The interaction of grammatical aspect and lexical aspect has been a topic of interest to linguists for many years, yet only recently has more attention been focused on this topic specifically in relation to Bantu languages. The difficulty of mapping Bantu actional types onto the commonly accepted categorizations has resulted in new frameworks being proposed to take these complex lexicalizations into account. In this paper, we use Croft’s (2012) two-dimensional diagrammatic representations of events to represent the aspectual contour encoded by certain predicates in the South Tanzanian Bantu language Bungu [wun]. We investigate the semantics of the Progressive, Anterior, and Resultative aspects in Bungu, and by identifying the phases within each aspectual contour that are profiled by each of these grammatical aspects, we show that the particular interpretation of each aspect depends on the type of predicate that it modifies. By using Croft’s diagrammatic representations of events to identify the semantic contribution made by different grammatical aspects in Bungu, we illustrate its potential as a descriptive tool.

Keywords: Bantu, Bungu, lexical aspect, phasal structure, grammatical aspect

1. Introduction

The Progressive, Anterior, and Resultative aspects in Bungu (Bantu, F25) give rise to strikingly different interpretations with different predicates. The Progressive expresses an ongoing, single event with dya ‘eat’ and ikala ‘sit; live’, an increase in knowledge or understanding with mana ‘know’, and multiple events with wina ‘become ill’ (the subject falls ill frequently or often). The Anterior describes a recently completed event with dya ‘eat’ and mana ‘know’ (the subject has recognised a person or recently learned a skill), a recent continuing state with wina ‘become ill’ (the subject has recently fallen ill and is still ill), and a recent or intentional continuing state with ikala ‘sit; live’ (the subject has sat down and is intentionally remaining seated). Finally, the Resultative expresses an ongoing state with mana ‘know’ (the subject knows something or someone), wina ‘become ill’ (the subject is ill), and ikala ‘sit; live’ (the subject is seated); with dya ‘eat’ the Resultative yields a recent (hodiernal) past or habitual reading (the subject eats well or frequently).

Each predicate has its own ‘aspectual potential’ (defined in Section 1.1 below) that can be represented as a contour in the two-dimensional graphs described in Croft (2012). We will show how the three grammatical aspects investigated here each ‘profile’ part of the aspectual potential of a predicate or ‘coerce’ additional readings.¹ For example, the Progressive profiles an ongoing

¹ Coercion (Pustejovsky 1993), also called ‘semantic shift’ (Talmy 2000: 324) occurs when the characteristics of two elements within a construction (such as lexical and grammatical aspect) are incompatible, but rather than resulting in ungrammaticality, the specifications of one of the elements (in this case lexical aspect) are
activity or change of state, but when the aspectual potential does not include such a durational element (as in the case of \textit{wina} ‘become ill’) it coerces a multiple event reading; likewise, the Resultative profiles resultant states (e.g. know, be ill, be seated) but when the aspectual potential of a predicate does not include a resultant state (as in the case of \textit{dy\textasciitilde} ‘eat’) the Resultative coerces a hodiernal past or habitual reading, depending on the context of use.

The paper is organized as follows: In the remainder of Section 1 we review some recent literature on grammatical and lexical aspect in Bantu languages and describe Croft’s graphs. In Section 2 we describe the morphological structure of the Progressive, Anterior, and Resultative aspect operators in Bungu. Sections 3 – 5 describe the semantics of these three aspects in light of their effects on the interpretation of different predicates. We conclude the paper in Section 6.

1.1 Grammatical and lexical aspect. The fact that grammatical aspect interacts with lexical aspect (also called actionality, Aktionsart, verb aspect, Aristotelian aspect, and situation type) is well-established and has been documented in numerous languages. This topic has recently been explored in relation to Bantu languages in, for example, Botne & Kershner (2000, 2008), Persohn (2018), and Crane & Persohn (2019a, 2019b). Persohn (2018) argues that the dominant system of classifying predicates based on Vendler (1957, 1967) fails to adequately describe lexical aspect (which he terms ‘actionality’) in Bantu languages. Of particular relevance are so-called ‘change-of-state verbs’ which “can encode the lead-up to a state-change, the change itself, and the resultant state.” (Crane & Persohn 2019a: 307) Vendler’s division of such predicates into either achievements or accomplishments fails to describe the variation that is found in Bantu change-of-state verbs. As Crane & Persohn note, not all change-of-state verbs encode all of these phases, and verbs in different Bantu languages with similar meanings do not necessarily encode the same phases or attribute the same characteristics to those phases. Following Crane & Persohn (2019a), who in turn follow Binnick (1991), we refer to the encoding of different phases and the boundaries between them as the ‘aspectual potential’ of a predicate.

Crane & Persohn (2019a) investigate various verbs and classes of verb in Bantu languages with respect how they interact with different aspects. They note, for example, that with imperfective aspect, change-of-state verbs often yield iterative and/or habitual readings, and sometimes coming-to-be readings, whilst with perfective aspect, change-of-state verbs often describe ongoing states, state changes, and sometimes also the process leading up to and including a state change (2019a: 312–313). Various aspectual operators are grouped together under the categories ‘imperfective’ and ‘perfective’; imperfective includes the Nyakyusa and Southern Ndebele Present\textsuperscript{3} tenses and the Nyamwezi Progressive aspect, whilst perfective includes the Totela Completive aspect, the Southern Ndebele Perfective aspect, and the Swahili Perfect. Crane & Persohn are fully aware that the aspectual markers in different languages are semantically unique,\textsuperscript{4} but their primary purpose is to describe the different phases (coming-to-be, “point” of change, and resultant phase) that typify

\footnotesize
\begin{itemize}
\item changed in order to yield an interpretation that is compatible with the other element (in this case grammatical aspect).
\item For a list of different labels for what we are calling lexical aspect, see Sasse (2002: 203) and Crane & Persohn (2019a: 309).
\item We adopt the convention of using lower case for cross-linguistic categories such as imperfective and perfective, and initial upper case for language-specific tense and aspect labels.
\item “Note that in Nyamwezi, the -\textit{ile} form does not correspond exactly to what is typically considered perfective in Bantu, but it nevertheless targets the result state of change-of-state verbs.” (Crane & Persohn 2019a: 325)
\end{itemize}
change-of-state verbs in a number of Bantu languages. Our approach differs in that our primary purpose is to identify the semantic contribution made by different grammatical aspects (specifically, the Progressive, Anterior and Resultative) to the interpretation of predicates within a single language: Bungu [wun] (F25) spoken in Songwe District, Tanzania. By describing and modeling the interaction of various Bungu aspectual markers with different types of predicate, we aim to characterize the semantic contribution of each aspect in a way that accounts for all of its functions without privileging its behaviour with respect to any particular class of predicates. Conversely, classifying any particular predicate as a representative of a certain situation type is not our primary goal.

Botne (2003: 238) and Botne & Kershner (2008) propose a three-phase model of lexical aspectual structure consisting of onset, nucleus (or ‘nuclear pivot’), and coda. Crane & Persohn (2019a: 315) appear to endorse a three-phase model when they note that variation exists concerning “the lexical encoding (or lack thereof) and qualitative features of the coming-to-be phase, the change itself, and the resultant state,” and organize the central section of their paper around those three components. However, they leave open the possibility of a two-phase model when they write (2019a: 315), “Bantu verbs can lexically encode (at least) a coming-to-be-phase and its resultant state” where a phase is encoded if “it can be targeted by morphosyntactic operators in non-coerced contexts.” Furthermore, they go on to show that “at least in many cases, the point of change does not seem to be detachable (that is, targetable by morphology of grammatical aspect) from the coming-to-be phase that proceeds it.” (2019a: 324)

In later work, Crane & Persohn (2019b) specifically propose a two-phase model consisting of a coming-to-be phase (that is, the initial phase of an event, equivalent to Botne & Kershner’s onset) and a resultant phase (Botne & Kershner’s onset, that is, a lexically encoded resultant state), together with left and/or right boundaries of these phases. They note (ibid. 38) that treating the point of change as a ‘nucleus’, that is, as the semantic core of a predicate, contradicts the view of verbs as having a complex phasal structure in which no single phase is privileged. They go on to suggest (ibid. 53) that “[f]urther distinctions, including differing interactions with operators of grammatical aspect, can be captured through attention to qualitative features of the phases themselves (such as those proposed in Croft 2012).” As we will see in more detail below, different phases and the boundaries between them are represented in Croft’s model by change (or lack of change) along a ‘qualitative state’ dimension over a period of time. A punctual point of change in a change-of-state predicate is thus represented as an abrupt change in the qualitative state dimension. The model itself does not distinguish whether this abrupt change should be treated as a phase in its own right or simply as the boundary between other phases, such as a coming-to-be phase and a resultant state, and so we understand Croft’s model to be, in principle, agnostic regarding whether a three-phase or a two-phase model best characterizes change-of-state predicates. Note, however, that Croft (2012: 62) describes accomplishments (such as ‘eat a pancake’ and ‘repair a computer’) as consisting of three phases that he terms the ‘inception’, ‘directed change’, and ‘completion’ phases.

In this paper, we will demonstrate how Croft’s diagrammatic representations can help to explain variation in the interpretation of the Bungu Progressive, Anterior, and Resultative aspects with different predicates. Our approach assumes that each predicate has a specific aspectual contour, and that each grammatical aspect profiles certain phases of this contour. Croft’s model allows us to represent the different phases (and the boundaries between them) and the ways in which they are profiled by different grammatical aspects. In the following subsection, we will briefly introduce Croft’s approach.
1.2 Croft’s representation of predicate structure. Within Cognitive Grammar, one of the basic characteristics of linguistic meaning is that semantic structures (including predicates) derive their value through the imposition of a ‘profile’ on a ‘base’ (Langacker 1988: 50). The base consists of all the possible concepts that an expression can give rise to, and is therefore a schema, “a superordinate concept, one which specifies the basic outline common to several, or many, more specific concepts.” (Tuggy 2010: 83) The base needs to be narrowed to express a specific concept; this is achieved by the profile, which Langacker (1988: 59) describes as follows: “Some facet of the base is invariably raised to a distinctive level of prominence, and serves (intuitively speaking) as its focal point; this substructure is the predication’s profile.” Langacker illustrates this for grammatical aspect by comparing go and gone, which share the same base but differ in the profile imposed on it. “This difference in profiling is the semantic contribution of the past participial predication… The participial morpheme takes a schematically-characterized process as its base, and profiles only the final state of this process.” (Langacker 1988: 62–63)

Croft (2012) represents the aspectual potential of verbs using a two-dimensional model made up of a ‘qualitative state’ or q dimension, and a t dimension, which represents changing time. He explains that the “unfolding of events is the sequence of qualitative states that characterize a particular event type” (Croft 2012: 53), which he represents by means of a contour on a two-dimensional graph. The aspectual contour of a verb is thus a visual representation of its base. Figure 1 shows the aspectual potential of the English verb see as an instantaneous transition between discontinuous qualitative states in which a particular object is ‘not seen’ and ‘seen’. The fact that this graph represents the aspectual potential of the predicate, rather than its interpretation in a specific proposition, is indicated by the use of dashed lines.

![Figure 1: A two-dimensional representation of the aspectual contour of SEE (Croft 2012: 53)](image)

Using this aspectual contour, Croft goes on to show how either the moment of transition or the resultant phase can be profiled by combining the verb with certain tense-aspect operators. This profiling, which he indicates as a solid line on the graph, results in particular readings. Croft (2012: 60) represents achievements as “a transition from one state to another on the q dimension at a single point on the t dimension.” Profiling the transition phase therefore yields an achievement reading, as seen in Figure 2. States, on the other hand, involve no change on the q dimension, and so profiling the resultant phase, as in Figure 3, yields a (transitory) state reading.⁵ ‘S’ indicates the moment of speech.

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⁵ A permanent state would be indicated by an arrow on the horizontal line showing the state continuing in time indefinitely.
I (reached the crest of the hill and) saw Mount Tamalpais’

Figure 2: Profiling the transition phase to represent an achievement

I see Mount Tamalpais’

Figure 3: Profiling the resultant phase to represent a state

Not all changes in the q dimension lead to a resultant state; in the case of semelfactives such as ‘the mouse squeaked’ (understood as the mouse emitting a single squeak) a punctual change occurs in the q dimension after which the subject returns to the initial ‘rest’ state (i.e. being quiet). This is represented in Figure 4. A punctual change on the q dimension is profiled, and so semelfactives are a type of achievement (cf. Figure 2); because the subject then immediately returns to the rest state the event has a cyclical quality, and so Croft further classifies semelfactives as ‘cyclic achievements’.

The mouse squeaked’ (once)

Figure 4: Profiling the transition phase to represent a cyclic achievement

The sentence ‘the mouse is squeaking’ can be understood iteratively, as a number of squeaks repeated over a period of time. Croft (2012: 61) depicts these as a succession of ‘cyclic achievements’, with a zigzag line on the q dimension, showing that the entity goes back and forth
between two (or more) qualitative states, shown in Figure 5. Other activities, such as ‘the girls are singing’ and ‘they are dancing’ are given the same aspectual contour and profile.

**Figure 5: Profiling an ongoing undirected activity**

Some predicates involve an incremental change along the $q$ dimension that does not culminate in a resultant state. Croft (2012: 60) calls these ‘directed activities’ and notes (ibid. 73, citing Kennedy & Levin 2008: 160) that they are atelic, which can be demonstrated in English by their incompatibility with temporal *in*-clauses.

**Figure 6: Profiling a directed activity**

The English *for/in* test distinguishes directed activities from accomplishments, that do have a resultant state. If a temporal *in*-clause is acceptable, this indicates that the predicate encodes an inherent end point. Some accomplishments involve incremental, directional change such as ‘eating a pancake’ in which the pancake decreases in size as it is eaten, until the moment when it is finished. Croft (2012: 62) calls this an ‘incremental accomplishment’, represented in Figure 7. Note that ‘in 5 minutes’ describes the entire time from the inception boundary point (the leftmost vertical line) up to and including the completion boundary point (the rightmost vertical line), and so these are both profiled (indicated by a solid line). In ‘I was eating a pancake’, these boundary points are not included and so only the incremental change phase would be profiled.

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6 We follow Croft (2012: 53) by positioning the two states ‘quiet’ and ‘squeak’ far apart on $q$ for visual convenience. The activity of squeaking may involve moments of quiet, even though the solid lines do not descend to the original ‘quiet’ level.
Finally, Croft (2012: 63) notes that in some predicates, “there is no monotonic progression from the rest state to the result state.” In ‘Harry repaired the computer’ there is a change from a rest state (broken computer) to a result state (fixed computer), but progress is not necessarily incremental and linear; Harry may need to do a number of things which cumulatively result in the computer being fixed, and some of his actions may not in fact contribute to this outcome, and so the phase between the inception and completion boundary points resembles an activity. This is represented in Figure 8. Note that ‘in an hour’ profiles the entire event, including the inception and completion boundary points. If ‘Harry repaired the computer’ were modified by ‘for an hour’ only the change phase would be profiled, and if it were modified by ‘at 3 pm’ only the completion boundary point would be profiled.

1.3 A note on the language and data. Bungu, also known as Wungu in some of the literature and ɨChiwungu by its speakers (ISO 639-3 code: wun), is spoken by approximately 30,000 people (Eberhard et al. 2021) in southwestern Tanzania, on the eastern side of Lake Rukwa. Called an isolate by Nurse (1999: 32), there seems to be little consensus between researchers based on linguistic evidence (Johnson 1922; Nurse 1988, 1999; Labroussi 1999; Fourshey 2002) though the most recent analysis of the data by Roth 2011 posits Bungu as a conservative member of Proto-Mwika (alongside Pimbwe (M11), Rungwa (M12), Mambwe-Lungu (M14/M15), Wanda (M21) and Wanga (M22)) that has adopted a large number of lexical items from Mbeya-clade languages (Nyiha (M23), Safwa (M25)) (Roth 2011: 112).

Despite the many attempts to determine the historic origins of the language, there have been few papers written about the language itself. Walsh and Swilla (2000: 31) describe it as “one

The present study is based on a sample of 30 predicates, chosen on the basis of preliminary observation of their interaction with different grammatical aspects in translated and natural texts. Two Bungu speakers were interviewed (together) for the purposes of the research. Apart from eliciting the meaning of each verb with the Progressive, Anterior and Resultative, the verb in each grammatical aspect was also tested for compatibility with the Persistive -chili, the temporal adverbial kwi-isambo itani ‘for a long time’, and kufuma unghu ‘since (this) morning’. Where possible, each predicate was also presented in the frames wânyâ + infinitive ‘s/he has started Ving’, wâleka + Infinitive ‘s/he has ceased Ving’ and -sime + Subjunctive ‘be about to V’, and the way in which these constructions were interpreted was noted; this helped to clarify the aspectual contours of the predicates. We recognize that these and additional tests should ideally be applied to a larger sample of predicates, and presented to a larger group of Bungu speakers, and so the results presented here make no claim to exhaustivity.

2. The morphology of the Bungu Progressive, Anterior and Resultative

As is common in Bantu languages, Bungu verb forms are composed minimally of a root and final vowel, but may include various combinations of prefixes and suffixes, in the following order:

Subject-Negative-TAM-Object-Root-Extensions-Imperfective-Final

The Progressive has the morpheme ma- in the TAM slot of the verb, and final vowel -a. The Progressive prefix is eroded in combination with most subject prefixes, such that in some forms only the tonal melody remains to indicate the aspectual form of the verb. Where the subject prefix is a single vowel, such as class 1 a- or class 9 i-, the full form of the Progressive prefix remains. The examples below are presented first in the community’s current orthography, then the underlying morphemes and their glosses are provided, followed by a free translation.

(1) ^amatela a-ma-tel-a 1.SP-PROG-say-FV ‘she is saying’
(2) ^watela wa-ma-tel-a 2.SP-PROG-say-FV ‘they are saying’
(3) ^chitela chi-ma-tel-a 7.SP-PROG-say-FV ‘it is saying’

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7 Both lexical and grammatical tone are at work in Bungu. In order to distinguish segmentally identical forms, grammatical forms that are only distinguishable by tone have been marked in the orthography which will be followed in this paper; for example, the circumference ^ precedes any member of the Progressive paradigm. The Bungu orthography is still in its trial stage; it was approved for trial by a committee of Bungu speakers at a meeting in November 2016, and has been used in small scale publications and literacy classes since that date. Approval of the orthography will not be sought from community representatives until it has been used among the wider Bungu community for several more years, and comprehensive orthography testing has been carried out.

8 Like other Bantu languages, Bungu noun classes do not indicate biological sex or social gender. In the free translations of examples we have used ‘she’ to express class 1 (3SG) subject prefixes and ‘him’ to express class 1 (3SG) object prefixes unless this is culturally or factually inappropriate; this is purely for convenience, to avoid ‘s/he’ and ‘her/him’.
The Anterior has the morpheme \textit{a-} in the TAM slot of the verb, and a final vowel -\textit{a}. As with the Progressive, it is necessary to mark the Anterior for the effects of grammatical tone; however, unlike the Progressive in which the whole paradigm is marked orthographically, only certain forms are marked for the Anterior. For the purposes of this paper it is sufficient to know that the Anterior with a 3SG (class 1) subject is marked with an acute accent, as in the following example.

(4) \textit{wátelə a-a-tel-a} 1.SP-\textsc{Ant}-say-FV \ ‘she has said’

The Resultative has the morpheme -\textit{ile} in the final slot of the verb, with the TAM slot remaining empty. Note that the suffix -\textit{ile} causes spirantization\footnote{In Bungu, spirantization is also caused by causative \textit{-i}/, agentive \textit{-i}/ and adjectival \textit{-u}/. While spirantization occurs in all four contexts, the range of consonants affected varies greatly. Gray (2020: 72) lists, based on her database, the stem-final consonants which can be shown synchronically to undergo spirantization in each context: adjectival \textit{-u}/ spirantizes stem-final /l/, agentive \textit{-i}/ spirantizes stem-final /p, \textit{d}, \textit{g}, w, l/, and causative \textit{-i}/ spirantizes stem-final /p, \textit{mb}, \textit{d}, \textit{g}, \textit{i}, \textit{w}, \textit{j}/.} of stem-final /\textit{l}/ to /\textit{zl}/, as seen in (5); -\textit{ile} also undergoes imbrication into verbal extensions, whether lexicalized or not, as seen in (6)-(9).

(5) \textit{atezile a-tel-ile} 1.SP-say-PFV \ ‘she said’
(6) \textit{ilepweke i-lepuk-ile} 9.SP-crack-PFV \ ‘it is cracked’
(7) \textit{akominge a-komang-ile} 1.SP-kill-PFV \ ‘she killed’
(8) \textit{apotwile a-pot-w-ile} 1.SP-succeed-PASS-PFV \ ‘she failed’
(9) \textit{ayimilile a-imilil-ile} 1.SP-stand-PFV \ ‘she is standing’

3. Progressive semantics

The Bungu Progressive profiles change in qualitative state (\textit{q}) over time (\textit{t}). It gives a single event reading with what Croft calls ‘undirected activity’ predicates: \~\textit{amakudya} ‘she is eating’, \~\textit{imatona} ‘it is raining’, \~\textit{amatetema} ‘she is shivering’, etc.

\begin{center}
\includegraphics[width=0.5\textwidth]{profile}
\end{center}

\textit{\~amatetema} ‘she is shivering’

\textbf{Figure 9: Profiling of ongoing undirected activity by the Progressive}

Likewise, with predicates that involve a durative change along the \textit{q} dimension culminating in a resultant state, the Progressive profiles the change of state that occurs over time, be it a short time such as in \~\textit{amatungama} ‘she is kneeling down’, or a longer time as in \~\textit{amalela} ‘she is giving birth’.\footnote{The verb \textit{kulela} is a fairly a direct way to talk about giving birth, and so \textit{kupapuka} (from \textit{kupapa} ‘to bear on one’s back’) is often used as a euphemism.} In \~\textit{amatungama} ‘she is kneeling down’, the change from standing to being in a kneeling

\footnotetext[9]{In Bungu, spirantization is also caused by causative \textit{-i}/, agentive \textit{-i}/ and adjectival \textit{-u}/. While spirantization occurs in all four contexts, the range of consonants affected varies greatly. Gray (2020: 72) lists, based on her database, the stem-final consonants which can be shown synchronically to undergo spirantization in each context: adjectival \textit{-u}/ spirantizes stem-final /l/, agentive \textit{-i}/ spirantizes stem-final /p, \textit{d}, \textit{g}, w, l/, and causative \textit{-i}/ spirantizes stem-final /p, \textit{mb}, \textit{d}, \textit{g}, \textit{i}, \textit{w}, \textit{j}/.}
position is incremental and directional, and so this is represented using the aspектual contour of an incremental accomplishment:

\[ \text{amatungama } '\text{she is (in the act of) kneeling down}' \]

**Figure 10: Profiling of a durative change of state by the Progressive in an incremental accomplishment**

In ^amalela ‘she is giving birth’, the change is not only of longer duration, but also “there is no monotonic progression from the rest state to the result state” (Croft 2012: 63), and so this is represented as a non-incremental accomplishment.

\[ \text{amalela } '\text{she is giving birth}' \]

**Figure 11: Profiling of a durative change of state by the Progressive in a non-incremental accomplishment**

^amalela can also be understood as ‘she is (still) having children’. This is a multiple event reading in which the duration is far longer than when ^amalela is understood as ‘she is giving birth’. The aspectual contour for this reading is that of an undirected activity (described above); the initial ‘rest’ state is the time before the subject has her first child, but there is no resultant state.

Using Croft’s framework, we can avoid the difficulties that Crane & Persohn (2019b: 35–37) describe of discerning whether this durative change of state constitutes the onset or the nucleus of the predicate, and thus of distinguishing tungama ‘kneel’ as a transitional accomplishment or transitional achievement according to Botne’s classification (2003: 238). Croft’s graphs represent the aspectual potential of a predicate, but that potential is only realized when the predicate is modified by a grammatical aspect. The Progressive profiles the durative change of state, regardless of whether it would be regarded as the onset or the nucleus in Botne’s model. At present, we have
not found any test which indicates the importance of distinguishing a change of state phase as constituting a durative onset or a durative nucleus in Bungu.

With *mana* ‘know’ applied to human objects, the Progressive profiles the phase where someone is growing in their knowledge of a person’s character.

(10) \(^{\text{amaku\textendash}mana}\)
    \[\text{a-\text{ma-\text{ku-mu-man-a}}}\]
    \[1.\text{SP-PROG-KU}^{11}-1.\text{OP-know-FV}\]
    ‘She is getting to know him’

In the Anterior, *mana* ‘know’ expresses either recent acquisition of knowledge, as in \[\text{wámana kusoma} \text{‘she has learned to read’}\], or complete knowledge, as in \[\text{wáni\textendash}mana \text{‘she understands him (totally)’}\]. This indicates that the aspectual potential of *mana* ‘know’ includes a completion boundary point and can therefore be represented as an incremental accomplishment (Croft 2012: 62).

![Diagram of phase progression](image)

*\(^{\text{amaku\textendash}mana}\) ‘she is getting to know him’

**Figure 12: Profiling of a durative change of state as an incremental accomplishment**

The Progressive also profiles the change itself in change-of-state predicates like *lepuka* ‘crack’. The predicate *lepuka* ‘crack’ can be conceived as describing an abrupt and non-reversible transition from one qualitative state (not cracked) to another qualitative state (cracked); this may be all that happens, and an item that is cracked may not undergo any further change, but an item can become more cracked, as in the case of a pot or gourd in which a small crack develops over time into a large crack, until eventually the item is totally broken. Different grammatical aspects profile different phases of this aspectual contour; the Progressive aspect profiles the ‘directed change’ phase (Croft 2012: 62). This is similar to Crane & Persohn’s example of ‘being wet’ where coming-to-be phases and resultant states overlap in real life. They give the example of clothing ‘being wet and getting wetter’ being essentially the same as ‘being already wet’ in real world terms (2019b: 47). As

11 The prefix *ku* is inserted before certain objects (e.g. 3sg *mu* but not 3pl *wa* or 1pl *tu*), and also before monosyllabic/V-initial verbs, e.g. ‘*amaku\textendash{dy}a a-\text{ma-\text{ku-dy-a}}*’ ‘she eats/is eating’, ‘*amawikala a-\text{ma-\text{ku-ikal-a}}*’ ‘she sits/is sitting’, in certain TAM constructions. It does not appear to have any semantic content.
observed by Crane & Persohn, it is not clear how Botne & Kershner’s framework deals with such predicates.

Croft’s basic predicate contours are also unable to map such behaviour, but a new contour can be added to account for such predicates. This contour combines two of Croft’s basic contours: Initially, the contour follows that of an (irreversible directed) achievement representing an abrupt transition from the state of being uncracked to the state of being cracked; the three leftmost dashed lines indicate a rest state when the gourd is uncracked, the transition from that rest state to the first point at which the gourd could be described as cracked (when the crack first appears), and the resultant state where the first crack is not worsening. However, none of this is profiled; the Progressive in *ichilanga ^chilepuka* does not mean ‘the gourd is starting to crack’, but rather that a crack has started and is getting worse. As the crack widens the predicate has the contour of an incremental accomplishment, in which the crack first appearing constitutes the inception boundary point and the point at which the gourd is totally broken constitutes the completion boundary point. The Progressive aspect profiles the change of state between these two boundaries. The contour includes an irreversible resultant phase indicated by the dashed arrow, but this is not profiled. (Note that ‘S’ indicating the time of speech is before this final resultant phase on the ‘t’ dimension.)

![Diagram](image)

*ichilanga ^chilepuka* ‘the gourd is cracking’ (a crack has started and is growing)

**Figure 13: Profiling of a durative change of state as a modified incremental accomplishment**

When the Progressive occurs with reversible predicates that do not exhibit a durative change of state (Botne’s resultative achievements), such as *wina* ‘be ill’ and *iyuka* ‘open’ (intransitive), a single-event reading is not possible; instead, the Progressive coerces a frequent or habitual reading:

(11) ^amawina
    a-ma-win-a
    1.SP-PROG-be.ill-FV
    ‘She gets ill a lot, she frequently falls ill’
    Not: ‘she is becoming progressively more ill’ or ‘she is starting to fall ill’

This frequent or habitual reading is only possible because these predicates are reversible; this entails that they can be repeated, and this is what the Progressive aspect profiles. The
Progressive yields a similar reading with repeatable semelfactive predicates (Croft’s cyclic achievements), such as kosomola ‘cough’, that involve a punctual change to a ‘point state’ before almost immediate reversal to the rest state. The Progressive aspect yields either an activity reading in which a succession of cyclic achievements occurs over a continuous period of time, or a reading in which this activity is repeated frequently or habitually. These profiles are represented as in Figure 9 above.

(12) ^amakosomola
    a-ma-kosomol-a
1.SP-PROG-cough-FV
‘She is right now in the process of coughing’ or ‘she coughs frequently’

Use of the Persistive -chili ‘still’ with the Progressive is permissible to the extent that it fits with the real world scenario. For example, the actions of kneeling or sitting down do not take very long; using the Persistive with the Progressive of tungama ‘kneel’ and ikala ‘sit’ yields a multiple event reading as the preferred interpretation. By extension, ikala ‘sit’ in the Progressive with the Persistive can also refer to ‘dwelling’ in a certain place.

(13) achili ^amatungama
    a-chili   a-ma-tungam-a
1.SP-PERS 1.SP-PROG-kneel-FV
?’she is still in the act of kneeling down’
‘she still kneels’ (often)

(14) achili ^amakwikala nao
    a-chili   a-ma-ku-ikal-a      nao
1.SP-PERS 1.SP-PROG-KU-sit-FV with.them
?’she is still in the act of sitting down with them’
‘she still sits with them’ (often)
‘she is still living with them’

For verbs with longer change of state phases, if the resultant state is reversible then both a single event reading and a multiple event reading are possible.

(15) achili ^amakodwa
    a-chili   a-ma-kodw-a
1.SP-PERS 1.SP-PROG-be.drunk-FV
‘she is still getting drunk’
‘she stills gets drunk’ (frequently)

If the resultant state is not reversible, only the single event reading is possible.

(16) achili ^amachikula
    a-chili   a-ma-chikul-a
1.SP-PERS 1.SP-PROG-be.old-FV
‘she is still getting older’
achili ^amamana
a-chili a-ma-man-a
1.SP-PERS 1.SP-PROG-know-FV
‘She is continuing to learn’

The compatibility of the Persistive -chili ‘still’ plus the Progressive form of a predicate goes hand in hand with the compatibility of the predicate with anzya ‘begin/start’. The combination of anzya ‘begin/start’ and the Infinitive form of the main verb indicates the beginning of the phase profiled by the Progressive, be it a single event reading or a multiple event reading. Thus, the Infinitive in this construction profiles the same phase as the Progressive, and anzya indicates the start of this phase (represented graphically with a circle at this point).

Figure 14: Predicates with anzya ‘begin/start’ + Infinitive

As with the Persistive plus Progressive, using anzya ‘begin/start’ with the Infinitive of ikala ‘sit’ more naturally indicates the habitual use in which ikala describes dwelling somewhere. Likewise, with anzya with the Infinitive of fika ‘arrive’ yields a habitual, multi-event reading.

Figure 15: Multi-event reading (more natural) of anzya ‘begin/start’ with ikala ‘sit; live’ and fika ‘arrive’

In certain contexts, anzya with the Infinitive of ikala ‘sit’ can be used to describe the beginning of the change of state in a single event reading ‘beginning to sit down’. This reading is not available for fika ‘arrive’, which has a very short transition phase.
Unlike modifying a predicate in the Progressive by means of the Persistive, modifying a predicate in the Progressive with the temporal adverbial \textit{kwi-isambo itani} ‘for a long time’ results in a generic or habitual reading. For predicates without a resultant state (18)-(19), the time period that is profiled only refers to the duration of the change of state. For predicates having a resultant state (20)-(21) however, the time period refers to the duration of the resultant state.

(18) \textit{^amakudya kwi-isambo itani}
\quad a-ma-ku-dy-a
\quad 1.SP-PROG-KU-eat-FV
\quad ‘she eats for a long time’ (i.e. when she eats, she takes a long time to finish eating)

(19) \textit{^amakosomola kwi-isambo itani}
\quad a-ma-kosomol-a
\quad 1.SP-PROG-cough-FV
\quad ‘she coughs for a long time’ (i.e. when she starts coughing, she coughs for a long time)

(20) \textit{^amakwikala kwi-isambo itani}
\quad a-ma-ku-ikal-a
\quad 1.SP-PROG-KU-sit-FV
\quad ‘she sits for a long time’ (i.e. when she sits, she remains seated for a long time)

(21) \textit{^amawina kwi-isambo itani}
\quad a-ma-win-a
\quad 1.SP-PROG-be.ill-FV
\quad ‘she is ill for a long time’ (i.e. when she gets ill, she remains ill for a long time)

These can be represented as follows, where the period covered by \textit{kwi-isambo itani} ‘for a long time’ is indicated by the extent of the oval:
Diagramming Grammatical and Lexical Aspect: The case of the Progressive, Anterior, and Resultative in Bungu (Bantu, F25)

^ama

^uka

dya

isambo

itani

'she eats for a long time’

Figure 17: Profiling the duration of an activity

^ama

wikala

dya

isambo

itani

'she sits for a long time’

Figure 18: Profiling the duration of an ongoing resultant state

4. Anterior semantics

With predicates having no resultant state, such as undirected activities, the Anterior indicates the endpoint of the activity.

^atona

‘it has rained’

Figure 19: Profiling the end of an undirected activity by the Anterior

At first glance, this suggests that the Bungu Anterior simply profiles the instantaneous transition between qualitative states, as in the following graphs (where S indicates the moment of speech):
However, with predicates encoding a resultant state, the Anterior profiles more than just an abrupt change between two qualitative states. Where there is a reversible state which persists from the transition, the Anterior is compatible both with the Persistive -chili ‘still’ and with expressions such as kufuma unguzu ‘since (this) morning’:

(22)  
\text{achili wóna}  
\text{a-chili a-a-on-a}  
1.SP-PERS 1.SP-ANT-fall.asleep-FV  
‘she has fallen asleep and is still asleep’

(23)  
\text{achili wíkala}  
\text{a-chili a-a-ikal-a}  
1.SP-PERS 1.SP-ANT-sit-FV  
‘she has sat and is still sitting’

Where there is no (durative) resultant state as part of the aspectual contour of the predicate, the Persistive is not compatible with the Anterior.

(24)  
*\text{achili wáfika}^{12}  
\text{a-chili a-a-fik-a}  
1.SP-PERS 1.SP-ANT-arrive-FV

(25)  
*\text{achili wákosomola}  
\text{a-chili a-a-kosomol-a}  
1.SP-PERS 1.SP-ANT-cough-FV

(26)  
*\text{ichili yatona}  
\text{i-chili i-a-ton-a}  
9.SP-PERS 9.SP-ANT-rain-FV

---

^{12} In Bungu, the aspectual potential of fika includes only a (brief) transition phase between the states of ‘not arriving’ and ‘having arrived’, and the culmination point of having arrived at the destination. It does not include a durational resultant state of ‘having arrived and remaining at the location’.
If the Anterior profiled only the transition between two qualitative states, it would not be compatible with -chili or kufuma unguzu, both of which require the profiled section to have duration over time. The assumption underlying the test of compatibility with ‘still’ is that “only a resultant state, but not a transition from one state into another, should be able to hold over time” (Crane & Persohn 2019a: 326, referencing Jerro 2017). We propose therefore that the Anterior profiles the transition and at least part of the resultant state:

![Diagram](image)

**Figure 21: Profiling of the transition phase and part of the resultant state by the Anterior**

With the predicate lepuka ‘crack’, the Anterior likewise profiles an abrupt transition on the q dimension plus the resultant state. Unlike the previous examples, this state is not reversible, and thus the Anterior form of lepuka ‘crack’ describes an ‘irreversible directed achievement’. We saw in Figure 12 above that the Progressive form of lepuka ‘crack’ profiles a durative change of state phase in which a crack has appeared and is increasing in size. In the Anterior aspect, ichilanga chalepuka ‘the gourd has cracked’ yields two alternative readings: it can describe either the transition from the rest state (a crack has appeared in the gourd) or the transition to the result state (the gourd is totally broken and is unusable). These readings are illustrated in Figures 22 and 23 respectively; note that in Figure 22, the appearance of the first crack (indicated by the solid lines representing the part of theaspectual contour that the Anterior profiles) does not entail that the worsening of that crack will necessarily happen, although it may (indicated by the diagonal dashed line).

![Diagram](image)

**Figure 22: Profiling of the initial transition phase by the Anterior**
It should be noted that *lepuka* ‘crack’ is not compatible with the Persistive; this is because, as Crane & Persohn (2019a: 326) note, “in many Bantu languages, the construal of an ongoing resultant state with ‘still’ + perfective seems to require that the state be (at least potentially) non-permanent or reversible.” This is the case for Bungu; where there is a permanent resultant state, the Persistive is incompatible with the Anterior (and also the Resultative) on the semantic grounds that no change back to the rest state is possible from a permanent state.

(27)  
\[\text{? achili wàchikula} \]  
\[\text{a-chili} \quad \text{a-a-chikul-a} \]  
\[1.\text{SP-PERS} \quad 1.\text{SP-ANT-be.old-FV} \]  
intended: ‘she has become old and is still old’

(28)  
\[\text{? achili wàfwà} \]  
\[\text{a-chili} \quad \text{a-a-fw-a} \]  
\[1.\text{SP-PERS} \quad 1.\text{SP-ANT-die-FV} \]  
intended: ‘she has died and is still dead’ (only acceptable if expecting a resurrection to occur)

Compatibility of a predicate in the Anterior with the Persistive also appears to require a certain degree of agentivity on the part of the subject, another factor that Crane & Persohn (2019a: 334; 2019b: 45) note plays an important role in the acceptability of aspect combinations. In Bungu, the predicate *wina* ‘be ill’ in the Anterior is not compatible with the Persistive, perhaps due to the lack of intentionality involved. This is in contrast to the Resultative form of *wina* ‘be ill’ plus the Persistive, which is acceptable (see below), presumably because the combination of Resultative plus Persistive does not entail intentionality on the part of the subject in remaining in the resultant state.

As with the Progressive, when a predicate in the Anterior is modified with the temporal adverbial *kwi-isambo itani* ‘for a long time’, for predicates without a resultant state phase (29)-(30), the time period once again refers to the duration of the change of state. For predicates having a resultant state phase however, the time period refers to the duration of the resultant state (31)-(32). The difference between the Progressive and Anterior in this context is that while the Progressive refers to a generic or habitual event, the Anterior refers to an event which has just come to an end.
Diagramming Grammatical and Lexical Aspect: The case of the Progressive, Anterior, and Resultative in Bungu (Bantu, F25)

(29) wády a kwi-isam bo ita ni
    a-a-dy-a
    1.SP-ANT-eat-FV
    'she ate for a long time' (since she started, she took a long time to finish)

(30) wákosomola kwi-isam bo ita ni
    a-a-kosomol-a
    1.SP-ANT-cough-FV
    'she coughed for a long time' (since she started, she coughed for a long time and has now finished)

(31) wíkala kwi-isam bo ita ni
    a-a-ikal-a
    1.SP-ANT-sit-FV
    'she sat for a long time' (since she sat down, she sat for a long time but is now no longer sitting)

(32) wí́wina kwi-isam bo ita ni
    a-a-win-a
    1.SP-ANT-be.ill-FV
    'she was sick for a long time' (since she became sick, she was ill for a long time but has now recovered)

These can be represented as follows, where the period covered by kwi-isambo itani ‘for a long time’ is indicated by the extent of the oval (note the position of S indicating the end of the event coinciding with the speech time, which differentiates these graphs from Figures 17 and 18 which represent the use of this adverbial with the Progressive):

![Diagram of duration of activity]

wády a kwi-isam bo ita ni ‘she ate for a long time’

Figure 24: Profiling the duration of a recently ended activity
5. Resultative semantics

In contrast to the Anterior, the Resultative only profiles the resultant state phase, and pays no attention to the transition. Thus, contrast the following Anterior and Resultative verb forms:

(33) a. wáñmana
     a-a-mu-man-a
     1.SP-ANT-1.OP-know-FV
     ‘she recognised him’

b. añmanile
   a-mu-man-ile
   1.SP-1.OP-know-PFV
   ‘she knows him’

(34) a. wámana kukwandika
     a-a-man-a    ku-ku-andik-a
     1.SP-ANT-know-FV    INF-KU-write-FV
     ‘she has learned to write’

b. amanile kukwandika
   a-man-ile    ku-ku-andik-a
   1.SP-know-PFV    INF-KU-write-FV
   ‘she knows how to write’

The Anterior forms in (33a) and (34a) imply a recent change in knowledge. The type of knowledge in each case is very different; in the case of recognizing a person, this recognition can be (although it does not have to be) instantaneous, whereas in the case of learning a skill such as writing, the moment at which the skill has been acquired is often hard to pinpoint with any precision. The Anterior abstracts away from these differences and profiles the point in the aspectual contour of mana at which the subject is represented as transitioning from a state of not knowing to a state of knowing. The resultant state up to the moment of speech (S) is also profiled as the knowledge continues to that point (for example, wámana kukwandika expresses that the subject has learned to write and is therefore currently capable of writing, not that the subject learned to write but subsequently lost this knowledge). The Resultative forms in (33b) and (34b) do not profile the point
at which the transition from not knowing to knowing occurred, but only the resultant state of knowing.

The difference between the Anterior and the Resultative is illustrated with the verb *izula* ‘become full’ in Figures 26 and 27.

![Figure 26: Profiling of the transition phase and part of the resultant state by the Anterior](image)

*yizula* ‘it has become full’

![Figure 27: Profiling of the resultant state by the Resultative](image)

*iyzwile* ‘it is full’

Crane & Persohn (2019a: 322) give examples from several languages which show that not all verbs interpreted as present states with perfective morphology require reference to a prior state change. The existence of such a contrast between verbs that do or do not require reference to a prior state change leads them to question whether this contrast is “a (semi-)arbitrary language-internal factor, or whether it is derivable from real-world knowledge and therefore consistent across languages.” For Bungu, this contrast (reference to a prior state change or not) is achieved purely through the language having two distinct aspects: one which profiles the transition phase (Anterior), and one which does not (Resultative). Because the Resultative does not profile the transition from one state to another, it simply indicates that the situation holds, as in (35); the Anterior, on the other hand, places a certain emphasis on the intentionality of the action having been performed and the significance of the continuation of the state is greater, as in (36).

(35) ayikile papo kufuma unguzu ^amatawa ipepe
    a-ikal-ile papo kufuma unguzu ^a-ma-taw-a ipepe
    1.SP-sit-PFV there since morning 1.SP-PROG-weave-FV mat
    ‘she has been sitting (she is in the state of sitting) there since morning weaving a mat’
(36) \[ \text{wikala papo kufuma unguzu} \, \text{^amakuwetekela} \]
\[ \text{a-a-ikal-a} \, \text{papo kufuma unguzu} \, \text{^a-ma-ku-wetek-el-a} \]
1.SP-ANT-sit-FV there since morning 1.SP-PROG-2SG.OP-wait-APPL-FV
‘she has been sitting there since morning waiting for you’ (implication: she sat down to
wait and is still waiting for you)

With the Resultative, as with the Anterior, all predicates encoding a resultant state are also
compatible with the Persistive, as long as the state is reversible. For example, achili achikwile
(intended: ‘she is still old’) is not acceptable, as a person cannot become young again. With the
Resultative (in contrast to the Anterior), because there is no reference to a previous change of state,
the agentivity of the grammatical subject is irrelevant, and therefore the Persistive is compatible
with the Resultative form of verbs such as wina ‘be ill’; achili awinile ‘she is still ill’.

Interestingly, in Bungu, adding unguzu ‘(this) morning’ to the Resultative form of a
predicate which has a resultant state phase, such as ikala ‘sit’, forces a hodiernal past reading with
no ongoing resultant state (compare (37) with (35) above):

(37) \[ \text{ayikile unguzu} \]
\[ \text{a-ikal-ile} \, \text{unguzu} \]
1.SP-sit-PFV morning
‘she sat this morning (but is no longer sitting)’

For those predicates without a (durative) resultant state as part of their aspectual contour,
the default interpretation of the Resultative is as a hodiernal past.

(38) \[ \text{afikile} \]
\[ \text{a-fik-ile} \]
1.SP-arrive-PFV
‘she arrived (earlier today)’

(39) \[ \text{akosomwile} \]
\[ \text{a-kosomol-ile} \]
1.SP-cough-PFV
‘she coughed (earlier today)’

(40) \[ \text{adyile} \]
\[ \text{a-dy-ile} \]
1.SP-eat-PFV
‘she ate (earlier today)’

Crane & Persohn (2019a: 305) show this same behaviour in Southern Ndebele (S407),
where use of the perfective suffix -ite with an activity-like verb which does not encode entry into a
state refers to a past state of affairs. Similarly, Kershner (2002: 86) cited in Crane & Persohn (2019b:
40) notes that “acute achievement” verbs with no targetable coda phase (that is, without a resultant
state that can be profiled) receive a hodiernal past reading with the Completive -ite in Sukwa
(M202).

In Bungu, a curious state of affairs holds for the predicates wala ‘go’ and iza ‘come’. For
these predicates, the Progressive and Anterior profile the expected phases of the following contour:
Figure 28: Aspectual contour of the predicates wala ‘go’ and iza ‘come’

When it comes to the Resultative however, the default reading of awazile (a-wal-ile 1.SP-go-PFV) is ‘she is going’ and ayizile (a-iz-ile 1.SP-come-PFV) is ‘she is coming’ with the understanding that the coming or going is a certain event, either in the future or at the moment of speech. When an appropriate time adverbial is used with the Resultative forms of ‘coming’ and ‘going’, a hodiernal past reading can be coerced; however, a present or certain future reading is the default reading for both verbs in the Resultative. Use of the Progressive is limited to when the grammatical subject can be seen departing or approaching, whereas the Resultative can be used even if the subject is not actually moving at the speech time, but is certain to do so in the future:

(41) wáliwine iboti dyazile ku-Talishishi
    wáliwine iboti li-wal-ile ku-Talishishi
    he saw boat 5.SP-go-PFV to Tarshish
    ‘He saw a boat going to Tarshish’ (Jonah 1:3)
    (The destination of the boat is Tarshish, but it was not moving at the time Jonah saw it.)

The behaviour of ‘come’ and ‘go’ with the Resultative in Bungu is not unlike the situation described by Kanijo (2019: 132–133) for Nyamwezi concerning verbs that he refers to as “directionals”, such as run, go or come. Like other activity verbs, these encode only a durative dynamic (non-stative) nuclear phase, and the stative (-ile) construction “selects a time frame within the nuclear phase to denote a process which is ongoing at the reference time.” One of the examples that he gives, where some of the lion’s footprints are described as ‘going’ and some as ‘coming’, is very similar to example (41) from Bungu where a stationary object can be described as ‘going’ in a direction based on the certainty of its eventual movement in that direction.

A possible reading for the Resultative form of other predicates which do not encode a resultant state is of habitually doing something well or frequently:

(42) adyile, uyo
    a-dy-ile uyo
    1.SP-eat-PFV that one
    ‘she eats, that one’ (Implication: she eats a lot; compare with (40) above)

(43) ajengile, uyo
    a-jeng-ile uyo
    1.SP-build-PFV that one
    ‘he builds, that one’ (Implication: he does it often and very well)
One of the Bungu speakers interviewed for this paper said that the Persistive can be used with the Resultative in this context: *achili atumbile* ‘he still jumps (well)’ (perhaps said in the context of someone who jumps well having become old), whereas another Bungu speaker did not consider this possible, saying that for him *achili atumbile* conjures up the picture of a person frozen in the act of jumping!

As with the other grammatical aspects mentioned, the use of the temporal adverbial *kwi-isambo itani* ‘for a long time’ in the Resultative refers to the duration of the change of state or activity for predicates without a resultant state (45)-(46), or to the duration of the resultant state if there is one (47)-(48). In both cases it is implied that there is a time gap between the hodiernal end of the event and the present moment, though it is not necessary that the entire event occurred earlier today (see example (48)).

(45) akosomwile kwi-isambo itani
    a-kosomol-ile
    1.SP-cough-PFV
    ‘She coughed for a long time’ (she finished coughing earlier today)

(46) adyile kwi-isambo itani
    a-dy-ile
    1.SP-eat-PFV
    ‘She ate for a long time’ (she ate earlier today)

(47) ayikile kwi-isambo itani
    a-ikal-ile
    1.SP-sit-PFV
    ‘She sat for a long time’ (she stopped sitting earlier today)

(48) awinile kwi-isambo itani
    a-win-ile
    1.SP-be.ill-PFV
    ‘She was ill for a long time’ (she recovered earlier today)

6. Conclusion

In this paper, we have investigated the semantics of the Progressive, Anterior, and Resultative aspects in Bungu. The particular interpretation of each aspect depends on the type of predicate that it modifies, and we therefore investigated the distribution and interpretation of each aspect with thirty predicates. We also investigated these predicate-aspect combinations in additional frames involving the Persititive *-chili*, the temporal adverbial *kwi-isambo itani* ‘for a long time’, and *kufuma unguzu* ‘since (this) morning’, among others. We used Croft’s (2012) two-dimensional diagrammatic representations of events to represent the aspectual contour encoded by each
Diagramming Grammatical and Lexical Aspect: The case of the Progressive, Anterior, and Resultative in Bungu (Bantu, F25)

predicate, which allowed us to identify the phases within each aspectual contour that are profiled by the Progressive, Anterior, and Resultative aspects.

While compatibility of the Progressive with a predicate in Bungu depends only on the presence of a durational change-of-state phase (whether directed or undirected), compatibility of that form with the Persistive requires the change-of-state phase to be more than merely fleeting (perhaps more than simply the immediate lead-up to the transition to the resultant state), thus indicating a divide in the behaviour of such predicates. All Bungu predicates are compatible with both Anterior and Resultative aspects, however the interpretation of such forms (as immediate or hodiernal past versus profiling the resultant state) depends on the existence of a durational resultant state phase. Also, for predicates with a durational resultant state phase, agentivity or intentionality plays a factor in the compatibility of the Persistive with an Anterior verb form, and reversibility of the predicate is likewise key to the compatibility of the Persistive with both the Anterior and the Resultative. Predicates having an overlapping coming to be and result phase (e.g. lepuka ‘crack’) complicate the picture further, as multiple potential resultant states exist.

While kwi-isambo itani ‘for a long time’ is compatible with many verbs, it requires either a durative resultant state phase, or a more than fleeting durative change-of-state phase (thus being incompatible with a verb like fika ‘arrive’, which has neither). For verbs with both phases, the resultant state phase, rather than the change-of-state phase, is profiled by the time adverbial.

The present study is by no means exhaustive, but we hope that it sheds some light on the interaction between grammatical and lexical aspect in Bungu and illustrates the potential of Croft’s diagrammatic representations of events as a descriptive tool.

Acknowledgments

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Abbreviations

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<th>Meaning</th>
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References


Hazel Gray
SIL International
hazel_gray@sil.org

Steve Nicole
Canada Institute of Linguistics
British Columbia
Canada
Steve_nicole@sil.org