zero, which gives rise to various context-specific (aspecto-temporal) usage types. These usage types will be elaborately described and discussed in this paper, whereby the interaction between lexical aspect (or actionality) and temporal reference will prove of primary importance. The reason for this is that in Sranan, as in many other Atlantic English-based creole languages (cf. Holm *et al*. 2000 for an overview of and exceptions in creoles from various origins), there seems to be a restriction on zero-marked dynamic verbs in that they normally cannot refer to the time of speaking and are typically given a past interpretation (as in (1)), whereas with zero-marked stative verbs present-time reference is the default (as in (2)) (cf. Bickerton 1981, 1984):[1]

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[1] The presumed place of the zero morpheme is explicitly indicated in these examples for reasons of clarity. In the subsequent examples, the presence of zero will be left implicit. In the glosses of the examples cited in this paper, the following abbreviations are being used (in order of appearance): DEF = definite; SG = singular; POSS = possessive; PL = plural; IPFV = imperfective; OBJ = object; COMPL = completive; FUT = future; MOD = modal; NEG = negative; LOC = locative; REL = relative; PRES = present; N = neuter; F = feminine.

(1) *Di   a   karta   **Ø   fadon**,   dan mi   **Ø   si**   en*
   when   DEF.SG   card   fall   then 1SG   see   POSS.3SG

   futu.
   foot

   'When the card fell, then I saw his feet.' (Karta 157)

(2) *Ala   sma   **Ø   sabi**   now   pe   den e   kari*
   all   person   know   now   where   3PL IPFV call

   Micromarkt.
   Micromarkt

   'All people now know the place they call Micromarkt.' (Karta 026)

These types of interaction between the zero verb form (or an equivalent overt expression) have also been attested in the substrate languages of Sranan (cf., e.g. Ameka (2008) on Ewe and Winford & Migge (2007) and Migge and Goury (2008) on multiple Gbe languages), as well as in other African languages (cf. Welmers (1973:344-347) on Igbo and Yoruba; Nurse (2008) and Brisard & Meeuwis (2009) on Bantu).

   In order to refer to dynamic situations in the present, the imperfective marker *e* needs to be added in front of the lexical verb (example taken from Winford 2000:422):

(3) *Nownow   yu   **e   teki**   en   kba   nownow?*
   now   2SG IPFV take   3SG.OBJ finish/COMPL now
   'Are you already taping right now?'

In our analysis of the uses of zero in spoken data, these observations will be further refined by implementing a unidimensional and epistemologically founded approach to aspect and by taking into account contextual cues, such as adverbs. At the same time, we will suggest a cognitively motivated explanation for the attested distribution and for how the past interpretation that prototypically arises with zero-marked dynamic verbs can be reconciled with the default present-time reading of stative verbs. We will show, more particularly, that the meaning of epistemic immediacy in the speaker's current reality is instantiated in all uses of the zero expression, and that this modal schema is elaborated on a more specific temporal level in terms of present perfectivity. However, due to alignment problems between the configuration of the present perfective and that of dynamic verbs (the so-called 'present perfective paradox' (Malchukov 2009)), a genuine present-tense reading is not available for these verbs, which are consequently given other, nonpresent interpretations (that still, however, involve epistemic immediacy). This analysis will be presented in detail in Section 5.

The goal of this paper is thus to study the semantics of the zero verb marking in Sranan, which contrasts with *ben* (as a marker of nonimmediacy, or past tense, at a more specific level) and *e* (as a marker of imperfectivity), in relation to the verb's lexical aspect and context. This entails that we study the Sranan tense and aspect system on its own terms, just like that of any other natural language (cf. also Velupillai 2002 on the TMA-system of Hawai'i Creole English). We will not, therefore, devote any particular attention to the genesis of Sranan (for example, whether or not the characteristics of its TMA-system constitute evidence for the influence of substrate languages and language-internal developments on the formation of the creole – cf. Winford & Migge (2007) and Migge & Goury (2008) for a discussion of these matters). Nor will we be concerned with the features, if any, that Sranan has in common with other (Atlantic English-based) creole languages in this domain, although we will briefly touch upon a number of analyses proposed for constructions equivalent

to zero in the substrate languages of Sranan. Yet it is our assumption that our findings regarding the zero-marked verb form and its interaction with lexical aspect in Sranan can be related to similar phenomena in many other languages, not only its substrate languages (as we will indicate in Section 5.3), and that this study leaves room for further cross-linguistic and typological research into 'presentness' and its interaction with aspect.

This paper is organized as follows: in Section 2, we offer a brief overview of the tense and aspect markers in Sranan and we discuss the merits and problematic aspects of previous analyses of those preverbal markers that are central to the present study. Section 3 contains a number of methodological considerations regarding our corpus data and elicitations as well as our approach to (lexical and grammatical) aspect and the application of this approach to Sranan examples. Section 4 is devoted to an empirical description of the various uses of zero in Sranan. In Section 5, then, we propose to integrate these different uses into one semantic account in terms of 'epistemic immediacy', and, more specifically, present perfectivity, thereby systematically contrasting zero to the past-tense marker *ben* and to the imperfective marker *e*. Our conclusions will be submitted in Section 6.

2. Tense and aspect in Sranan: Previous analyses

Early comprehensive studies of the Sranan TMA-system are those by Voorhoeve (1957, 1962), on which Bickerton (e.g. 1975) has based his own analysis of Sranan's verbal system, as an illustration of the 'TMA prototype' and the Language Bioprogram Hypothesis associated with it (Winford 2000:392). More recent work is that of Seuren (1981/2001), who situates his analysis within the framework of generative semantics, and that of Winford (2000), who provides a description of the temporal and aspectual categories of Sranan along the lines of the typologically oriented Bybee-Dahl approach to

tense and aspect, in order to allow for cross-linguistic comparison between Sranan and other (creole) languages.

The Sranan tense and aspect system is generally regarded as consisting of a set of preverbal markers: *o*, *sa*, *ben*, *e*, and perhaps also *k(a)ba* (cf. Winford 2000:391-394 for an overview of the various analyses proposed for these markers). There is some disagreement about whether or not zero ought to be analyzed as a (covert) preverbal marker or whether it is the unmarked verb itself that is associated with certain aspecto-temporal features. By assuming that zero constitutes the grounding element in finite clauses in which (other) preverbal markers are lacking, we follow Bickerton (1975), who suggests that finite verbs that do not receive overt TMA-marking are in fact marked with zero (which thus also constitutes one of Sranan's preverbal markers). This goes against, e.g. Winford (2000:394-398), who assigns certain semantic features to unmarked verbs rather than to the zero morpheme. In spite of this important theoretical distinction, observations made by, e.g. Winford (2000) about how the (allegedly) unmarked verb form patterns and how it contributes to the semantics of a finite clause are of course also taken into account in our analysis (cf. below).

The first two preverbal markers – *o* and *sa* – are used for future-time reference, whereby, according to Seuren (1981/2001) and Winford (2000), *o* designates future events with a high degree of predictability, whereas *sa* (analyzed as a modal construction by Winford 2000:410-416; cf. also Essegbey 2008) is used for hypothetical, less predictable future situations. Example (4), cited by Winford (2000:414), illustrates the difference between *o* and *sa*:

(4) *A yuru te yu kon baka mi **o/sa***
    DEF.SG hour   when   2SG come   back   1SG FUT/FUT(MOD)

    kba skrifi a brifi disi.
    finish/COMPL   write   DEF.SG letter   this

'By the time when you come back, I will/should have finished writing this letter.'

K(a)ba ('already') appears to be on its way to grammaticalize into a marker of completive aspect, according to Winford (2000:431-436; cf. Bybee, Perkins & Pagliuca 1994:57-61 for a definition of completive aspect). In many contexts, however, it still seems to pattern more like a serial verb, as in (4), or it functions as an adverb, as in (5) (Winford 2000:433):

(5) *Want na tu leisi mi nanga a   man meki*
because be two time 1SG and DEF.SG man make

*afspraak   **kaba**,   a   man no kon.*
appointment already DEF.SG man NEG come

'Because it is already twice that me and the man made an appointment, and the man didn't come.'

Especially important for the present purposes are the various proposals that have been made with regard to the semantics of zero, *ben*, and *e*, so let us summarize these somewhat more extensively.

According to Voorhoeve (1957, 1962), zero-marked verbs indicate present tense, while at the same time denoting completion, whereas for Seuren (2001:461) they are 'ambiguous between a resultative perfect and a simple past indicating a fact that took place some time in the past'. Bickerton (1975), too, treats the zero form as ambiguous, but in a different sense: depending on the actional class of the verb, it is a present (for statives) or a past tense (for dynamic verbs). Winford (2000), on the other hand, proposes a monosemous account in which the 'unmarked' verb form is analyzed as indicating perfective aspect,

canonically conceived of as a kind of grammatical aspect which indicates that a situation is viewed 'as a single whole, without distinction of the various separate phases that make up that situation' (Comrie 1976:16). This analysis is in line with a longstanding tradition within African linguistics to conceive of markers that pattern similarly to Sranan's unmarked/zero-marked verbs as indicating perfectivity (cf., e.g. Ameka 2008) or anteriority (cf., e.g. Nurse 2008). Elsewhere, however, Winford argues that the bare verb form is literally 'unmarked' in the sense that it 'is unanalysed for any of the parameters of tense, mood or aspect' (Winford 2001:158).

There is also disagreement among the various studies regarding the analysis of the preverbal marker *e*. In Voorhoeve (1957, 1962) it is considered to be a marker of noncompletive aspect, having present-time reference unless it is preceded by *ben*. In a similar vein, Bickerton (1975) analyzes *e* as a marker of nonpunctual aspect, whereas Winford (2000) employs the more conventional term 'imperfective', which, as opposed to perfective aspect, involves 'essential attention to the internal structure of the situation' (Comrie 1976:16) and is not concerned with the boundaries of the situation, if any. In Seuren's view, however, *e* is 'a tense marker for the present or for temporal simultaneity' (2001:464). Referring to Reichenbach (1947), Seuren proposes that there are two kinds of (what he calls) tense: one indicating the relation between the time of speaking (S) and the reference point (R), and one indicating the relation between the reference point (R) and the point of the event (E). If S and R coincide, the preverbal marker *e* functions as a present-tense marker, and if they do not, *e* indicates a temporal overlap between E and R.

The preverbal marker *ben*, finally, is traditionally analyzed as an 'anterior tense', indicating past for stative verbs and past before past (pluperfect) for nonstative verbs (Bickerton 1981). Voorhoeve (1957, 1962) treats it as a regular past-tense marker, whereas according to Seuren (2001:461) it indicates past before past, although he adds that *ben* can have a simple-past interpretation as well, which entails, according to Seuren (*ibid*.), that *ben* is in competition with

zero (for dynamic verbs). Winford (2000:398-410) adopts a different perspective and points to a discourse-pragmatic difference between the use of the unmarked verb form (in its past interpretation) and that of *ben*. The latter is interpreted by Winford as a marker of *relative* past, locating 'a situation as past in relation to some other point or interval of time (the tense locus) which may be either the moment of speech or some reference point in the past' (2000:399). It is thus used to situate an event prior to the (discursive) reference point and as such, Winford claims, it often occurs in backgrounded contexts. Foregrounded situations in the past, on the other hand, are typically rendered by means of unmarked verb forms.

We can agree with these previous analyses on various scores. For instance, the analysis of *e* as a marker of imperfectivity, advocated by Winford (2000), nicely captures its various uses (cf. Section 5.4).[2] Yet a first glance at the available data as well as some more general considerations point to a number of problematic aspects. A first concern is that, whereas a verb's lexical aspect seems to be of major importance for the interpretation and use of zero and, to a lesser extent, *e*, relatively little attention has been paid to the actional classification employed in the cited analyses. For one thing, it is vital to properly define and operationalize the stative/dynamic distinction. Which actional classification has to be used and how fine-grained does this classification need to be? Is this classification typologically valid? Is actionality a property of verbs, or rather of verb phrases, or even sentences/utterances? How can it be distinguished from grammatical aspect, if at all? And what about coercion (i.e. the shift from one class of lexical aspect to another)? In our view, studies of tense and aspect in Sranan – and, to our knowledge, of (Atlantic English-based) creole TMA-systems in general – have not sufficiently highlighted these issues, in spite of the observed importance of lexical aspect for time reference in this

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[2] We thus conceive of *e* as an aspectual construction and not as a tense, as proposed by Seuren (1981/2001).

and other creoles.[3] We will therefore attempt to offer some clarification regarding these matters in Section 3.

Another objection to the analyses proposed is that, as already indicated in the Introduction to this paper, they do not suggest a *unified semantic* account of the markers under consideration, whereas many linguists regard monosemy as a null hypothesis that is to be maintained in the analysis of any marker or construction, unless the data force them to do otherwise (cf. Ruhl 1989). *Ben* and zero are systematically assigned different meanings according to the actionality of the verbal stem, and they are thus treated as inherently ambiguous or unspecified for TMA-parameters, while the existence of a schematic core meaning instantiated in the various uses of the markers in question is too easily excluded (cf. Ruhl 1989:4-5).[4] Yet, though not necessarily wrong, an analysis in terms of homonymic coincidence is clearly less likely to be valid, while recognizing polysemy – i.e. recognizing (as we do) that a single construction

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[3] There are exceptions, though: Winford (2000:422-428), for instance, does devote some attention the stative/dynamic distinction and to coercion, van de Vate (2011) discusses more fine-grained parameters of lexical aspect in her analysis of tense, aspect and modality in the Surinamese creole Saamáka, and Yakpo (2009:187-191) recognizes the importance of maintaining methodologically adequate actional distinctions to study the TMA-system of Pichi.

[4] In analyses that assume that zero and equivalent markers in other languages are unspecified for TMA-parameters, the present-time interpretation of states and the past-time interpretation of events are regarded as default readings, determined by pragmatic principles (cf. Smith & Erbaugh (2005) on Mandarin Chinese, Faraclas (1996) on Nigerian Pidgin, and Yakpo (2009) on Pichi). This is also reflected in Welmers' (1973:344-347) analysis of markers in African languages that exhibit interactions similar to those of zero: the meaning of these markers is captured by Welmers under the label 'factative'. Factative constructions, he claims, express 'the most obvious fact about the verb in question, which in the case of active verbs is that the action was observed and took place, but for stative verbs is that the situation obtains at present' (Welmers 1973:346-347). However, apart from being somewhat vague (why, for instance, should it not be more important that a dynamic situation has present relevance or is even ongoing in the present?), this analysis cannot explain why, as we will see in Section 5.3, some languages seem to consider futurity to be 'the most obvious fact' about dynamic situations.

may have a variety of context-dependent uses – necessarily entails the existence of a common underlying schema (otherwise one *would* be dealing with homonymy). Most often, such an underlying schema is not sought for in studies of TMA in Sranan, except in Winford (2000). However, his interpretation of *ben* as a marker of relative past is not linked (at least not explicitly) to its various 'nontemporal' uses, viz., those in which *ben* expresses irrealis (Wilner 2000). In (6) (taken from Wilner 2000), for instance, *ben* is used to express counterfactuality in both the protasis and the apodosis of the conditional:

(6) *Ma   efu mi **ben**   **sori**   en   taki mi **ben**   **bron**,*
    but   if   1SG PAST   show   3SG.OBJ that 1SG PAST   burn

    *dan   a   **bo**[5]   **du**   wan fasi nanga   mi.*
    then   3SG PAST.FUT do   one way with   1SG

    'But if I had shown him that I was burned, then he would have done something for me.'

Similarly, it is not entirely clear how the analysis of (so-called) 'unmarked' verbs in terms of perfectivity proposed by Winford single-handedly accounts for all of their uses in finite clauses (even though, as we will show, zero-marked verbs do evoke a bounded perspective, as is typical of perfective markers). Why, for instance, should 'unmarked' stative verbs, given their alleged perfectivity, prototypically yield a *present-time* reading (i.e. what triggers the anchoring in the present)? In his study on predication in Caribbean English Creoles, Winford (1993) analyzes the unmarked verb form (which has similar features as that of Sranan) as indicating perfectivity and claims, at the same time, that (some) stative verbs are able to 'modify and even neutralize the dominant meaning of

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[5] *Bo* is a contraction of *ben + o*.

an aspectual category' (1993:34). In other words, the perfective value of unmarked verbs is overruled in the case of stative predicates. However, such an analysis again implies ambiguity (in that the meaning of the unmarked verb form is perfective, but only for dynamic verbs) and does not really *explain* where the present-time reference with states should be derived from. The question of how to account for this present-time interpretation of states is equally relevant for analyses of allegedly perfective constructions in African languages. One way of resolving this problem is proposed by Harley (2008), who analyzes 'unmarked' verbs in Tuwuli as perfective and, at the same time, as indicating nonfuture tense, which then gets a past or present realization depending on the lexical aspect of the verb involved. This solution is, in our view, very much on the right track in that it shows that the zero verb form (in a language belonging to the branch of Sranan's substrate languages) can function as a tense *and* aspect marker at the same time.

Furthermore, if we regard zero as a marker of perfective aspect (in line with Winford's analysis), a paradigmatic difficulty appears. Table 1 shows the (im)possible combinations of (temporal and aspectual) preverbal markers with verb stems and their aspecto-temporal interpretations, on the assumption that zero is perfective. As can be seen, verbs can (in this case) either be marked for grammatical aspect only or for grammatical aspect and (past) tense.

PREVERBAL TMA-MARKING	ASPECTO-TEMPORAL INTERPRETATION
zero + verb stem	Perfective aspect
e + verb stem	Imperfective aspect
ben + zero + verb stem	Past perfective
ben + *e* + verb stem	Past imperfective
*e + zero + verb stem	Impossible: a verb cannot be viewed perfectively and imperfectively at the same time.

Table 1.

Paradigms of zero, *ben*, and *e*, if zero = perfective.

The problem at issue appears in the third row: the past-tense marker *ben* in combination with zero ought to yield a past perfective reading, but this is not always the case. For one thing, it is remarkable that this 'past-perfective' construction should be the one used to convey irrealis readings, while typological evidence shows that modal meanings of, for instance, counterfactuality and hypotheticality are canonically associated with the (past) *imperfective* (Fleischman 1995). Moreover, for a number of examples of *ben* cited in Winford (2000), a perfective reading is difficult to maintain. Sentence (7), for instance, is uttered in a conversation about someone who has died; after the speaker explains how this person died (i.e. the past reference point is settled), the hearer asks:

(7) *Dan   omeni   yari   a   **ben   abi***?
    then   how.many   year   3SG PAST   have
    'So how old was he?' (Winford 2000:404)

These anaphoric uses – i.e. past-time reference to a time that has already been established previously in discourse and which does not involve narrative progression – are part and parcel of the semantics of the past imperfective rather than of the perfective (cf. Kamp & Rohrer 1983:254 and Brisard 2010 on the French *imparfait*). Even if such uses have not been attested unequivocally for dynamic verbs, they do show that '*ben* + zero + stem' does not only occur in past perfective contexts.

    These observations indicate that there are some aspects of zero, as well as of *ben*, that are not captured by the semantic analyses proposed thus far. Our analysis attempts to overcome these problems by reformulating the general semantic opposition between zero and *ben* in modal (epistemic) and, at a more

specific level, aspecto-temporal terms, rather than in discourse-pragmatic terms, as is done in Winford (2000) (as well as in Gooden's (2008) study on equivalent markers in Belizean Creole). Let us, however, begin with a number of methodological issues with regard to the nature of lexical and grammatical aspect, the actional classification used, and its application to Sranan corpus data.

3. Methodology: Actional classification and corpus analysis

3.1. *Aspect: a unidimensional and cross-linguistically applicable approach*

3.1.1. *Lexical versus grammatical aspect*

Traditionally, lexical aspect is described as an inherent property of verbs or verb phrases, whereby three parameters play a crucial role: [± stativity], [± telicity], and [± duration] (cf., e.g. Comrie 1976:41-51). Grammatical aspect, on the other hand, pertains to the viewpoint a speaker adopts with regard to a situation (cf. Smith 1997). From a cross-linguistic perspective, the two major types of grammatical aspect are 'perfectivity' (the situation is viewed as bounded) and 'imperfectivity' (the situation is viewed as unbounded). Various subtypes of imperfective aspect can further be distinguished: a situation may, for instance, be conceived of as ongoing ('progressive') or taking place on a regular basis ('habitual'). In spite of this intuitively clear distinction between lexical and grammatical aspect in terms of internal temporal structure versus viewpoint, there is a lot of scholarly debate about whether or not these actually constitute two different dimensions. In most traditional accounts, a bidimensional approach is advocated in which grammatical and lexical aspect are treated as distinct categories (cf. Comrie 1976; Dahl 1985; Smith 1997; Tatevosov 2002; see also Bertinetto & Delfitto 2000 for an explicit defence of this approach). Still, there are unmistakable similarities between the semantic features that figure in aspectual classifications and those that figure in actional classifications,

which incites us to follow cognitive linguists such as Langacker (1987:254-267, 1991:207-211) and Michaelis (2004) in adopting a unidimensional approach to aspect, in line with the assumption held in cognitive linguistics that lexicon and grammar cannot be separated strictly. This assumption is also supported by Breu (1994) and Sasse (1991, 2002), who claim that lexical and grammatical aspect operate on the same cognitive domain 'of human perception of states of affairs in terms of situations and situation changes' (Sasse 1991:37). Thus, even though actionality and grammatical aspect are not the same, they form a continuum, and boundedness distinctions that are lexicalized in one language may be expressed by grammatical morphemes in another, and vice versa. In German, for instance, lexical aspect plays a crucial role, since the language hardly possesses overt grammatical-aspect marking. Samoan, on the other hand, heavily relies on grammatical morphemes to express the aspectual contours of otherwise vague concepts of situations and entities (Sasse 1991:38-42). These may be regarded as two extreme cases, since in most languages lexical and grammatical aspect interact: as we will discuss in the next section, grammatical aspect markers select specific proportions of a situation in relation to the lexical aspect of the verb referring to this situation.

At this point, we need to add that not only actionality and grammatical aspect contribute to the overall aspectual meaning of a clause. Sasse (2002:263) distinguishes no less than seven 'aspectual tiers' that may interplay in different ways in different languages:

(i) the inherent tempo-aspectual characteristics of the (simple or complex) situation-denoting lexical units that enter the sentence; (ii) the tempo-aspectual nuances of meaning brought in by overt morphological systems ('aspect operators' or 'aspect grams'); (iii) the bounding potential of determinational and quantificational characteristics of arguments; (iv) the bounding potential of adverbials; (v) the contribution of other types of phase markers such as *begin*, *continue*, *finish*, *stop*, etc.

to bounding; (vi) the relational structure of the sentence such as diathesis, causativity, thematic roles, etc.; (vii) interclausal relations between predicates in terms of 'taxis'.

The first tier pertains to actionality ('aspect$_2$' in Sasse's terminology), and the second to grammatical aspect ('aspect$_1$'). The third aspectual tier – central to the works of Krifka (1992, 1998) and Verkuyl (1993) – is relevant for verbs such as English *write*, which has different actional properties according to the characteristics of its object. Compare:

(8) *a. He wrote a letter.*
    b. He wrote letters.

In (8a), the argument is countable and thus quantized (i.e. nonadditive and nonsubdivisible) (cf. Krifka 1992, 1998). Therefore, the denoted situation has an inherent endpoint (i.e. the verb phrase is telic). The argument *letters* in (8b), on the other hand, is cumulative (like other indefinite plurals and singular mass nouns): if you add one letter, the overall result still remains 'letters'. Verb phrases such as these are atelic. Next, adverbials, such as *for X time* or *until today*, as well as phase markers, can confer boundaries on a situation, or they can, conversely, trigger an unbounded viewpoint. The final two tiers concern higher-order aspectual relations, such as the bounding quality of sequential events. In our study, each of these tiers will be taken into account, even though, as we will see, they do not all turn out to be equally relevant for the description of zero verb marking in Sranan.

3.1.2. *Relevant classes of lexical aspect*

It is well known that the actional opposition between stative and dynamic verbs can be further refined by distinguishing between various types of dynamicity. The commonly employed classification of lexical aspect of Vendler

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(1957/1967), for instance, divides English verbal predicates into four classes – states, activities, accomplishments, and achievements, on the basis of the classic features [± stative], [± telic], and [± durative]. Beside the Vendlerian one, other well-known actional classifications are that of Dik (1989) and Verkuyl (1993), who also assume various types of dynamic verb, depending on parameters such as telicity. While these classifications have proven fruitful to some degree, most of them – even Dik's, which is developed in the explicitly typologically oriented framework of Functional Grammar – show 'but little typological awareness' (Tatevosov 2002:322). That is, classes of actionality are frequently established on the basis of a calculus of semantic features, as is done by Vendler and his followers, and it is tacitly assumed that this classification (preferably established on the basis of English data) is not subject to cross-linguistic variation: all languages will have the same classes, consisting of equivalent verbal predicates. However, cross-linguistic variation among classes of lexical aspect is not uncommon (cf. also Tatevosov 2002:323-324). This raises the question whether, in order to analyze the uses of zero in relation to lexical aspect, Sranan verbs require a more fine-grained classification (than the fairly coarse stative/dynamic distinction hitherto used) and whether we can find a method do so without being led by a 'Standard Average European' bias, i.e. without erroneously assigning properties that are relevant for verbs in Western European languages to their translational equivalents in Sranan.[6]

Typical of studies of creole TMA-systems since Bickerton (e.g. Holm et al. 2000) and of other studies which address the interface between actionality and tense (cf. Brisard & Meeuwis 2009 on Lingála) is that they only focus on the distinction between stative and dynamic (eventive) verb types, thereby disregarding the internal heterogeneity of the latter group. There are, however, indications that a more fine-grained distinction within the class of dynamic

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[6] The term 'Standard Average European' was first used by Whorf (1956) and refers to the idea that Western European languages are similar in a nontrivial way and could even be argued to constitute a *Sprachbund* (cf. van der Auwera 2011).

verbs can unveil other interactions. In Harley's (2008) study of TMA-categories in the Kwa language Tuwuli, for instance, it is demonstrated that, while 'unmarked' stative verbs typically refer to the present and unmarked activity verbs typically have past-time reference, unmarked accomplishment and achievement verbs (which involve an inherent endpoint) are ambiguous between a present and a past interpretation (Harley 2008:307-308). Yakpo (2009) further points out that temporal reference in Pichi, an Atlantic English-based creole spoken in Equatorial Guinea, is dependent on interactions with *three* types of verb: stative, inceptive-stative, and dynamic. Given observations such as these (and especially given the fact that Sranan has undergone substrate influence from some members of the Kwa language family, to which Tuwuli belongs, and may have features in common with other Atlantic English-based creoles, such as Pichi), one could argue that the a more fine-grained actional classification needs to be used in the present study as well, yet there are no *a priori* indications that this is necessary for Sranan. In order to verify whether parameters such as duration and telicity are indeed crucial in the interaction between types of verbal aspect and zero marking, one would have to use a typologically sound actional classification (such as that of Tatevosov (2002) or of Breu (1985, 1994) and Sasse (1991)) *and* specific native speaker elicitations. One cannot claim, for instance, that a dynamic verb such as *waka* ('walk') is always atelic unless it comes with a quantified argument, as in English (cf. *He's walking* vs. *He's walking a mile*), without consulting native speakers. Independent tests could verify, for instance, whether the event of walking, expressed by *waka* without arguments, can be successfully completed (in which case we may assume that it is not always atelic). Clearly, however, carrying out such independent tests in a methodologically adequate fashion for a sufficiently large sample of Sranan verbs is a very labor-intensive job that unfortunately lies beyond the scope of our study. We have therefore decided to restrict our analysis to that actional distinction that is, according to the existing literature, grammatically reflected in Sranan, viz., the stative/dynamic opposition:, to our

knowledge, only stative and dynamic verbs behave differently with regard to imperfective and zero-marking. This being said, it remains of course vital to properly operationalize this stative/dynamic distinction.[7]

Following Breu (1985, 1994) and Sasse (1991), we believe that, in order to determine the actional class to which a verb belongs, one has to investigate the aspectual properties of this verb in use, i.e. in interaction with grammatical aspect markers. For Breu and Sasse, the parameter [± boundedness] is crucial in this respect. Basically, stative situations are always assumed to be unbounded, while dynamic situations involve at least one (initial or final) cognitively salient boundary. This even holds for so-called activity predicates (in Vendler's terminology), which do not involve any inherent boundaries (unlike, for instance, accomplishment verbs): according to Breu (1994) such activities are bounded simply by 'the external impossibility of a limitless duration of the action'. An event's boundaries are only highlighted when the dynamic verb referring to the event combines with a marker of perfective aspect, since imperfective aspect markers blur boundaries (if any) and only zoom in on the intermediate phase between the points of inception and termination of the denoted event. Concretely, in order to determine whether a Sranan verb is stative or dynamic, we have verified how it interacts with the imperfective marker *e* and with zero (which may, for the present purposes, be regarded as indicating perfective aspect).[8] A verb is analyzed as dynamic if it systematically takes *e* to refer to an unbounded situation and zero to refer to a bounded situation, while we assume that stative verbs do not need *e* to indicate unboundedness. Thus,

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[7] Note that even though it is impossible on the basis of our data to accurately establish the type of dynamic actionality *class* to which a verb belongs, it is often possible to determine whether or not a verb *in a particular sentence* (in combination with the other aspectual tiers mentioned in Section 3.1.1.) yields e.g. a telic or a punctual interpretation. Whenever relevant, this more specific actional value will be indicated.

[8] In Section 5, we will further qualify this analysis of zero, by showing that it functions as a *present* perfective marker.

since *teki* ('take') comes with *e* to refer to a situation that is ongoing at the time of speaking (cf. (3), repeated here in (9)) and takes zero-marking when the event of taking is conceived of as bounded (cf. (10)), it is analyzed as a dynamic verb. A verb such as *wani* ('want'), however, does not rely on *e* for construing the denoted situation as unbounded, as can be seen in (11).

(9) *Nownow   yu   e   teki   en   kba   nownow?*
     now   2SG IPFV take   3SG.OBJ finish/COMPL now
     'Are you already taping right now?' (Winford 2000:422)

(10) *Alexi   teki   en   spikri,   a   go   na   bakadyari.*
      Alexi   take   3SG.POSS   mirror   3SG go   LOC backyard
      'Alexi took his mirror and went into the backyard.' (Alexi 64)

(11) *Den   pikin   wani   prey.*
      DEF.PL   child   want   play
      'The children want to play.' (Q61)

The method of establishing a verb's class by investigating its properties in interaction with markers of grammatical aspect – which is also advocated by another typologically oriented approach, viz., that of Tatevosov (2002) – may be considered circular, since the semantics of grammatical aspect markers are, in turn, determined by how they interact with different types of lexical aspect (e.g. in cross-linguistic TMA-studies, progressive markers are said to be incompatible with stative verbs). Yet it is our conviction that these interactions and their limitations are *symptomatic* of the inherent meaning of a verb. We admit, though, that this diagnostics is not rigid: in the course of time, the lexical class of verbs as well as the semantics of grammatical aspect markers may change, and synchronically as well, verbs can shift from one class to another under the appropriate contextual conditions. The latter phenomenon, known as

coercion (de Swart 1998; Michaelis 2004), is attested in Sranan when a prototypically stative verb is given a dynamic reading, as indicated by the use of *e*. In example (12) (taken from Seuren 1981, cited in Winford 2000:427), for instance, *sabi* ('know') refers to an evolving, i.e. nonstative, situation:

(12) *Safrisafri*   *mi* *e* ***sabi*** *den*   *pasi*   *kba*.
slowly   1SG IPFV know   DEF.PL road   finish/COMPL
'Slowly I am already getting to know the roads.'

In Breu (1994:29-30), such cases of coercion are treated as purely contextually induced mechanisms that do not alter the lexical properties of a verb. Michaelis (2004), on the other hand, argues that English stative verbs in the progressive are *categorized* as dynamic by this construction. Since this analysis is more in line with the unidimensional approach adopted in this study, we will follow Michaelis in this respect. Concretely, every Sranan verb that is given an eventive reading in a particular context will be regarded as dynamic within that context, even if in terms of frequency it is prototypically stative and even though this has the unfortunate consequence (probably reflecting the ever-evolving nature of language) that some verbs may receive a hybrid classification.

According to Winford (2000:424-425), stative verbs can also take *e* when the denoted state is regarded as a habit. In our corpus, we did not find any clear-cut example of such a present habitual state marked by *e*, yet it is naturally used in past habitual stative contexts (with *ben*), as illustrated in (13):

(13) *Fosten,*   *I*   *no* ***ben***   *e* ***abi***   *kasi,*   ***ben***
previously 2SG NEG PAST   IPFV have   wardrobe   PAST

e   ***abi***   *falis*.
IPFV have   luggage

'Previously, one wouldn't have a wardrobe, one would have a piece of luggage.' (Waskrosi 47)

The fact that, outside habitual contexts, (noncoerced) present-time states take zero-marking indicates that they naturally collocate with perfective marking. This goes against Sasse (1991) and Breu's (1994:28-29) claim that stative verbs are by definition incompatible with perfective aspect, since the latter involves a bounded view. In our view, this shows that (un)boundedness is not a sufficient criterion to describe lexical and grammatical aspect and the interactions between the two domains, and that it needs to be complemented with an important epistemological account of the opposition between states and events and between perfectivity and imperfectivity. This has been pointed out for the stative/dynamic opposition by, among others, Michaelis (2004:10-11), who identifies the distinction between a genuine state, such as *I know your name*, and a homogeneous activity, which does not involve change over time, such as *He is holding a broom*, as follows:

… events are those situations whose existence cannot be verified on the basis of a momentaneous sample… Verification of a homogeneous activity like holding a broom, standing in a corner, or sleeping, requires access to points of inception and termination, as well as several contiguous frames between those endpoints. Sleeping is distinct both from being comatose and from nodding off for a second, and staying at one's sister's house is distinct both from popping in on one's sister and living with her. While states like being tall endure in the same way that the events of sleeping and standing in a corner do, states do not take time: **any subinterval of a state counts as an instance of that same state**. [emphasis ours]

In other words, states are *contractible* (Langacker 1987:258-262): since any random segment of a state is representative for the state as a whole, its existence

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can be verified on the basis of any such sample. This property is also known as the 'density condition' or the 'subinterval property' in interval-semantic approaches to aspect (cf. Tatevosov 2002:329-330). Since activities and other dynamic situations are bounded, one needs, at least, to conceive of their initial and/or final boundaries, and some segments of the intermediate phase between those boundaries, if available.

We contend, now, that such an epistemological distinction is relevant for grammatical aspect too, yet on the level of viewpoint rather than of internal temporal constituency (to the extent that these can separated from one another). That is, if one adopts a perfective viewpoint, conceiving of a situation in its totality including its boundaries (if any), this necessarily implies that the speaker has *full knowledge* about this situation. An imperfective viewpoint, on the other hand, only entails a partial view, i.e. no full knowledge. It thus seems that, paradoxically, perfective and stative aspect are related (and thus compatible) in that, given their specific configuration, they involve complete knowledge about a situation, while in terms of boundedness they are opposites (states are unbounded, whereas perfectivity typically involves a bounded perspective).

3.2. *Sranan corpus data and elicitations*

Our 83,645-word corpus consists of one written narrative (*A sneeri na ini hemel* 'The tailor in(side) heaven', a so-called *tori* 'story')[9] and twenty glossed texts from the database of recorded speech developed at Ohio State University, containing relatively spontaneous conversations between native speakers of Sranan (one of them acting as an interviewer). In addition, we have used native speaker elicitations provided to us by Donald Winford, i.e. four completed questionnaires (each consisting of 143 sentences) based on the model developed

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[9] The story is published in a collection of Surinamese stories, *Ondrofeni sa leri ju: Tori's* ('You will learn by experience: Stories'), edited by A.H.P. de Groot & A. Donicie (1950).

by Östen Dahl for his typological investigation of tense and aspect categories (Dahl 1985). For each questionnaire, a native speaker was asked to translate English sentences into Sranan. In the English sentences, the verb (and, if present, the subsequent adjective) was capitalized and rendered in the infinitive, such that the influence of English on tense and aspect marking in the Sranan translations was minimal (Dahl 1985:44-45).

In a first stage, we have carried out a detailed analysis of 192 zero-marked clauses in all questionnaires, the written text and five texts from the database of recorded speech.[10] For each occurrence, we have looked at the aspecto-temporal interpretation of the clause (past perfective, present, perfect, etc.), the meaning of the verb involved (communication, motion, etc.), the verb's lexical aspect (i.e. its stativity/dynamicity), other 'aspectual tiers' (arguments, taxis, etc. − cf. Section 3.1.1) and, what we call, other 'temporal tiers', i.e. other elements in the context besides tense that may influence the temporal reference of the clause (e.g. temporal adverbials, narrative settings, preceding and following clauses, etc.). The total of 192 zero-marked clauses collected features 48 stative and 137 nonstative verbs.[11] After this first in-depth corpus analysis, we have studied, in

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[10] Zero-marked verbs occurring in the questionnaires have only been counted once per questionnaire item. Thus, cases where all four native speakers opt for zero-marking constitute but one instantiation. Questionnaire sentences in which only two or three informants employ zero, or for which it is claimed that the use of zero is optional, have also been included in our analysis, together with an explanation for the varying judgments (cf., e.g. (16) and (17) for illustrations).

[11] This does not add up to 192, but this is due to the fact that we have also included a number of sentences consisting of a subject and a predicative adjective without copula, such as *A osu bigi* ('The house is big', Q1). These sentences, involving so-called property items and denoting stative situations, have been included in our analysis because they also involve zero marking, as is shown by the fact that other preverbal markers may be inserted, e.g. *A osu ben bigi* ('The house was big', Q2). Yet, even though there may be arguments to regard items such as *bigi* ('be.big') as verbal (cf. Migge 2000), we refrain from claiming that they are genuine stative verbs (Migge 2000:217-218).

a second stage, the other texts and questionnaire sentences so as to find additional illuminating illustrations and to compare the usage types of zero with those of *e* and *ben*.

4. Usage types of zero in Sranan

In this section, we offer a systematic overview of the various uses of zero in Sranan in relation to the zero-marked verb's lexical aspect and to other elements in the discourse context influencing the aspecto-temporal interpretation of the sentence. We distinguish, for each use, between stative and dynamic verbs. In Section 5, we will then propose a cognitively motivated and integrated explanation for the different uses of zero, in comparison with those of *e* and *ben* (as attested in our data and described in the literature).

4.1. *Present-time reference*

As expected given the traditional accounts (cf. Section 2), zero-marked stative verbs in our sample typically (i.e. in 39 out of 48 cases) convey present-time reference:

(14) *San   mi   **wani**   taki over   a   brifi: ...*
     what   1SG want   say about DEF.SG letter
     'What I want to say about the letter: …' (Advice 1, 007)

However, as is acknowledged by, among others, Winford (2000:396-397), zero-marked stative predicates can have (actual) past-time reference as well, yet only in narrative contexts or in the presence of temporal adverbials referring to the past (such as *esde* 'yesterday'). Dynamic verbs do not normally have present-

time reference when they are zero-marked, yet there are exceptions, such as verb forms in fixed expressions, cf. (15).

(15) *Dan   Alexi   lon kon.   Alexi   taki:'Fa a   **waka?**'*
       then   Alexi   run come.   Alexi   say how 3SG walk
       'Then Alexi came running. Alexi said: 'What's going on?'.'

       A   taki:'Luku   dya, luku   dya, luku   dya!'
       3SG say look   here look   here look   here
       'She said: 'Look here, look here, look here!'.' (Alexi 031-032)

Judging from the questionnaire materials, some native speakers prefer to use zero with the mental state (or homogeneous activity) predicates *firi* ('feel'), *denki* ('think'), and *prakseri* ('think') as well as with the posture verb *sidon* ('sit') in present-time contexts (as is typical of stative verbs). According to others, the imperfective marker *e* is needed to achieve present-time reference with these predicates, reflecting their more dynamic nature. In (16), for instance, two informants use zero, while the two others prefer *e*:

(16) [My brother THINK (right now) that the water BE COLD (today, but he is wrong).]
     *Mi brada **(e)**   **denki**   a   watra   sa*
     1SG brother (IPFV) think   DEF.SG water   FUT(MOD)

     kowru.[12]
     cold

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[12] The four translations proposed by the informants all subtly differ and the one given in (16) is but one possible solution. However, for the present purposes only the variation in use of zero/*e* is relevant.

'My brother thinks the water is cold (but he is wrong).' (Q15)

The optional use of *e* indicates that these verbs, like in English, may vacillate between stativity (when in combination with zero they denote an unbounded and contractible situation) and dynamicity (when in combination with *e* they refer to an unbounded, currently ongoing activity). Thus, the behavior of verbs such as *denki* ('think') is not regarded as an exception to the general rule that only stative verbs take zero to refer to the time of speaking while the other types of verb require *e*; it merely reflects the hybrid actional status of these mental state (or homogeneous activity) verbs. Note that verbs of involuntary physical perception, such as *si* ('see') and *yere* ('hear'), do not seem to show such vacillation, even though they involve equally homogeneous situations: in our corpus, they behave exclusively in ways typical of dynamic verbs when they are zero-marked (i.e. they never refer to present-time situations).

There is one notable example (again coming from a questionnaire sentence) that does not feature a stative verb (nor a homogeneous activity predicate) and that nevertheless seems to allow present-time reference with zero verb marking:

(17)   [My brother SAY (right now) that the water BE COLD.]
       Mi   brada   (e)   taki (nownow)   a   watra   kowru.
       1SG brother (IPFV)   say (right.now) DEF.SG   water   cold
       'My brother says (right now) that the water is cold.'

Even though *taki* ('say') is hard to interpret statively, only one out of four informants uses *e* here. It seems that, despite the presence of *nownow* ('right now'), the other informants have not regarded the denoted (speaking) event as actually taking place in the present, but rather in the near past. After all, in order to report on what someone has said, this speaking event already needs to have taken place.

4.2. *Present perfect*

As already noted by Winford (2000:397) and Seuren (2001:461), the use of zero-marked dynamic verbs can yield a present-perfect (or anterior) interpretation. Following Klein (1994), we conceive of the hallmark of the present perfect the fact that the topic time equals the utterance time, and follows the time of the situation. In (18) and (19) (questionnaire sentences with clear contextual cues that typically trigger the use of the perfect – cf. Dahl (1985:131) on (19)), for instance, the reference point (i.e. the topic time) is the time of speaking, while the event itself has (or might have, in (18)) taken place in the past.

(18)   [The speaker knows that the addressee was going to meet the
        speaker's brother, but not when.]
        [You MEET my brother (yet)?]
        *Yu **miti**   mi brada   kba?*
        2SG meet   1SG brother   finish/COMPL
        'Have you met my brother yet?' (Q125)

(19)   [A: I want to give your brother a book to read, but I don't know which.
        Is there any of these books that he READ already?]
    B:[(Yes,) he READ this book (already).]
        *Ay,   a **leysi**   a   buku   disi kba.*
        Yes,   3SG read   DEF.SG book   this finish/COMPL
        'Yes, he has already read this book.' (Q117)

These two examples involve so-called 'experiential' uses of the perfect, since the denoted events (could) have taken place at least once during a certain interval. Other uses are the perfect of result, the continuative perfect, and the 'hot news' perfect (McCawley 1971).

Observe that both (18) and (19) also feature *kba* ('already'), which can, according to Winford (2000:431-436), convey a resultative perfect meaning with dynamic verbs. Even though the sense of result is not so prevalent in the examples we cite, it is indeed noteworthy that in no less than seven out of eighteen perfect uses attested in the questionnaire data, native speakers prefer to insert *kba*. In some cases, this may be due to the presence of *already* in the original English sentence, but it may also indicate that *kba* is indeed grammaticalizing into a type of perfect marker, at the expense of zero. This being said, the majority of the perfect uses of zero (25 in total in our corpus) still do not contain *kba*. In view of this observation, and taking into account the fact that *kba* does not pattern like the regular TMA-markers in Sranan (i.e. as a preverbal marker), we propose to analyze all zero-marked clauses conveying a perfect meaning as illustrations of the present perfect meaning component of zero (irrespective of the presence of *kba*). We thus put *kba* ('already') on a par with other adverbials such as *ete* ('yet') and *noyti* ('never') that are typically attested in perfect contexts.

Note, further, that both (18) and (19) involve telic verb phrases. Out of the 25 examples of perfect uses of zero attested in our corpus, only three verbs denote activities. This may have to do with the reoccurrence of the same verbs in the questionnaire sentences (*miti* ('meet'), for instance, is frequently used), but it is also probably due to the focal status of a situation's end state (possibly lasting up to the present) in the meaning configuration of the perfect (as is especially clear for the perfect of result). Yet, as can be seen in example (20), zero-marked activity verbs are equally liable to a present-perfect (continuative) reading (reflected in the presence of *vanaf* ('since')).

(20) *En vanaf a ten fu Bruma, mi* **volg** *den*
and since DEF.SG time of Bruma 1SG follow 3PL.OBJ

alamala op de voet.

all   on DEF foot

'And since the time of Bruma, I have been following them all closely.' (Koba 026)

4.3. *Narrative contexts*

Zero-marked dynamic verbs frequently occur in narrative (past) contexts to mark foregrounded, sequential events. Stative verbs marked with zero can also occur in these narrative contexts, but given their intrinsic unboundedness, they do not move the narrative time forward (Kamp & Reyle 1993:528). (21) is a short excerpt from a story: it starts with the announcement that the speaker is going to tell a story (in a), and after a longish description of the background setting (featuring *ben*), a series of more foregrounded, sequential events takes place (of which the first part is rendered in b, with the relevant verbs put in boldface). Since we are dealing with situations that are *objectively* set in the past, one might suggest past-tense translations. On the other hand, a simple present-tense interpretation offers itself equally naturally, as it reflects the narrative vividness associated with the English simple present and, apparently, also with zero in Sranan. This past/present ambiguity is reflected in the translation we propose.

(21) a. *A   tori   di   mi e   go ferteri   now na wan*
            DEF.SG story   REL 1SG IPFV go tell   now be one

            tori   di psa   langa,   langa   yari kba.
            story   REL happen long   long   year finish/COMPL

            'The story that I am now going to tell is a story that happened many, many years ago.'

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b.

Ma	*dan*	*now,*	*wan*	*neti*	*leki*	*fa*	*mi*	*taki,*	*dan*
but	then	now	one	night	like	how	1SG	say	then

den	*man*	***de***	*na*	*ini*	*a*	*faya*	*fu*
DEF.PL	man	be.at	LOC	in(side)	DEF.SG	fire	of

a	*prei.*	*Dan*	*a*	*doro*	***klop***.	*Wan*
DEF.SG	play	then	DEF.SG	door	knock	one

fu	*den*	***go luku***,	*dan*	*den*	***si***	*wan*	*man*	*tnapu.*	*Dan*
of	3PL.OBJ	go look	then	3PL	see	a	man	stand	then

a	*man*	***taki***:	'*Yere,*	*mi*	*yere*	*un*	*de*
DEF.SG	man	say	hear	1SG	hear	2PL	be.at

wan	*club*	*dyaso*	*e*	*prei*	*carta.*	*Mi*	*kan*
one	club	right-here	IPFV	play	card	1SG	can

prei	*tu?'*	*Den*	***taki***:	'*Ai*'.	*A*	*man*	***kon***	*na*	*ini* …
play	too	3PL	say	yes	DEF.SG	man	come	LOC	in(side)

Den	***luku***	*makandra,*	*bikasi*	*te*	*wan*	*vreemde*
3PL	look	each_other	because	when	a	stranger

sma	*e*	*kon*	*prei*	*den*	*prei*	*fufuru*	*nanga*
person	IPFV	come	play	3PL	play	steal	with

en.	*Dan*	*den*	***sabi***	*taki*	*den*	*e*	*go*	*feni*	*wan*
3SG.OBJ	then	3PL	know	REL	3PL	IPFV	go	find	one

man	*fu*	*den*	*nyan*	*sensi*	*na*	*en*	*skin*.
man	of	3PL	eat	money	LOC	POSS.3SG	body

'But now one night, like I said, the men are/were in the thick of the game. Then there is/was a knock at the door. One of them goes/went to look, then they see/saw a man standing there. The man says/said: 'Listen, I hear(d) you have a club here for playing cards. Can I play too?' They say/said: 'Yes'. The man comes/came inside … They [the men] look/looked at each other, because whenever a stranger comes/came to play they cheat/cheated him. Then they know/knew they are/were going to find a man from whom they could get money.' (Karta 101-107, 109-110)

The copula *de* ('be.at') and *sabi* ('know') illustrate that, under the appropriate contextual conditions, zero-marked stative verbs can have objective past-time reference, as already indicated in Section 4.1 (contrary to what is predicted by Bickerton 1975). Outside narrative contexts and in the absence of adverbials with past-time reference, use of the preverbal marker *ben* always seems to be required to refer to past states.

Zero-marked dynamic verbs can also be associated with a pluperfect reading, once the past narrative context is established previously in discourse, as is the case in (22). Yet, again, a historical present(-perfect) translation offers itself equally naturally.

(22) | *A* | *ten* | *di* | *den* | **wroko** | *a* | *wroko,* | *a* | *man* |
|-----|-------|------|-------|-----------|-----|---------|-----|-------|
| DEF.SG | time | when | 3PL | work | DEF.SG | work | the | man |

taki:'Ai, no.   Dan a   bun'.
say yes no   then 3SG be.good

'At the time when they have/had done the job, the men say/said: 'Yes, no. Then it's good'.' (Alexi 76-77)

4.4. *Past perfective outside narrative contexts*

Bickerton (1975), according to whom zero-marked dynamic verbs must have a past value, appears to have concluded this on the basis of isolated sentences, and indeed, our data confirm that, outside narrative contexts and in the absence of contextual triggers that could yield a perfect reading, zero-marked dynamic verbs refer to events that are situated in the past and viewed in their entirety, as illustrated in example (23):

(23) *Mi **go** tide   mi e   suku   fu bai wan   batra   oli.*
    1SG go   today   1SG IPFV search   of   buy one   bottle   oil

    Veertig golu   a   man aksi mi fu   wan liter nyan-oli.
    forty   guilder   DEF.SG   man ask 1SG for one liter eat.oil

    'I went looking today for a bottle of oil to buy. Forty guilder did the man ask for one liter of oil.' (Klagen 009-010)

In this example, the speaker refers to a situation (*go* 'go') that happened earlier that day. This illustrates that zero-marked verbs can (and, in our corpus, regularly do) refer to recent pasts, a meaning that is, incidentally, typically associated with perfect markers from a typological perspective (Dahl 1985:136). This is shown as well in the first lines of (21b), repeated in (24), in which *taki* ('say') refers to something the speaker said earlier in the same conversation:

(24) *Ma dan now,   wan neti   leki fa mi **taki**,   dan den*
     but then now   one night   like how 1SG say   then DEF.PL

     man   de   na ini   a   faya fu a   prei.
     man   be.at   LOC in(side) DEF.SG   fire of   DEF.SG play

'But now one night, like I said, the men are/were in the thick of the game.' (Karta 101)

Even though these past perfective readings have been attested quite commonly among our examples of zero, it should be noted that they very rarely (if at all) occur without there being an explicit indication of 'pastness' somewhere in the preceding context (in the form of *ben* or an adverbial with past-time reference). In example (25), for instance, zero is used in reply to a question that contains the adverb 'yesterday'.

(25) [Q: What BE your brother's reaction when you GIVE him the medicine (yesterday)?]
   [Answer:] [He COUGH once.]
      *A   **koso**   wan leysi.*
      3SG cough   one time
      'He coughed once.' (Q87)

4.5. *Noncounterfactual conditionals*

Finally, zero-marked verb forms regularly occur in the protasis of noncounterfactual (i.e. open or hypothetical) conditional clauses, as already noted by Winford (2000:397-398) (cf. also Yakpo (2009:295) on zero in

conditionals in Pichi). This goes for stative as well as dynamic predicates, as shown in (26), (27), and (28):

(26)　*Efu yu **wani** yu e teki en, efu yu no **wani***
　　　if　2SG want　2SG IPFV take　3SG.OBJ if　2SG NEG want

　　　yu no e teki en.
　　　2SG NEG IPFV take　3SG.OBJ

　　　'If you want to [pay a lot], you're taking it; if you don't want to [pay a lot], you're not taking it.' (Text 4, 210)

(27)　*Dus ef' a sma **denki** f' a de, a*
　　　thus if　DEF.SG person　think　how 3SG be.at　DEF.SG

　　　sma kan tan gewoon nanga en pikin te
　　　person can stay normal with　POSS.3SG child until

　　　*ala sani **waka** a sma bun.*
　　　all　thing　walk　DEF.SG person be.good

　　　'Thus, if the person considers how it is, the person can just keep her child, until everything goes well for the person.' (Advice 3, 005)

(28)　*Efu mi **teki** a wroko disi a mi tapu, a kan*
　　　if　1SG take DEF.SG work　this to 1SG close　3SG can

　　　koste mi mi libi.
　　　cost　1SG 1SG life

'If I take on this job, it can cost me my life.' (Alexi 47)

Note that the *until*-clause in (27) also features a zero-marked verb.

4.6. *Overview*

For the sake of convenience, Table 2 lists the various usage types (as attested in our data) of the zero construction in Sranan according to actionality. As can be seen, our corpus findings indicate that a past perfective reading (outside narrative contexts) is only available for dynamic verbs. A present-time reading, on the other hand, has only been attested for stative verbs and for some verbs that seem to vacillate between stativity and dynamicity. Only in exceptional cases (such as fixed expressions) has such a reading been found for genuinely dynamic verbs. On the whole, then, our data indicate (more or less in line with previous studies) that the interpretation of zero is heavily dependent on lexical aspect and on the discourse context; yet, as we will explain in Section 5, this does not entail that it does not lend itself to a unified semantic analysis.

STATIVE	DYNAMIC
Present-time reference	Narrative use
Narrative use	Present perfect
Noncounterfactual (in conditionals)	Past perfective
	Noncounterfactual (in conditionals)
	Present (very limited)

Table 2.

Usage types of zero in Sranan, attested in corpus data and native speaker elicitations

5. **Analysis: Zero as a present perfective marker**

Let us now subject our empirical findings to a unified and cognitively plausible semantic analysis of zero, in contrast to *e* and *ben*. We argue that it is the basic 'presentness' of the zero form, in combination with its perfectivity, that lies at the heart of its variety of uses that are seemingly difficult to reunite. It may appear surprising that, in the semantic description of a single form, we should bring together two grammatical categories (present tense and perfective aspect) that normally do not combine felicitously (Malchukov 2009). Yet, paradoxically, we conceive of this infelicity as the very reason for the attested diversification of uses, as we will explain in the following sections. This analysis crucially hinges upon a proper understanding of 'the present' and 'perfectivity', which we both define in epistemic terms at the most abstract level of definition, in line with what has been proposed in Cognitive Grammar (Langacker 1987, 1991) for the analysis of the English present and with some additions from Botne & Kerschner's (2008) conception of the present in Bantu. In Section 5.1, we outline our analysis of the present at a more schematic, modal level as well as at a more specific, temporal one. In Section 5.2, we will look into the aspectual properties present-tense markers may have by analyzing some data on French and English and we will show that zero in Sranan patterns as a present perfective marker. In Sections 5.3 to 5.5, we examine the consequences of this analysis in terms of present perfectivity, zooming in on, respectively, the 'present perfective paradox', the uses of the imperfective marker *e*, and the (temporally) nonpresent uses of zero.

5.1. *The present*

We conceive of any present-tense marker (independent of its aspectual value) as a marker of *epistemic immediacy* at the most schematic, abstract level of definition: it anchors, or *grounds*, a situation within the conceptualizer's immediate reality. This grounding process is described in Langacker

(1991:Chapter 6) in terms of idealized cognitive models. Although the description pertains to tense and modals in English, nothing prevents its application to other languages, such as Sranan.

The most schematic model, underlying all tense (and modal) grounding predications in English, is the basic epistemic model, depicted in Figure 1.
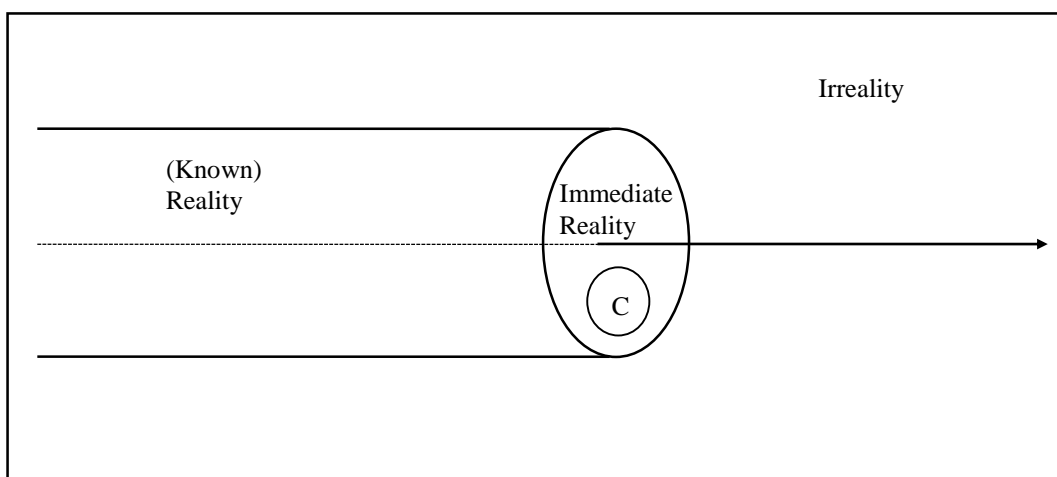

Figure 1.

Basic epistemic model (Langacker 1991:242)

Known reality (conceived of in Cognitive Grammar as an ever-evolving cylinder) comprises everything a conceptualizer (C) considers to be real and is distinguished from irreality, consisting of everything that is not regarded as real (because it is not known by the speaker, or because she thinks it is irreal, e.g. (logically) impossible). Within the realm of known reality (henceforth 'reality'), a proximal/distal distinction is made: immediate reality – 'reality in its latest stage of evolution' (Langacker 1991:243) – includes situations that belong to the speaker's ground (the speech event, its immediate circumstances, and everything the speaker considers to be structurally real), while the rest of reality consists of those situations that are in some way distant from the speaker (but no less real). There are thus two axes of opposition, real versus irreal and

immediately real versus nonimmediately real, along which, according to Langacker, the tense markers and modal auxiliaries in English are distributed: immediate reality is marked by the present tense (zero), without a modal auxiliary, nonimmediate reality is marked by the past-tense marker (*-ed*), again without a modal auxiliary. Whenever a modal auxiliary is used, this indicates that the situation is conceived of as part of irreality.

There are two elaborations of the basic epistemic model, adding more specific details to the overall conception: the elaborate epistemic model and the time-line model. For the present purposes, only the latter is directly relevant (the former pertains to the semantics of modals in English). As can be seen in Figure 2, the time-line model incorporates the time of speaking, indicated by the squiggly line, and comprising the final stage of reality from which the speaker conceptualizes a situation, and a temporal axis along which reality continuously evolves.
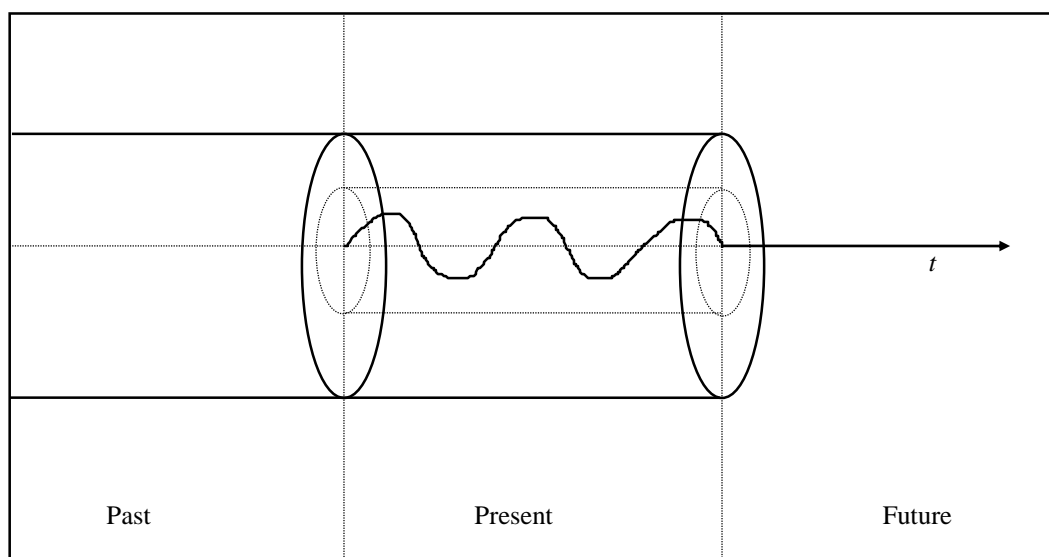
Figure 2.

Time-line model (Langacker 1991:244)

Thus, at a more specific level, immediate and nonimmediate reality are instantiated by the temporal/tense categories 'present' and 'past'. In other words, the English present- and past-tense markers can be defined at two levels: at the most abstract level they indicate, respectively, epistemic immediacy and epistemic nonimmediacy in reality, while at a more specific, temporal level their prototypical values involve present- and past-time reference.

At the temporal level, the present tense involves coincidence with the time of speaking, as indicated in Figure 2. In his conception of the present tense in English, Langacker (1991:250-252) conceives of this coincidence in a very narrow sense: in his view, the present indicates *full and exact coincidence with the time of speaking*. Thus, since the speech event always has a certain time depth, the present is not treated as punctual. This configuration is depicted in Figure 3, in which the time of speaking is indicated by the boxed squiggly line. The present tense, like any tense marker, imposes an immediate scope (IS$_T$) that delineates that part of the overall conception which is focused upon, *in casu* the entire event (nothing more and nothing less). This segment that is focused upon is put in bold to indicate that it constitutes the expression's *profile* (or conceptual designatum). The *maximal scope* (MS) includes those configurational aspects that are not focused upon but that are nevertheless relevant for the overall semantics of the construction at hand (in the case of Figure 3, MS does not contain anything except for a conception of time).
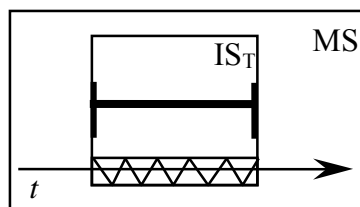

Figure 3.

Full and exact coincidence

Thus, if we claim that (part of) the semantics of zero can be captured by analyzing it as a present-tense marker and if we adopt Langacker's conception of tense, this means that the zero verb form ought to indicate epistemic immediacy in current reality at the most schematic level, and full and exact coincidence with the time of speaking at a more specific, temporal level. In the following section, we will show, by looking at present-tense markers in other languages than English, that the latter statement requires some nuancing, since, at this level, the aspectual value of the present-tense marker needs to be taken into account as well.

However, we first have to point out that Langacker's treatment of tense markers as indicators of the epistemic status of a situation is echoed in the analysis of tense and aspect in Bantu languages by Botne & Kershner (2008), who cut up cognitive space into two 'worlds' or domains: the P-domain is the world of inclusion, comprising the speech event, while the D-domain, or the world of dissociation, involves detachment from the deictic *origo*. This difference between the P- and D-domains is not only to be understood in temporal terms (contemporal versus noncontemporal – the latter comprising past and future), but also in modal (realis versus irrealis) and spatial terms (here versus not here), without there being any hierarchical relation between these various kinds of verbal deixis (Botne & Kershner 2008:158-160). While we uphold Langacker's view, according to which tense is essentially epistemic in nature and temporal at a less basic level of conceptualization, Botne & Kershner's analysis forms an interesting addendum, as they conceive of the P-domain as not only comprising situations that are actually present, but also past and future situations that still, in a way, include or evoke the present. Such 'presentified' expressions of past and future are coined *tenors*, rather than tenses (Botne & Kershner 2008:167). Past tenors, for instance, refer to states or events that have current relevance and that are thus perfect (which is regarded by Bonte & Kershner (2008:167) as a kind of tenor and not as an aspectual category), or whose location is adjacent to the time of speaking (expressions with *yesterday*,

last year). Genuine past tenses, on the other hand, involve a process of dissociation, whereby situations are relegated to a domain/world that does not include the time of speaking, giving rise to, for instance, (remote-)past or irrealis interpretations. As we will see, our interpretation of the semantics of zero in Sranan borrows many things from Langacker's (1991, 2001) analysis of tense marking in English. In this, it diverges in important respects from what is proposed by Botne & Kershner (2008) – who, for one thing, explicitly reject the view of the present in English indicating full and exact coincidence with the time of speaking –, yet their contribution allows us to analyze the attested past perfective interpretations of zero with dynamic verbs as derived from its basic 'presentness', since, in this use, the zero form seems to pattern as a past tenor (belonging to the P-domain) rather than as a past tense, as we will show in Section 5.5.3.

5.2. *The present tense in relation to grammatical aspect*

In this section, we introduce a small excursion on the semantics of the English simple present from a comparative perspective, as there appear to be striking parallels between its uses and those of zero. Langacker's claim that the present tense indicates, at the temporal level, full and exact coincidence between the event and speech event may seem 'naïve' at first sight (Langacker 1991:250). Yet, in Langacker (2001), he convincingly shows its usefulness for the analysis of the various uses of the English simple present. One uncontroversial type of context that clearly meets the requirement of full and exact coincidence are performative expressions, in which the designated event and the speech event are actually one and the same:

(29)   *I hereby* **promise** *that I will never do it again.*

On the other hand, in contexts where the time of speaking and the designated event are not fully and exactly coincident, the simple present tense cannot be used felicitously. Instead, the present progressive has to be introduced:

(30)   *I *walk/am walking home right now.*

This restriction does not seem to be relevant for, for instance, the French simple present, which can be used to convey present-time reference irrespective of whether there is full and exact coincidence, as can be seen in (31) and (32):

(31)   *Je promets   que je ne le   ferai*
       1SG promise.PRES.1SG that 1SG NEG OBJ.SG.N   do.FUT.1SG

       jamais   plus.
       never   again

       'I promise that I will never do it again.'

(32)   *Là,   maintenant, je rentre   à   la   maison.*
       now   now   1SG return.PRES.1SG LOC DEF.SG.F house
       'Right now, I'm returning home.'

If we want to adhere to Langacker's definition of the present tense as involving full and exact coincidence with the speech event and apply it to other languages than English, then we have to explain why the French simple present (just like its Dutch and German equivalents, for that matter) does not seem to behave so strictly in this respect.

The answer, in our view, resides in the specific aspectual contours which these present-tense markers impose. That is, we contend that a full-fledged account of the semantics of a present-tense marker in an individual language

needs to specify whether it concerns a perfective, an imperfective or an aspectually ambiguous present-tense marker. This entails concretely that, next to the scope imposed by the present, we suggest that present-tense markers impose an aspectual scope too. Recall that perfective aspect has been defined as involving a bounded view on a situation in its entirety, while imperfectivity involves an unbounded perspective (i.e. potential boundaries are put in the expression's maximal scope). The configurations in 4a and 4b thus represent the two aspectual viewpoints on an event (whereby IS_A stands for the aspectual scope).
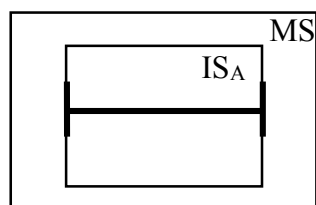
Figure 4a.

Perfective aspect
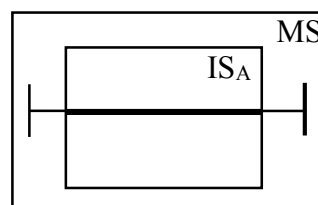
Figure 4b.

Imperfective aspect

Recall as well that this perfective/imperfective opposition does not only pertain to viewpoint, but also has epistemic implications: having a full view on a situation implies full knowledge, whereas imperfectivity involves partial knowledge (Section 3.1.2).

The parallels between Figure 4a and Figure 3 are unmistakable. If the two figures are superimposed, as is the case in present perfective construals, IS_T and IS_A coincide, as indicated in Figure 5.
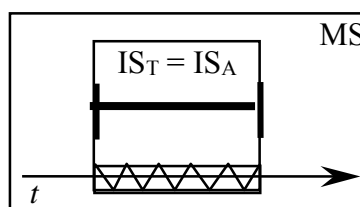

Figure 5.

Perfective present

This, we believe, constitutes a more precise description of the semantics underlying markers such as the simple present in English – which we thus take to be perfective, as is also proposed in Brinton (1988:16) and Giorgi & Pianesi (1997:163-166) – and, as we will show, the zero verb form in Sranan. For English, this entails that the present-tense paradigm is aspectually divided: while the simple present involves a complete view, the present progressive entails an unbounded, partial perspective, in which case IS_T and IS_A are not the same. As a consequence of the internal perspective imposed by IS_A in the configuration of the progressive (which behaves like any imperfective marker in this respect), the segment of the event located within this scope is given a stative profile (indicated in bold in Figure 4b), which is unbounded and, importantly, contractible (just like a genuine state).[13] Thus, any segment of that part of the event that is within IS_A is representative for the imperfectivized event as a whole (Langacker 2001). This also holds for the part delimited by the present tense, which imposes its scope within IS_A (cf. Figure 6). By virtue of this contractibility, there is still full and exact coincidence between the time of speaking and (a representative part of) the event.
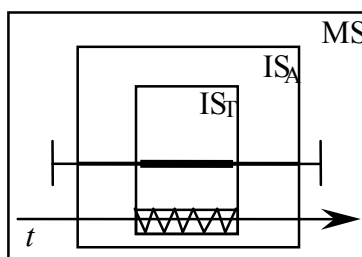

Figure 6.

Present progressive

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[13] Note that, even though the segment in IS_A is put on a par with stative situations, there is still a crucial difference between states and imperfectivized dynamic situations (or 'derived states') in that the latter crucially involve backgrounded boundaries (De Wit & Patard forthcoming).

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In languages such as French, it seems that the simple present is aspectually ambiguous: depending on the context, it can construe IS_A and IS_T as coinciding (perfective) or not (imperfective). Consequently, the present progressive in French is comparatively much less grammaticalized (De Wit and Patard forthcoming).

Since we analyze zero in Sranan as a present perfective marker, just like the English simple present, this entails that zero-marked situations are construed as belonging to the speaker's immediate reality (or P-domain), while at the same time prototypically involving full and exact coincidence with the present at a more specific, temporal level of analysis.[14] The consequences of this analysis and how it gives rise to the attested usage types of zero in Sranan are presented in Sections 5.3 to 5.5.

5.3. *Present-time reference in Sranan, in relation to lexical aspect: the 'present perfective paradox'*

In this section, in which the focus returns to Sranan, lexical aspect comes into play. If, as we assume, zero is a present perfective marker, then this has different consequences for different actionality types. For states, which are contractible, full and exact coincidence with the speech event is conceptually straightforward. Just like with derived states (i.e. imperfectively viewed events, cf. Figure 6), that part of a genuine state that is delimited by the scopes imposed by zero can count as a full instance of the entire state, both in terms of viewpoint and in terms of knowledge (cf. Langacker 2001:262 on present states in English). In Figure 7, we can see that a representative part of the state is included in the present and perfective scopes, while the state continues (within the overall

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[14] Remark that this analysis of zero in terms of present perfectivity is reminiscent of Voorhoeve's (1957, 1962), claim that the bare verb form indicates present tense and completion at the same time, even if, of course, perfective and completive aspect are not the same categories (Comrie 1976:18-19).

cognitive domain of time) outside the boundaries imposed by the present tense (reflected in MS).
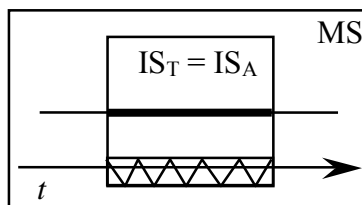

Figure 7.

Stative present

In our view, this is the reason why the standard interpretation of zero-marked stative verbs in Sranan is present. In this respect, we differ from Sasse (1991) and Breu (1994:28-29), according to whom states can never be viewed perfectively (cf. Section 3.1.2). Our definitions (states are contractible and perfective aspect involves a full view and full knowledge) do allow these two meanings to be brought together and may, in fact, offer an explanation for other languages in which perfective markers also combine with stative verbs (cf. Bybee 1994:77 for examples).

For dynamic situations, however, it is more problematic to be fully and exactly aligned with the speech event and to be fully known at the time of speaking. The basic characteristic of dynamic situations which distinguishes them from stative ones is the fact that they are not contractible. If one wants to refer to such bounded, noncontractible events in the present, two problems occur: one durational and one epistemic (Langacker 2001:263). First, it usually takes longer for an event to occur than for a speaker to describe it, or vice versa, in some cases; hardly ever do description and event take up an equal amount of time (durational problem). Moreover, in order to verify that a dynamic event is taking place in the present, this event normally needs to have been initiated already (epistemic problem). Most often, then, there is no full and exact

coincidence between the speech event and dynamic situations, as depicted in Figure 8.
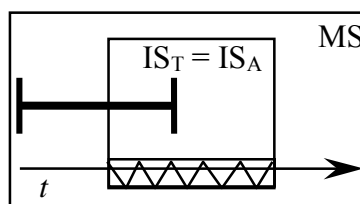

Figure 8.

Dynamic present

Therefore, while zero-marked stative verbs in Sranan readily allow present-time reference, zero-marked dynamic verbs do not. Hence, paradoxically, the prototypical temporal interpretation of zero (i.e. present-time reference), which straightforwardly elaborates its basic meaning, is actually ruled out in the majority of its uses. Observe that this is also the case in English, where the simple present is (despite its name) in fact rarely used to refer to present-time situations (Langacker 2001).

In view of the durational and epistemic problems involved in the present perfective construal of an event, the categories 'present tense' and 'perfective aspect' are traditionally regarded as incompatible (e.g. Comrie 1976: 66-71; Dahl 1985: 79-81; Bybee et al. 1994: 83; Malchukov 2009). This infelicity is referred to by Malchukov (2009) as the 'present perfective paradox'.[15] While we certainly recognize these conceptual alignment problems, we propose to conceive of the combination of perfective aspect and present tense as giving rise to specific interactions in the aspecto-temporal paradigms of languages in which

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[15] This 'present perfective paradox' is also known as the 'bounded event principle' (Smith 2003) or the 'Punctuality Constraint' (Giorgi & Pianesi 1997: 163). Schaden (2011) employs a similar term, 'present perfective puzzle', to refer to a slightly different, yet related phenomenon, i.e. the fact that, in some contexts, a perfective reading is not available for aspectually underdetermined present-tense markers.

such problems have been attested, rather than considering it to be impossible. We claim, more specifically, that languages such as English and Sranan have developed strategies to deal with the 'present perfective paradox'. In English, as we have seen, a progressive has to be used for present-time reference with dynamic verbs (*I am working right now*), but one may also assign an alternative, general-validity interpretation to dynamic situations in the simple present (*I work on Sundays*). Other languages in which the 'present perfective paradox' is manifested have developed other strategies. In North-Slavic languages and Slovene, for example, perfective verbs are often given a future interpretation in combination with the present-tense marker (Galton 1976). On the other hand, as we have seen in Sections 1 and 2, in many African and Atlantic English-based creole languages, dynamic verbs are typically given a past perfective or perfect interpretation in combination with what functions as a present-tense marker for stative verbs. Again, present-time reference with dynamic situations requires imperfectivization (by means of a progressive or an imperfective construction). The fact that creole languages, such as Sranan, as well as their substrate languages resort to a different strategy to handle the 'present perfective paradox' than, for example, English is most probably due to differences between the aspecto-temporal paradigms of the languages involved. Unlike English, Sranan disposes of a grammaticalized marker of habitual aspect, used in both present- and past-time contexts, i.e. the imperfective marker *e*. Thus, the habitual slot is already occupied in Sranan, such that there is no need for (or even a constraint on) the use of zero in this context, while for the English simple present a habitual interpretation constitutes a natural alternative reading. On the other hand, English does have a dedicated perfect construction ('*have* + *-ed*-participle'), and thus a 'move' to the past would be less straightforward for the English simple present than it is for zero. Existing gaps in the aspecto-temporal paradigm of a language thus seem to play a decisive role in the type of strategy chosen. Note, further, that it is not unexpected from a cognitive perspective that a past perfective strategy should have been developed and adopted in various

languages, such as Sranan: in order to conceive of a dynamic event in its entirety, a prerequisite of ('present') perfective marking, it already needs to have taken place.[16]

In other words, whereas zero in Sranan basically (i.e. semantically) functions as a present-tense marker, indicating epistemic immediacy in all of its uses, the perfective viewpoint it poses makes it liable for more specific present-time reference only with states. With dynamic verbs, a (temporally) nonpresent reading is assigned or the imperfective marker *e* is added to achieve present-time reference. In Section 5.4, we briefly address this function of *e*. Section 5.5, then, is dedicated to the various context-specific uses of zero that do not involve actual coincidence with the present. We will show that each of these uses can be explained as derived from the 'present perfective paradox', i.e. as arising as a consequence of the incompatibility of present-time reference and perfectivity, and that they, despite not being temporally present, only involve situations that belong to the speaker's P-domain or immediate reality, as opposed to the genuine past-tense marker *ben*, which implies dissociation.

5.4. *Imperfective* e

The preverbal marker *e*, being an aspectual marker solely, can combine with *ben* to refer to past imperfective events or with zero to refer to present imperfective events (just like –*ing*, in English, can combine with a simple past or a simple present auxiliary). Here, we only focus on the latter. Just like in other languages in which the 'present perfective paradox' arises, the imperfective marker *e* is (barring some exceptional contexts discussed in Section 4.1) obligatorily introduced to refer to ongoing events in the present (as in (33)), while with states, *e* is not normally used outside habitual contexts (contrary to

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[16] This may be regarded as a cognitive explanation for the default readings of stative and dynamic verbs described by Welmers (1973:346-347) under the label 'factative' (cf. Section 2).

Sasse (1991) and Breu (1994)'s prediction that stative verbs always take imperfective marking).

(33) *Mi no e si wan boto, ma mi e si tu boto.*
1SG NEG IPFV see one boat but 1SG IPFV see two boat
'I don't see one boat, but I see two boats.' (Maskita 64)

Such present-time reference is made possible because *e*, like any other imperfective construction, gives an unbounded an homogeneous profile to dynamic events, making them contractible. At the same time, zero grounds the event in the present.

Next to conveying a progressive reading, *e* is also used to denote habitual, characteristic situations, with dynamic verbs as well as with stative ones, according to Winford (2000) (cf. Section 3.1.2). The rise of such a habitual meaning, which occurred later in the evolution of Sranan (Winford & Migge 2007:85-86) has turned *e* into a marker of imperfective (and not just progressive) aspect, according to Comrie's definition (1976:28):

(34) *Dati wani taki, pe den sma e go go*
that want say where DEF.PL person IPFV go go

prei karta.
play card
'That is, that's where the people go to play cards.' (Karta 75)

In its habitual reading, the imperfective construal again retains present-time reference as a central configurational element, yet this time there is no actual coincidence between the time of speaking and a (representative part of a) profiled event. That is, the imperfective marker now refers to a series of multiple, repeated events in the actual world (or 'plane'), i.e. a habit. This habit need not

be instantiated at the time of speaking (in (34), for instance, people need not be playing cards while the speaker is talking). However, it is always, if only *mentally*, 'present' at the time of speaking, by virtue of the structural (predictable) nature of the resultant conceptualization. As Langacker (2001:269-270) puts it, a habit invokes a *virtual, higher-order scheme*, which is a kind of *type* representation corresponding to an open-ended set of actual instantiations of this habit. This higher-order situation is itself unbounded and homogeneous, as it is imperfectivized by means of *e*, and thus it is contractible, just like states.[17] The only difference with the latter is that the coincidence with the present takes place at a virtual level of representation (i.e. there is no actual full and exact coincidence). Figure 9 depicts this full and exact coincidence between the speech event and a virtual representation of the designated situation type, connected with actual tokens (in this case, dynamic events) via correspondence lines.

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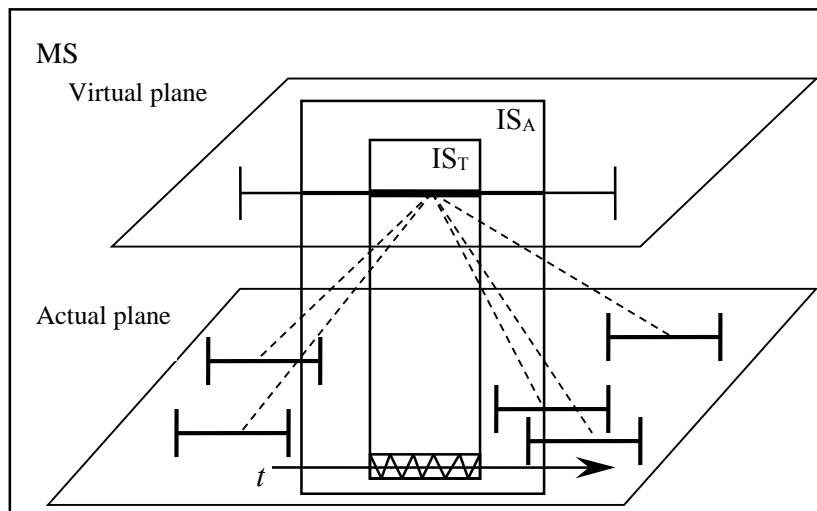
[17] This use of *e* to refer to habitual situations differs from the similar use of the progressive in English. Reference to a habit by means of *be + -ing* in English has the effect of turning the habit in question into a temporary one, which is apparently not the case in Sranan. This is perhaps due to the strong link between the simple present and the expression of structural information in English (Brisard 2002). Consequently, the English (present) progressive is only needed to indicate less structural situations (such as habits that are temporary). In Sranan, the simple form (zero) is not associated with structural information, and it takes a separate construction (*e*) to convey such meaning.

Figure 9.

Habitual imperfective; *e*

5.5. *'Nonpresent' usage types of zero*

In this section, we discuss those uses of zero that are 'nonpresent' in the sense that they do not involve actual coincidence between the time of speaking and the denoted event. Yet, again, we will argue that these uses *are* present at a more schematic level of definition.

5.5.1. *Present perfect: Present relevance*

In examples involving a present-perfect reading, there is no temporal coincidence between the zero-marked event and the speech event. As already implied in the term 'present perfect', there is nevertheless reference to the time of speaking in that the past event has some current relevance for the present. In fact, it is a contracted, representative sample of the (resultant) state following the past event that is made to coincide with the present. As can be seen in Figure 10, the representative part of the end state coinciding with the present (in the immediate scopes imposed by zero) is given maximal prominence (and constitutes the reference time), whereas the past event is deferred to the expression's MS.
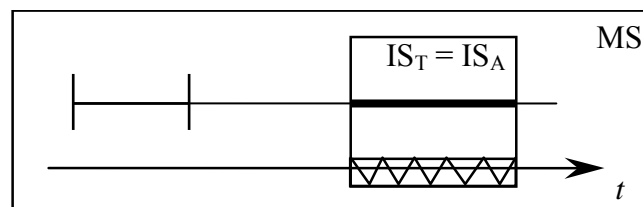

Figure 10.

Present perfect

With some present perfect uses of zero (resultative, continuative, and 'hot news'), this link with the present is quite clear. In (20), for instance, the denoted situation (*volg* 'follow') obviously remains relevant for the speaker at the time of speaking. For experiential uses of zero (as in (18) and (19)), this link with the present may seem somewhat less obvious, in which case the past event gets a more prominent status. Still, the profile remains present, as is reflected in the presence of adverbials, such as *kba* ('already'). One may hypothesize that use of *kba* is preferred in these experiential perfect uses so as the underscore the present relevance of the denoted event.

By assigning a present-perfect meaning to zero-marked dynamic predicates, Sranan avoids the epistemic and durational problems involved in aligning events with the present (cf. Brisard & Meeuwis (2009) for a similar analysis of the *−í* suffix in Lingála). In fact, with this use of zero, the resultant end state is not only part and parcel of the speaker's conception of immediate reality, but there is also still actual temporal coincidence with the present, even though this coincidence does not involve the original event and is, in some uses, more subjectified (i.e. given less prominence, relatively – cf. Langacker 2006).

5.5.2. *Zero in narrative contexts*

As we have observed in Section 4.3, the bare verb form can be used in narratives set in the past to refer to states and foregrounded sequential events, which could be translated by means of a simple present or a simple past. Depending on the degree of 'presentness' one assumes this use entails, two analyses are possible: either zero patterns as a historical present here, or rather as a past perfective.

On the assumption that zero behaves like a historical present, it is, once more, similar to the simple present in English, which is also typically used in narratives to construe bounded past situations *as if* they were present. Thus, Langacker's (2001:269) analysis of the English present tense can provide us with the conceptual tools to reconcile this actual past-time reference with our analysis of zero as a present perfective marker, again via a virtual construct. As with

habituals, there is no actual coincidence between the event and the time of speaking: the past situations are construed as virtually present. More precisely, these narrated events constitute some virtual document that can be mentally 'replayed' at any given moment by the conceptualizer (cf. Figure 11). In such a configuration, the aforementioned epistemic and durational problems are once more avoided: the speaker already possesses the appropriate knowledge about the event(s) in question and can recall them at will, so as to make them fully and exactly coincident with the speech event.[18]
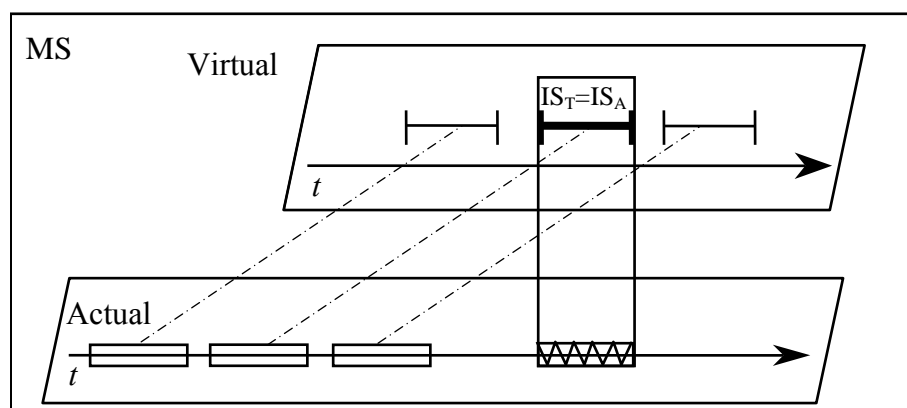

Figure 11.
Historical present[19]

Note that a past-perfect use of zero, as in (22), results from a combination of our analysis of the perfect with our analysis of zero as a historical-present tense: an actually past, resultant state is set in the present via a virtual plane of representation. We thus account for the occasional use of zero to denote

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[18] The fact that narrative events are typically viewed in their entirety is also indicated by the existence of dedicated 'narrative perfective' markers, as in Pichi (Yakpo 2009:196-198). In narrative contexts, the boundaries implied by such perfective viewpoint on a situation derive from the events that precede and follow the situation.

[19] Figure 10 involves events – for states the configuration remains the same, apart from the fact that only a representative part of the profiled state is made to coincide with the present.

pluperfect events, instead of *ben*, whose use may have seemed more appropriate given its distancing function.

However, this historical-present analysis primarily relies on analogies with the simple present in English, whereas one might just as well propose that zero functions more like a past perfective tense in narratives, such as the *passé simple* in French. On this analysis, there is no full and exact coincidence with the present anymore, not even on a virtual level. As we have argued in Section 5.3, we claim that the rise of such a past perfective interpretation constitutes but another strategy to avoid the alignment problems associated with the 'present perfective paradox'. In having chosen this interpretation, Sranan seems to have based itself on its substrate languages, in which similar strategies exist (cf. Sections 1 and 5.3).

Yet there are still clear traces of epistemic 'presentness' to be found in these past perfective uses of zero, which become most obvious if one compares them to the occurrences of the actual past-tense marker *ben* in narratives. Recall that the choice of *ben* or zero in narrative contexts depends on whether the speaker wants to present the situation as having a sense of 'current relevance' (Winford 2000:408) or whether she wants to distance it 'from some other situation she wishes to foreground' (*ibid.*), as illustrated in example (21). This, according to Wilner (1992) and Winford (2000), indicates that *ben* functions as a relative-past marker; yet, as we have argued in Section 2, it is not clear how this analysis accounts for the 'irrealis' uses of *ben*, which do not involve actual past-time reference. Moreover, even if one were to argue that these modal meanings are secondary uses of a (relative) past tense, derived from its basic temporal meaning, this analysis does not explain the *distancing* function of *ben*, which seems to unite all of its uses (temporal *and* modal) and, crucially, makes it distinct from zero. In the next section, in which we discuss the past perfective uses of zero in narrative as well as nonnarrative contexts, we will argue that the foreground/background distinction expressed by zero versus *ben* reflects the basic epistemic 'presentness' of the former and is indicative of a schematic

epistemic opposition between the two markers: they refer to different regions of conceptual space, viz., immediate reality and nonimmediate reality, or the P- and D-domain in the words of Botne & Kerschner (2008).

5.5.3. *Past perfective*

Botne & Kerschner's (2008) analysis of tense and tenor in terms of cognitive domains is useful to account for past perfective uses of zero in narrative as well as nonnarrative contexts, as it is geared to the analysis of the complex tense systems of Bantu languages in particular, which typically encode various degrees of remoteness, especially in the past domain. Botne & Kerschner (2008) show that languages can have various markers of past tense and tenor: while one locates a situation in the noncontemporal past domain (or D-domain), the other situates it within the speaker's present P-domain, i.e. the contemporal world, which also comprises past situations that are still prevailing in the present.

While Bantu languages often have various markers to refer to situations within the same domain (for instance, separate present-tense, perfect, and near past-tense marking in the P-domain), we claim that Sranan assigns uniform marking to all situations located in one and the same domain: zero for the P-domain (which we thus put on a par with the domain of immediate reality) and *ben* for the (past) D-domain (i.e. nonimmediate reality). In narratives, this tenor/tense contrast between zero and *ben* is concretely instantiated in the foreground/background distinction, whereby zero is used to create a sense of vividness. In other words, even if a clear sign of actual present-time reference of zero-marked verbs in narratives is lacking (so that there is no evidence for a historical-present reading), we claim that they nevertheless refer to situations that are only located in a past domain that is somehow mentally available to the speaker at the time of speaking (i.e. situations that are part of her P-domain), so that the denoted events are presented in a more lively manner. *Ben*, on the other hand, puts situations in a nonimmediate, past world and expresses that there is no implicit relation with the present, not even a subjective one.

This analysis also holds for past perfective uses outside narrative contexts. In Section 4.4, we have encountered some zero-marked verbs referring to situations that are temporally contiguous to the present. This use of zero is completely in line with its 'presentness'. In fact, in many languages, the P-domain (or the domain of immediate reality) also includes situations that happened in the recent past (cf. Section 5.1) and present and recent past receive the same marking (cf. Comrie (1985:91-93) for illustrations). Thus, just like with past perfective uses in narrative contexts, noncontractible situations are deferred to a time sphere that is not present, but nevertheless related to it.

The opposition between zero and *ben* in terms of past tenor and past tense can also account for those examples of zero that involve situations that are set in a non-recent (i.e. non-hodiernal) past in nonnarrative contexts. Examples (35) and (36), coming from questionnaire sentences, nicely illustrate the difference between *ben* and zero in terms of epistemic and temporal distance:

(35) [Q: What did you found out when you came to town yesterday?]
Answer: [The king DIE.]

*A kownu **dede**.*
DEF.SG king die
'The king died.' (Q79)[20]

All four informants indicate that the use of *ben* is impossible here, even though we are dealing with a past situation. This is because *ben*, as opposed to zero, indicates a break with the present: its use would only be appropriate if the king had come back to life after the speaker had found out about his death, as two informants point out. One informant adds that the use *ben* would also be possible if the finding out took place in a very remote past (which is not the case in (35)).

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[20] Although, in example (35), the event of finding out is recent, the zero-marked situation *dede* ('die') did not necessarily take place in a recent past.

On the other hand, all four informants judge the use of zero infelicitous in contexts such as (36):

(36) [Looking at a picture of a house which has been torn down.]
      [Who BUILD this house?]

Suma	***ben***	***bow***	*a*	*oso*	*disi?*
who	PAST	build	DEF.SG	house	this

‘Who built his house?’ (Q93)

This example again illustrates that zero can only be used to denote situations that have some present relevance: since, in (36), the house no longer exists, use of *ben* is obligatory.

Some of the past perfective examples we have encountered are more difficult to account for, since the link with the present is of a more subjective nature. However, one thing that appears to unite all examples of such past perfective uses of zero is that they always feature indications of ‘pastness’ somewhere in the preceding context. These indications thus seem to be vital to conjure up the past world, i.e. they ‘build’ the past space which includes the zero-marked situation(s). Zero itself cannot trigger a transfer to the past, only adverbs and *ben* can function as so-called (past) ‘space builders’ (Sweetser & Fauconnier 1996:10). We contend, once more, that the use of the zero form signals epistemic immediacy at the most schematic level of definition in these past perfective contexts: the speaker is already ‘in’ the past domain and perceives, within this domain, one or more completed events, about which she has full knowledge (since they happened in the past and are regarded as real, cf. Section 5.5.4). Again, the past-tense marker *ben* indicates distance (as it triggers the shift to the past domain), while zero indicates proximity to the speaker, even if there is no temporally present interpretation possible.

In our view, assigning a past perfective interpretation to zero avoids the epistemic and durational problems involved in taking on a perfective construal

of present-time dynamic situations: since these situations are deferred to the past, there is no requirement of full and exact coincidence with the speech event (or, for that matter, with some past event that functions as the reference time) and a bounded perspective can more easily be adopted. However, as has been illustrated in examples (35) and (36), there are limits to the degree of 'pastness' that can be reached by such zero-marked dynamic situations, in that they need to maintain some conceptual relation with the present (i.e. they remain in the P-domain or immediate reality), and will not enter into the domain of *ben* (the D-domain or nonimmediate reality). One might argue that these uses of zero as a past-tenor construction form a continuation of the present-perfect uses of zero (as depicted in Figure 10), whereby the past event has now become maximally prominent, while its present relevance is highly backgrounded (subjectified), yet not gone. Note that zero-marked stative verbs are never given such past-time interpretation outside narrative contexts, since they have a present interpretation by default and there is no conceptual reason to develop an alternative reading. Therefore, the only way to refer to states in the past that are no longer relevant for the present is by means of *ben*.

5.5.4. *Conditional clauses*

Finally, the use of zero in noncounterfactual conditional clauses contrasts with that of *ben* in counterfactual conditionals. In example (37), taken from Wilner (2000), the speaker uses the past-tense marker in both the protasis and the apodosis of the conditional to express irreality:

(37) *Efu mi no **ben** **abi** yu, dan fa mi **ben***
      if   1SG NEG PAST   have   2SG.OBJ then   how 1SG PAST

      sa   ***bigin*** *dan?*
      FUT(MOD)   begin   then

'If I didn't have you, then how would I begin?'

Other modally colored contexts cited by Wilner (2000) also typically feature *ben*, such as expressions of probability, politeness, and (mitigated) suggestion. Zero, on the other hand, figures in more factual statements, including *until*-clauses as in (27).

This distinction is again in line with our analysis of zero in terms of epistemic immediacy at the most schematic level of definition: situations referred to by zero-marked verbs in conditional clauses are, iconically, construed as part of the speaker's immediate reality, while *ben* marks epistemic distance (i.e. hypotheticalness, counterfactuality, etc). The use of zero in conditional clauses is thus epistemically motivated, since the speaker possesses full knowledge about (i.e. can impose a present perfective viewpoint on) a situation that she conjures up herself in some fictive, hypothetical space (Fauconnier 1997). By the same token, the event in the conditional construction can be freely manipulated such that its conception (its 'virtual occurrence') coincides exactly with the time of speaking. These uses of zero in noncounterfactual conditionals thus pose no epistemic and durational problems.

6. Conclusion

We have argued in this paper that the zero construction in Sranan can be semantically analyzed as a present perfective marker. In the most abstract terms, this means that zero-marked verbs are situated in the speaker's contemporal world or immediate reality. At a more specific level, zero imposes a temporally present and aspectually perfective scope on the situation in profile, i.e. it requires full and exact coincidence with the time of speaking. Given the intrinsic properties of dynamic verbs, such full and exact coincidence is hardly ever possible, and, consequently, the combination of such verbs with zero marking

gives rise to a conceptual alignment problem known as the 'present perfective paradox'. Sranan has developed various strategies to overcome this incompatibility problem by creating configurational alternatives that preserve the (epistemic) 'presentness' of zero-marked predicates: either originally dynamic situations are imperfectivized by means of *e* (in which case there is actual temporal coincidence), or zero-marked dynamic verbs are given alternative readings which still locate the event in the conceptualizer's immediate reality by taking recourse to cognitive constructs involving virtual entities and processes of subjectification (whereby the present relevance of a past event can sometimes be quite backgrounded). This analysis has been based on a corpus study of recorded speech data and native speaker elicitations and involves the application of an epistemological and unidimensional approach to aspect. This empirical study has enabled us to verify which zero-marked verbs allow a present reading, which types of verb require imperfectivization or trigger alternative interpretations with zero and which interpretations then arise.

We have thus proposed a new, cognitively based, and unified analysis of a marker that has previously hardly been considered to contribute *concretely and systematically* to the meaning of the clause. A similar analysis can most likely be proposed for equivalent structures in other Atlantic English based creoles and in their substrate languages. We assume, in any case, that the source of the phenomena we have described (the conceptual incompatibility of dynamic verbs and a perfective present) is cognitive in nature. Consequently, this problem needs to be dealt with in every language in which the present-tense marker has a perfective value, even if grammars might vary in the way they handle them.

References

Ameka, Felix K. & K.E. Kropp Dakubu (eds), *Aspect and modality in Kwa languages*. Amsterdam: John Benjamins.

Ameka, Felix K. 2008. Aspect and modality in Ewe: A survey. In Ameka & Dakubu, 135-194.

Bertinetto, Pier Marco & Dennis Delfitto. 2000. Aspect vs. actionality: Why they should be kept apart. In Dahl, Östen (ed.), *Tense and aspect in the languages of Europe*, 189-226. Berlin: Mouton de Gruyter.

Bickerton, Derek

–   1975. *Dynamics of a creole system*. Cambridge: Cambridge University Press.

–   1981. *Roots of language*. Ann Arbor: Karoma.

–   1984. The language bioprogram hypothesis. *Behavioral and Brain Sciences* 7. 173-221.

Botne, Robert & Tiffany L. Kershner. 2008. Tense and cognitive space: On the organization of tense/aspect systems in Bantu languages and beyond. *Cognitive Linguistics* 19 (2). 145-218.

Breu, Walter.

–   1985. Handlungsgrenzen als Grundlage der Verbklassifikation. In Werner Lehfelt (ed.), *Slavistische Linguistik* 1984, 9-34. München: Otto Sagner.

–   1994. Interactions between lexical, temporal and aspectual meanings. *Studies in Language* 18 (1): 23-44.

Brinton, Laurel J. 1988. *The development of English aspectual systems. Aspectualizers and post-verbal particles*. Cambridge: Cambridge University Press.

Brisard, Frank

–   2002. The English present. In Brisard, Frank (ed.), *Grounding: The epistemic footing of deixis and reference*, 251-297. Berlin: Mouton de Gruyter.

–   2010. Aspects of virtuality in the meaning of the French *imparfait*. *Linguistics* 48 (2). 487-524.

Brisard, Frank & Michael Meeuwis. 2009. Present and perfect in Bantu: The case of Lingála. *Journal of African Languages and Linguistics* 30 (1). 21-43.

Bybee, Joan, Revere Perkins & William Pagliuca. 1994. *The evolution of grammar: Tense, aspect and modality in the languages of the world*. Chicago: University of Chicago Press.

Comrie, Bernard

–   1976. *Aspect*. Cambridge: Cambridge University Press.

–   1985. *Tense*. Cambridge: Cambridge University Press.

Dahl, Östen. 1985. *Tense and aspect systems*. Oxford: Blackwell.

de Swart, Henriëtte. 1998. Aspect shift and coercion. *Natural Language and Linguistic Theory* 16. 347-385.

De Wit, Astrid & Adeline Patard. Forthcoming. Aspect, modality and the progressive. The semantics of the present progressive in French, in comparison with English. *Languages in Contrast*.

Dik, Simon. 1989. *The theory of Functional Grammar*, volume 1: *The structure of the clause*. Dordrecht: Foris.

Essegbey, James. 2008. The potential morpheme in Ewe. In Ameka & Dakubu, 195-215.

Faraclas, Nicholas G. 1996. *Nigerian Pidgin*. California: Routledge.

Fauconnier, Gilles. 1997. *Mappings in thought and language*. Cambridge: Cambridge University Press.

Fleischman, Suzanne. 1995. Imperfective and irrealis. In Bybee, Joan & Suzanne Fleischman (eds), *Modality in grammar and discourse*, 519-551. Amsterdam: John Benjamins.

Galton, Herbert. 1976. *The main functions of the Slavic verbal aspect*. Skopje: Macedonian Academy of Sciences and Arts.

Giorgi, Alessandra & Fabio Pianesi. 1997. *Tense and aspect: From semantics to morphosyntax*. Oxford: Oxford University Press.

Gooden, Shelome. 2008. Discourse aspects of tense marking in Belizean creole. *English World-Wide* 29(3). 306-346.

Groot, A.H.P. de & A. Donicie. ca. 1950. *Ondrofeni sa leri yu: Tori's*. Paramaribo: N.V. Varekamp & Co. (http://www.dbnl.org/tekst/groo050ondr01_01/) (20 February, 2012)

Harley, Matthew. 2008. Tense, aspect and mood in Tuwuli. In Ameka & Dakubu, 291-330.

Holm, John *et al*. 2000. The creole verb: A comparative study of stativity and time reference. In McWhorter, 133-162.

Kamp, Hans & Christian Rohrer. 1983. Tense in texts. In Bäuerle, Rainer, Christoph Schwartze & Arnim von Stechow (eds), *Meaning, use and interpretation of language*, 250-269. Berlin: Mouton de Gruyter.

Kamp, Hans & Uwe Reyle. 1993. *From discourse to logic: Introduction to modeltheoretic semantics of natural language, formal logic and discourse representation theory*. Dordrecht: Kluwer.

Klein, Wolfgang. 1994. *Time in language*. London: Routledge.

Krifka, Manfred

–   1992. Thematic relations as links between nominal reference and temporal constitution. In Sag, Ivan & Anna Szabolcsi (eds), *Lexical matters*, 29-53. Stanford: CSLI.

–   1998. The origins of telicity. In Susan Rothstein (ed.), *Events and grammar*, 197-235. Dordrecht: Kluwer.

Langacker, Ronald W.

 –   1987. *Foundations of Cognitive Grammar*, volume 1: *Theoretical prerequisites*. Stanford: Stanford University Press.

–   1991. *Foundations of Cognitive Grammar*, volume 2: *Descriptive application*. Stanford: Stanford University Press.

–   2001. The English present tense. *English Language and Linguistics* 5. 251-273.

–   2006. Subjectification, grammaticization, and conceptual archetypes. In Athanasiadou, Angeliki, Costas Canakis, and Bert Cornillie (eds), *Subjectification: Various paths to subjectivity*, 17-40. Berlin: Mouton de Gruyter.

Malchukov, Andrej. 2009. Incompatible categories: Resolving the 'present perfective paradox'. In Hogeweg, Lotte, Helen de Hoop & Andrej Malchukov (eds), *Cross-linguistic semantics of tense, aspect and modality*, 13-32. Amsterdam: John Benjamins.

McCawley, James D. 1971. Tense and time reference in English. In Fillmore, Charles & D. Terence Langendoen (eds), *Studies in linguistic semantics*, 96-113. New York: Holt, Rinehart & Winston.

McWhorter, John (ed.), *Language change and language contact in Pidgins and Creoles*. Amsterdam: John Benjamins.

Migge, Bettina

–   1998. Substrate influence in creole formation: The origin of *give*-type serial verb constructions in the Surinamese plantation creole. *Journal of Pidgin and Creole Languages* 13(2). 215-265.

–   2000. The origin of the syntax and semantics of property items in the Surinamese plantation creole. In McWhorter, 201-234.

Migge, Bettina & Laurence Goury. 2008. Between contact and internal development. Towards a multi-layered explanation for the development of the TMA system in the creoles of Suriname. In Michaelis, Susanne (ed.), *Roots of Creole Structures*, 301-331. Amsterdam: John Benjamins.

Michaelis, Laura A. 2004. Type shifting in Construction Grammar: An integrated approach to aspectual coercion. *Cognitive Linguistics* 15(1). 1-67.

Nurse, Derek. 2008. *Tense and Aspect in Bantu*. Oxford: Oxford University Press.

Reichenbach, Hans. 1947. *Elements of symbolic logic*. New York: Collier-Macmillan.

Ruhl, Charles. 1989. *On monosemy: A study in linguistic semantics*. Albany: State University of New York Press.

Sasse, Hans-Jürgen

–   1991. Aspect and aktionsart: A reconciliation. *Belgian Journal of Linguistics* 6. 31-45.

–   2002. Review article. Recent activity in the theory of aspect: Accomplishments, achievements, or just non-progressive state? *Linguistic Typology* 6. 199-271.

Schaden, Gerhard. 2011. Introducing the present perfective puzzle. In Mortelmans, Jesse, Tanja Mortelmans & Walter De Mulder (eds), *From now to eternity* (Cahiers Chronos 22), 105-122. Amsterdam: Rodopi.

Seuren, Pieter A.M. 1981. Tense and aspect in Sranan. *Linguistics* 19. 1043-1076. Reprinted in: Seuren, Pieter A.M. 2001. *A view of language*. Oxford: Oxford University Press.

Smith, Carlota S.

–   1997. *The parameter of aspect*, 2nd edition. Dordrecht: Kluwer.

–   2003. *Modes of discourse*. Cambridge: Cambridge University Press.

Smith, Carlota S. & Mary S. Erbaugh. 2005. Temporal interpretation in Mandarin Chinese. *Linguistics* 43(4) : 217-256.

Smith, Norval. 1987. *The genesis of the creole languages of Surinam*. Amsterdam: University of Amsterdam dissertation.

Sweetser, Eve & Gilles Fauconnier. 1996. Cognitive links and domains. In Fauconnier, Gilles & Eve Sweetser (eds), *Spaces, worlds and grammar*, 1-28. Chicago & London: Chicago University Press.

Tatevosov, Sergej. 2002. The parameter of actionality. *Linguistic Typology* 6. 317-401.

van der Auwera, Johan. 2011. Standard Average European. In Kortmann, Bernd & Johan van der Auwera (eds), *The languages and linguistics of Europe: A comprehensive guide,* 291-306. Berlin: Mouton de Gruyter.

van de Vate, Marleen. 2011. *Tense, aspect and modality in a radical creole: The case of Saamáka*. Thesis submitted for PhD degree, University of Tromsø.

Velupillai, Viveka. 2002. *The tense-mood-aspect system of Hawai'i Creole English*. Regensburg: Repro Druck Ruckpaul.

Vendler, Zeno. 1957. Verbs and times. *The Philosophical Review* 66 (2). 143-160. Reprinted in: Vendler, Zeno. 1967. *Linguistics in Philosophy*. Ithaca: Cornell University Press.

Verkuyl, Henk J. 1993. *A theory of aspectuality: The interaction between temporal and atemporal structure*. Cambridge: Cambridge University Press.

Voorhoeve, Jan

–   1957. The verbal system in Sranan. *Lingua* 6. 374-396.

–   1962. *Sranan syntax*. Amsterdam: North-Holland.

Welmers, W. E. 1973. *African language structures*. Berkeley: University of California Press.

Whorf, Benjamin. 1956. *Language, thought and reality: Selected writings of Benjamin Lee Whorf.* Edited by John B. Carroll. Cambridge, Massachusetts: M.I.T. Press.

Wilner, John

–   1992. The use of *ben* in narrative texts in Sranan Tongo. Paper presented at the ninth biennial conference of the Society for Carribean Linguistics, Bridgetown, Barbados, August 1992.

–   2000. Non-temporal uses of *ben* in Sranan Tongo. *Society for Caribbean Linguistics Occasional Paper* 27.

Winford, Donald

–　　　　1993. *Predication in Caribbean English Creoles*. Amsterdam: John Benjamins.

–　　　　2000. Tense and aspect in Sranan and the creole prototype. In McWhorter, 383-442.

–　　　　2001. A comparison of tense/aspect systems in Caribbean English Creoles. In Christie, Pauline (ed.), *Due respect: Essays on English and English-related creoles in the Caribbean in honour of Professor Robert LePage*, 155-183. Mona: University of the West Indies Press.

Winford, Donald & Bettina Migge. 2007. Substrate influence on the emergence of the TMA systems of the Surinamese creoles. *Journal of Pidgin and Creole Languages* 22(1). 73-99.

Yakpo, Kofi. 2009. *A grammar of Pichi*. PhD Dissertation. Radboud University Nijmegen.