

Southern Bantu Auxiliary Functions and Their Distributions

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Abstract

Southern Bantu languages have extensive auxiliary inventories with functions that sometimes go beyond typical tense/aspect/mood/polarity meanings. This article examines areal semantic patterns of auxiliaries in 16 Southern Bantu varieties, identifying functions that are regularly encoded by auxiliary forms. In addition to tense, aspect, modal, and negation meanings, these include sequentiality functions ('until', 'after', 'furthermore', and 'meanwhile', among others) and adverbial-like functions such as 'quickly, soon', 'do well', 'do in vain, fail', 'nevertheless', 'rather, preferably', and 'just, merely'. This article aims to give a systematic overview of auxiliary functions and where they are attested across Southern Bantu, allowing for further targeted studies and cross-linguistic investigations and leading, ultimately, to a better understanding of the origins of Southern Bantu auxiliary systems.

Keywords: Bantu Zone S, auxiliary semantics, non-TAMP functions of auxiliaries

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1 Introduction

1.1 Contextualizing the research

Southern Bantu auxiliary systems typically feature large inventories with functions that often go far beyond the temporal, aspectual, modal, evidentiality, and polarity semantics typically associated with auxiliaries.

For example, the Sesotho auxiliary *tla* (< ‘come’) can be used to indicate that the action indicated by the lexical verb was done well (1). The siSwati auxiliary *sheshe* (< ‘hurry’) indicates a quick action (2).

- (1) Sesotho S33 (Chaphole 1988, 193)

<i>A-tla</i>	<i>a-bu-a</i>	<i>Mosotho.</i>
SP ₁ .PST-AUX	SP ₁ .CSC-speak-FV	1.Sotho

‘He spoke well, the Mosotho.’

- (2) siSwati S43 (modified from Nkuna et al. 2021, 231)

<i>Lilanga</i>	<i>li-hlala</i>	<i>li-sheshe</i>	<i>li-shon-e</i>	<i>ebusika.</i>
5.sun	SM ₅ -AUX	SM ₅ .SIT-AUX	SM ₅ -set-SBJV	LOC.14.winter

‘The sun always sets quickly in winter.’

Many such auxiliary functions are attested within Southern Bantu. Some of them involve non-cognate or even totally distinct lexical sources, suggesting that these functions are significant enough within the language group that verbal resources are recurrently recruited to express them via auxiliiation.

To the best of my knowledge, there has been little to no comparative work identifying auxiliary functions and where they are attested across Southern Bantu. My aim in this article is therefore to lay out the specific auxiliary functions attested and the breadth of their attestation across Southern Bantu, showing which functions appear to be widespread, and whether these are recruited from multiple sources.

This comparative overview further aims to serve as an aid to other researchers of Southern Bantu languages and of Bantu in general, by providing a checklist, with examples, of functions known to be expressed via auxiliaries in Southern Bantu. I hope thereby to pave the way for broader cross-linguistic comparison, so that we can determine which auxiliary concepts are specific to Southern Bantu and which are more widespread in Bantu and in African languages more generally.

The article builds upon an open-source, spreadsheet-based dataset of auxiliaries in Southern Bantu (Carbo et al. 2025).

1.2 On the term ‘auxiliary’ and its use in this article

The forms chosen for inclusion in the present study have the following properties in common (3):

- (3) Criteria for identifying auxiliaries

- i. They form a single predicate with a lexical verb, modifying that verb and sharing a subject with it.
- ii. They are bound to the lexical verb they modify and cannot appear without it.

- iii. They are verbal and can – at least optionally – host subject-marking prefixes.
- iv. They take as a complement one of three subordinate or non-finite lexical verb forms: situative, subjunctive/consecutive, or infinitive.
- v. They cannot host object-marking prefixes, which are restricted to the construction's lexical verb.

These properties are described in far greater depth in Crane et al. (forthcoming).

Over the years, auxiliaries have been defined using many different and sometimes incompatible criteria, and I have not found a definition that fully captures the phenomenon discussed in this article, although Southern Bantu auxiliary forms are frequently included in cross-linguistic studies of auxiliiation and grammaticalization (e.g. Kuteva et al. 2019; Anderson 2011). The closest-fitting comparative concept is Haspelmath's (2024, 1) "retro-definition":

An auxiliary is a non-affixed bound [i.e. it cannot appear on its own – auth.] form cooccurring with a verb that expresses TAMEP (tense, aspect, modality, evidentiality, or polarity) meanings and that has person marking which indexes the verb's subject.

However, Southern Bantu auxiliary functions are not restricted to TAMEP; furthermore, excluding the auxiliaries with non-TAMEP functions would be linguistically random, excluding forms that otherwise behave identically to other auxiliaries in the same systems.¹

The defining properties listed in (3) are not without their complexities. For one thing, auxiliaries, as forms in the process of grammaticalizing, often exhibit variable behaviour (see e.g. Kuteva 2001, 6–7). For example, some of the forms I discuss in this article are losing their agreeing subject marking (thereby looking more like adverbial particles), while others can appear as either auxiliaries or prefixes. Following the criteria in (3), I include in this investigation only forms attested to host subject prefixes (even if they do not always do so)² and to appear as non-affixed forms (even if the language in question also has corresponding prefixes).

With verbs taking infinitive complements – which have extensive functional overlap with auxiliaries taking situative, subjunctive, or consecutive complement types and clearly belong to the same semantic field – it can occasionally be difficult to draw the line between auxiliary verbs and lexical verbs taking nominal complements, since infinitive forms share many properties with nouns. I included infinitive-selecting forms in the auxiliary set if their functions in these contexts differed from the reported functions of the same verb taking regular nominal complements. For example, Sesotho sa Leboa (S32) *rata* 'like, love, want' appears to be used only with these meanings, whether followed by a noun or a verb, according to the sources I drew upon, while a cognate form in Setswana (S31) and Sesotho (S33) can have the avertive or (ap)proximative meanings 'almost' or 'nearly' when used in auxiliary constructions. I therefore included the S31 and S33 forms in the analysis but not the form from S32. However, such lines are not completely straightforward to draw, as also noted by Ziervogel (1959, 150).

¹ Indeed, Haspelmath himself notes, "The particular choice of meanings is of course arbitrary, and one could have made different choices. The reason I chose TAMEP (tense, aspect, modality, evidentiality, or polarity)... is that these are the most common kinds of meanings mentioned for auxiliaries" (2024, 14).

² A few auxiliaries only appear as imperatives, which are not marked with subject prefixes, but which are clearly verbs. Regarding criteria (b) and (d), a small number of auxiliary-like forms (mostly modal, to the best of my knowledge) do allow for ellipsis of the lexical verb and/or can be prefixed with limited object markers (mostly frozen and possibly even having been reanalysed as part of the auxiliary itself; see Crane et al. 2024; Crane, Lubambo et al. 2025). I have included these in Section 5.2 to give a better overview of the modal systems and their lexical sources, also noting the classificatory challenges.

Because the auxiliary forms are drawn from descriptive literature of varied depth, I occasionally had to make judgment calls on whether forms described in the source material under the umbrella of auxiliaries (and related terms) fit these criteria perfectly, sometimes based on less-than-ideal data. I have high confidence that the great majority of forms included in the analysis belong there, based on the criteria outlined in (3). I have noted some cases of uncertainty. I also discuss some relevant forms that conform to some but not all the criteria, flagging them as not (yet) full members of the auxiliary systems.

1.3 Southern Bantu languages

Southern Bantu, also called South-Eastern Bantu, is a cluster of related languages spoken in South Africa and neighbouring countries, including Botswana, Eswatini, Lesotho, Mozambique, and Zimbabwe (Gunnink et al. 2023, 77). It is a subclade of Eastern Bantu. Southern Bantu consists of six groups, traditionally labelled with the ‘Guthrie’ (see Hammarström 2019) codes S10 (Shona), S20 (Venda), S30 (Sotho/Sotho-Tswana), S40 (Nguni), S50 (Tsonga), and S60 (Copi). See Gunnink et al. (2023) for a detailed description of these groups and their relationships to one another.

The languages examined in this study are listed in Table 1, along with approximations of the numbers of auxiliaries included in the present study.³

Table 1: Languages and approximate inventories of documented auxiliaries

Language group	Language	Number of auxiliaries considered in this study (approx.)
Shona S10	Central Shona [mostly Zezuru] (S10/S12, sna)	30
Venda S20	Tshivenda (S21, ven)	14
Sotho-Tswana S30	Silozi (K21, loz)	26
	Setswana (S31, tsn)	69
	Sesotho sa Leboa [N. Sotho] (S32, nso)	25
	Sesotho [S. Sotho] (S33, sot)	41

³Counts are unavoidably approximate for several reasons. Documentation is incomplete, and the distinction between separate auxiliaries and the same base auxiliary with different functions, derivable from its aspectual marking, is not always straightforward to make. This may result in minor overcounting, but the more likely situation, in my opinion, is undercounting due to insufficient documentation.

Nguni S40	isiNdebele [S. Ndebele] (S407, nbl)	32
	Sindebele [N. Ndebele] (S408, no ISO)	35
	isiXhosa (S41, xho)	49
	isiMpondo (S41a, no ISO)	19
	isiZulu (S42, zul)	65
	siSwati (S43, ssw)	41
	Sindebele [Ndebele of Zimbabwe] (S44, nde)	23
Tsonga S50	Xitswa (S51, tsc)	3
	Xitsonga (S53, tso)	21
Copi S60	Gitonga (S62, toh)	11

Note that S30 Sotho-Tswana also includes K21 Silozi, a mixed language spoken in Zambia and Namibia. Silozi formed after a group of mostly Sesotho speakers known as the Makololo invaded Barotseland, setting up temporary rule over the K31 Luyana speakers living there. Although the Makololo were eventually conquered in 1864, their language had already taken hold. It is still spoken in the area as a mixed language, with mostly Luyana phonology (dramatically simplified from Sotho-Tswana) and mostly Sotho morphology and vocabulary, although some typically Zone K grammatical features and locally relevant lexical items are found in Silozi (see Gowlett 1989; Gunnink et al. 2023 for discussion). Auxiliary concepts found in Silozi and Zone S languages but absent in other Zone K (or M) languages, especially those not influenced by Silozi, may therefore provide some evidence of time depth for the auxiliary forms and functions.

1.4 Data sources

The main source for this article is the body of descriptive literature on the Southern Bantu varieties, listed in Appendix B. Notes on auxiliaries from these sources are collected in Carbo et al. (2025), and I made use of this dataset in locating examples and identifying clusters of concepts. Because this article attempts to consolidate large amounts of data, I do not cite references when listing sources and functions, unless a particular reading or property is discussed at greater length. See Carbo et al. (2025) for detailed reference information.

The reference works consulted span more than a century and were written with different aims, target audiences, theoretical frameworks, and areas of focus. The depth to which auxiliaries are discussed also varies greatly: some sources merely list auxiliaries and their functions, while others discuss their sources and usage patterns in detail.

Furthermore, many descriptions of auxiliary functions, whether of a single auxiliary form, of cognates across languages, or of different forms with similar functions across languages, overlap only partially (if at all), and without further targeted investigation it is generally impossible to determine whether divergences reflect descriptive differences or distinct usage patterns. Inevitably, a study of such a complex semantic field, based on a literature survey, will engage in ‘lumping’ or ‘splitting’ of types, some of which will be due to differences in the precision of

descriptive sources (see e.g. Kuteva et al. 2019, 10–11 for some discussion of the latter issue). I represent significantly diverging descriptions as separate functions, in the absence of evidence (e.g. from comparable illustrative examples) that they are different terminology for the same function.

Although named languages are often described as if they were separable, reified entities, descriptive data are culled from doculects that do not fully represent the breadth of speaker practices. Lack of an attested auxiliary does not mean that the auxiliary does not exist in a named language, and (more rarely) an attested auxiliary may not actually be in common use. Researchers interested in the semantics of specific auxiliaries should consult the original sources – or, whenever possible, living scholars and speakers of the languages in question.

1.5 Classifications and other conventions

I have roughly classified auxiliary functions into a few major categories: aspect (Section 2), sequentiality (Section 3), tense (Section 4), mood and modality (Section 5), negation (Section 6), and a wide-ranging set of functions that do not fit neatly into these categories, but serve functions such as speaker evaluation, manner/other adverbial, and even discourse functions (Section 7). This division is a categorization of convenience rather than a theoretical claim. It is an understatement to say that the literature on tense, aspect, mood, and polarity has not always agreed on how to define and delineate these categories, and many auxiliary functions span them no matter how they are sliced. For a different approach to categorizing auxiliary functions for cross-linguistic comparison, see Schaefer and Egbokhare (2025).

The basic definitions I have used for categorizing the categories are as follows:

ASPECT relates an eventuality and its internal structure to the time being talked about (topic time); see e.g. Klein (1994).

SEQUENTIALITY relates (the times of) eventualities with respect to other eventualities (in contrast to the topic time or the reference time). It therefore has features in common with both aspect and tense, but instead of relating reference and topic times, directly relates eventualities to one another. I also classify under sequentiality causal relationships between events, which generally entail temporal relationships.

TENSE relates the time being talked about (topic time) to a reference point, usually the time of speech (or ‘utterance time’; see e.g. Klein 1994). Note that the nature of tense in Bantu languages, which often obligatorily mark multiple temporal distinction – for example, ‘today’ vs. ‘yesterday’ vs. ‘remote’ past – is debated (see e.g. Cable 2013, who argues that at least in Gikūyū (E51), temporal remoteness markers relate utterance time directly to event time). Further, some forms I have categorized as ‘tense’ function more like temporal adverbials, doing something like setting the topic time itself. Examples include meanings like ‘[do something] early/first thing in the morning’. The same forms often develop more traditionally tense-like functions (see e.g. Section 4.7).

MOOD refers to illocutionary force (following Nurse and Devos 2019, 219, “optatives and directive speech acts”).

MODALITY refers to expressions of possibility and necessity (see e.g. van der Auwera and Plungian 1998).

NEGATION refers to negative polarity, i.e. reversing the truth value of the proposition (see Miestamo 2005, 42 for standard negation as a comparative concept).

The other forms (Section 7) do not fit neatly into any of these categories, although they may have features of one or more of them.

It is sometimes difficult to distinguish the functional contributions of auxiliaries from those of the (sometimes elaborate) agglutinative TAMP marking on these auxiliaries (e.g. for auxiliaries conveying tense or negation). I have made notes on problematic cases where possible. Readers should refer to the dataset and source materials for further information.

Throughout this paper, for concision and easy cross-group comparison, and to avoid ambiguity (e.g. between ‘Ndebele’ varieties), I mostly refer to languages by their Guthrie codes, as listed in Table 1. For the convenience of human readers, I also list language names when giving examples or discussing specific forms in greater depth. Proto-Bantu (PB) reconstructions, marked with a reference number and an asterisk (*), are taken from Bastin et al. (2002).

I have generally adopted the orthographic conventions of the original reference works. Most of these works use the standard orthographies of the languages in question, although the orthographies used in older works are more variable. Some sources also mark tones. See Carbo et al. (2025) for some further notes on Southern Bantu orthographies. It is important to note that many of these languages (especially in S30) have more vowel contrasts than are represented in the orthographies. Some of the older descriptive materials do mark additional vowel distinctions (e.g. S31 *fêla* represents [fɛla] but is represented as *fela* in modern Setswana orthography; see Creissels forthcoming for phonemic transcriptions of S31 data). This means that a few auxiliaries are represented inconsistently in the dataset. I do not know of any cases where these differences represent (or mask) underlying lexical differences. Vowel diacritics in this paper, included to remain faithful to the original works, can therefore safely be ignored.

All glosses (and errors therein) are my own, either modified from the original works or (in most cases) added entirely. Translations are taken directly from the original works unless otherwise indicated.

When citing auxiliaries and noting their lexical sources, I cite the auxiliary forms as given in the descriptive sources. In each subsection (aside from Section 7.12, which lists auxiliary functions attested in only one language), I include a table of auxiliary forms grouped by source meaning. I group clearly cognate forms – which may in some cases be the result of borrowing – together in these tables. I have attempted to consolidate the translations of lexical sources to core meanings for easier cross-linguistic comparison. I also give a representative example in each subsection.

A summary of forms and meanings, along with the respective section in which each is discussed, is given in Appendix A.

2 Aspectual functions

Aspect marking is a very common function of auxiliaries across Bantu and worldwide. This section describes aspectual functions associated with auxiliaries in Southern Bantu, including functions such as imperfectivity and repetition, along with a few more specific aspectual functions, including the category of ‘phasal polarity’ (Van Baar 1997). I assume that all languages in the sample have ‘aspectual’ verbs that take verbal complements and have meanings like ‘finish’, ‘start’, ‘stop’, and so forth. Unless they have developed additional functions (e.g. finish > ‘as soon as’) and otherwise meet the criteria outlined in (3), I do not discuss them here, as I consider them primarily lexical: among other properties, they can take nominal complements, they are not bound to a complement verb, and they can take object markers.

2.1 Imperfective subtypes

By far the most frequent auxiliary function in the dataset relates to one or more of what I (following Comrie 1976) consider to be subtypes of imperfectivity, with meanings described as ‘habitual’, ‘continuous’, ‘continually’, ‘progressive’, ‘often’, ‘frequently’, ‘usually’, and ‘always’, among others.

Many auxiliaries have several of these functions. For example, Oosthuysen (2016, 291) notes that the S41 (isiXhosa) auxiliary *ya*, when followed by a subjunctive marker, can mean either ‘continues to occur’ or ‘occurs from time to time’. Some descriptions draw distinctions between these meanings: for example, Creissels (forthcoming) conceptually separates a number of imperfective subtypes in S31 (Setswana), including five auxiliaries meaning ‘continuous’ (‘constantly’); two expressing ‘continuative’ (‘continue to’); and one auxiliary each with the functions ‘frequentative’ (‘often or extensively’), ‘habitual’ ‘durative’, and ‘occasionally, sometimes’ (terms mentioned are as given by Creissels).

However, not all sources are so specific, and a more precise categorization is therefore beyond the scope of this paper, even though detailed semantic maps of each marker and its functions would be of great interest. It is very important to keep in mind that English translations alone cannot be taken as analyses, and certainly cannot be used to distinguish, for example, ‘habitual’ from ‘frequentative’ from ‘occasionally’. The main lesson to take from the preliminary comparative data presented here is the importance of auxiliaries in the expression of imperfective-type meanings in Southern Bantu.

Table 2 attempts a rough classification, distinguishing at least continuous from iterative aspects. CONTINUOUS encompasses durative ‘keep doing’ and progressive ‘be doing’ (following Heine and Kuteva 2002, 19; Kuteva et al. 2019, 27–32). What I call ITERATIVE refers to various kinds of repetition, including meanings like ‘constantly’, ‘habitual’, ‘usually’, ‘often’, and ‘occasionally’. Table 2 lists the translations given in descriptive documentation. The Xs in the continuous (CONT) and iterative (ITER) columns indicate that, based on the translations and examples given in the descriptive literature, I judge that this meaning is associated with one or more lexical items derived from the (semantic) source listed in the leftmost column. The question marks indicate that examples given in the source literature suggest that this might be a plausible interpretation, but some ambiguity remains.

This categorization does not rule out the possibility that two different lexical items derived from the same source meaning might have different functions; furthermore, it is likely that not all interpretations are represented in the table.

Sources of continuous auxiliaries include at least ‘**build**’, ‘**be common**’, ‘**continue**’, ‘**copula**’, ‘**go**’, ‘**go/leave/travel/walk**’, ‘**live**’, ‘**long ago**’ [far past continuous], ‘**refuse**’, ‘**spend the day; spend time**’, ‘**sit; stay; live**’, ‘**stretch**’, ‘**travel**’, and possibly ‘**be with**’, ‘**forget; delay**’, ‘**go round**’, and ‘**stand for**’.

Iterative functions derive from ‘acquaint; be used to’, ‘build’, ‘have/be with’, copula, ‘eat’(?),⁴ ‘end’, existential(?),⁵ ‘become full’, ‘go’, ‘go; leave; travel; walk’, ‘go round’, ‘increase’, ‘know’, potential(?), ‘remain’, ‘refuse’ ‘satisfy’, ‘stand for’, ‘sit; stay; live’, ‘travel’, ‘wait for’ ‘wander about’, and possibly ‘live’.

Sources of both functions include ‘build’, copula, ‘go’, ‘go; leave: travel; walk’, ‘sit; stay; live’, ‘travel’, and possibly comitative, ‘forget; delay’, ‘go round’, ‘live’, ‘refuse’ and ‘stand for’.

A few auxiliaries have unknown sources. Some of these resemble auxiliaries with known sources and may be borrowings or have similar source material.

Although a few imperfective-related prefixes occur, such as S10 (present) progressive *khou-* (Nurse 2019, 302), Southern Bantu languages tend to lack general purpose imperfective morphology such as the habitual suffix *-a(n)g*, which is common across Bantu (Nurse 2008, 262–264). This lacuna might be one motivation for the recruitment of many auxiliaries to express habitual and related readings.

Table 2: Imperfectives

Source Meaning	Language / Auxiliary	CONT	ITER
already + DEM (c117)	S41 <i>sólókò</i> always; constantly; persistently; continuously; all the time		X
acquaint/be used to	S32 <i>tlwaetše</i> used to (past habitual, judging from examples) S33 <i>tlwaela</i> be accustomed to [> tend to] i.e. generic reading		X
build	S31 <i>aga/agile</i> usually; often; continuous; keep on doing; always	X	X
come	S31 <i>tlé</i> occasionally; sometimes; usually; habitually; frequently; as a matter of habit or regular custom		X
comitative (have/be with)	K21 <i>na</i> keep on; continue to (examples ambiguous) S31 <i>na (le)</i> habitual [also obligative]	?	X
be common	S42 <i>vama</i> usually S407 <i>vame, vane</i> habitual	X	

⁴I am not fully convinced by this reconstruction, proposed for S41 by Oosthuysen (2016, 311). As noted in Carbo et al. (2025), the tones of *dla* ‘usually’ may differ from the tones of *dla* ‘eat’, and the semantic pathway is not straightforward. The only semantic pathway for ‘eat’ noted in Kuteva et al. (2019) is EAT > PASSIVE.

⁵I have posited the existential and potential sources based on their morphological similarity and the plausibility of semantic change.

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Source Meaning	Language / Auxiliary	CONT	ITER
copula	S33 <i>be</i> [usually even]; S62 <i>ba</i> [continuity]; S10 <i>va</i> [continuous; habitual] S62 <i>na</i> [continuity of action]; S31 <i>nê</i> [past continuous]; S33 <i>ne</i> [past continuous] S62 <i>ra</i> [continuity of action]; S10 <i>ri</i> [continuous]		
eat?	S41 <i>dla</i> usually; regularly		X
end	S31 <i>fêla</i> constantly; always; continually [examples suggest repetition] S408 <i>phele</i> just, sometimes, simply	X	
existential?	S33 <i>ke</i> sometimes, occasionally		X
forget / delay	S42 <i>libele</i> do continuously; do continually what ought not be done	?	X
get/become full	S53 <i>tála</i> likely; often; always S62 <i>talela</i> frequently		X
go	S41 <i>ya</i> progression; continuation; from time to time S33 <i>ya, ye</i> usually; habitually S43 <i>ye</i> usually	X	X
go / leave / travel / walk	S41 <i>hamba</i> all the time go / leave / travel / walk S41 <i>hamba</i> all the time S41A <i>hamba</i> all the time S42 <i>hambe</i> keep on; all the way along; all the time S43 <i>hambe</i> all the time; often S31 <i>tsamaya</i> keep on doing; usually; continuing; until; continuous; doesn't stop; constantly	X	X
go round	S10 <i>pota</i> go on; keep on; continually	?	X
increase	K21 <i>atisa</i> often S31 <i>atisa</i> often; frequently; keep on; usually; frequentative S33 <i>atisa</i> frequently; often		X
know (+APPL)	S10 <i>zivo, ziviro</i> habitually; according to custom		X
live	S31 <i>tshela</i> continuous; constantly	X	?
long ago	S43 <i>kadze</i> continuing in the far past	X	
potential?	S31 <i>ka</i> from time to time		X

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Source Meaning	Language / Auxiliary	CONT	ITER
refuse	S10 <i>ramba</i> keep on; remain; constantly; continue S53 <i>phika</i> always; continually	X	X
remain	S407 <i>hle</i> no more [NEG]; usually; commonly; habitual action S408 <i>hlwe, hlwa</i> no more [NEG]; usually; commonly; habitual action S43 <i>ye</i> usually		X
spend the day / spend time	S53 <i>dzumba</i> S32 <i>hlwa</i> spend the day doing; continually S21 <i>twa</i> spend the day doing; continually S31 <i>tlhola</i> usually; (spend) the whole day through; constantly, repeatedly; always; continuous(ly); no longer [NEG] K21 <i>tola</i> continuation; never again [NEG]	X	
stand for	S41 <i>mana</i> repeatedly; continually; often S41A <i>mane</i> continually	?	X

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Source Meaning	Language / Auxiliary	CONT	ITER
sit / stay / live	S32 <i>dula</i> always; continually S33 <i>dulela</i> keep doing S21 <i>dzula, dzulela</i> always; continuously S10 <i>gara</i> continuous S10 <i>garo</i> always S41 <i>hlala</i> persisting process; continu- ous; always, continuously S43 <i>hlala</i> keep on doing; continuously S44 <i>hlala</i> always S407 <i>hlale</i> from time to time; do habitually S408 <i>hlalela</i> always; continually S42 <i>hlale, hlalele</i> always; continu- ously; habitually; from time to time S42 <i>hlezi</i> always; constantly; from time to time S44 <i>hlezi</i> constantly S31 <i>nna; (n)ntse; nne; nnela</i> continue; may as well; gradually; keep on do- ing; do always; continually; occasionally; usually; customarily S53 <i>tsháma</i> always; be wont to; often	X	X
stretch	S31 <i>nama</i> continue; keep on; continuative	X	
travel	S31 <i>éta</i> do later/at that time; while; proceed, keep on; simultaneity; all the time	X	X
wait for	S53 <i>tshàmala, tshàmela</i> always (cf. <i>tsáma</i> < ‘sit / stay / live’?)		X
wander about	S42 <i>zinge</i> habitually		X

Source Meaning	Language / Auxiliary	CONT	ITER
unknown source	S42 <i>damane</i> / <i>damene</i> constantly; often; always S42 <i>dane</i> always S42 <i>de</i> always; repeatedly S33 <i>ěe</i> habitual S41 <i>fudula</i> ‘used to’; past habitual S53 <i>hámba</i> always; continually S407 <i>hle</i> no more [NEG]; usually; commonly; habitual S43 <i>hle</i> frequently S408 <i>hleti</i> (< ‘stay?’) keep on; continue S41A <i>khunkqa</i> do much; often S42 <i>lokhu</i> , <i>lo</i> keep on; persistently S44 <i>lokhe</i> , <i>lokhu</i> continuous; keep on doing; still S33 <i>ne</i> (< COP?; sit/stay?) past continuous S408 <i>nja</i> continually S33 <i>nna</i> ; <i>nne</i> (< COP?; sit/stay?) continue; keep on doing; occasionally S408 <i>nojwa</i> keep on; sometimes S407 <i>nonde</i> keep on; sometimes K21 <i>nze</i> continue, keep on, still S408 <i>se</i> usually, commonly S43 <i>solo</i> continuously S408 <i>swe</i> usually; commonly S53 <i>tàmà</i> always; continually S33 <i>ya</i> (< ‘go?’) usually		

2.2 ‘Again’ (S20; S30 incl. K21; S40; S50; S60)

Auxiliaries indicating that the predicate takes place ‘again’ occur in at least five subgroups, with numerous lexical items (many cognate). Known sources include ‘**add; increase**’ (K21, S53); ‘**repeat**’ (S21, S33, and most of S40);⁶ and ‘**return; come back; go back; return + APPL**’ (S10, K21, S33, S40 as a group, S53, S62). Most of these words (aside from ‘repeat’) are reconstructible to Proto-Bantu 3563 *jòng ‘add to’ or 353 *bój ‘come (or go) back; come’, but some seem to have been adopted by analogy, as with K21 *kuta* and S53 *tlhèlà*, both meaning ‘return’ (note that K21 also has *buela* ‘return’ as an auxiliary meaning ‘again’). Therefore, this function seems to be important in Southern Bantu. ‘Return’ is a common cross-linguistic source

⁶The auxiliary *phinde* (from *phinda* ‘repeat’) is not mentioned for S408. In S407, *phinda* is not listed as a lexical item in the isiNdebele dictionary (Iziko lesiHlathululi-mezwi sesiNdebele 2006), but *phinde* is noted as an auxiliary meaning (under negation) ‘never again’. The positive polarity meaning ‘again’ is not noted, and brief (translated) corpus searches (<https://app.glosbe.com/nr/en/>) for words such as *ngiphinde*, *aphinde*, and *baphinde* seem to confirm this pattern. *Phinde* may have been borrowed into S407, but only in negative contexts.

of the ‘again’ function (Kuteva et al. 2019, 476), and the other sources have obvious semantic relationships to the concept ‘again’.

- (4) Sesotho S33 (Doke and Mofokeng 1957, 284)

Rē-bōèla rē-ngòl-a.
 SP_{1PL}-AUX SP_{1PL}.SIT-write-FV
 ‘We write again.’

- (5) Silozi K21 (Fortune 1977, 94)

Ne-ba-ekeza ku-bulel-a.
 PST-SP₂-AUX INF-speak-FV
 ‘They spoke again.’

- (6) isiZulu S42 (Mkhatshwa 1991, 127)

Ngi-fun-a uku-buye / uku-phinde ngi-ku-bon-e.
 SP_{1SG}-want-FV INF-AUX / INF-AUX SP_{1SG}-OP_{2SG}-see-SBJV
 ‘I want to see you again.’

Table 3: ‘again’

Source Meaning	Language / Auxiliary
increase	K21 <i>ekeza</i> ; S53 <i>èngeta, engete</i>
repeat	S21 <i>dovha</i> S33 <i>phēta</i> S41 <i>phinde</i> ; S41A <i>phinde</i> ; S42 <i>phinde</i> ; S44 <i>phinde</i> ; S43 <i>phindze</i>
return / return to	S10 <i>wiro, wiriro</i> S31 <i>boa, boela</i> ; S33 <i>boela</i> ; K21 <i>buela</i> ; S62 <i>ḃwelela</i> S408 <i>buya</i> ; S41 <i>buya</i> ; S44 <i>buya</i> ; S407 <i>buye</i> ; S42 <i>buye</i> ; S43 <i>buye, buya</i> K21 <i>kuta</i> S53 <i>tlhèlà</i>

2.3 (Ap)proximative and avertive (‘almost’ / ‘about to’) (S30 incl. K21; S40; S50; S60)

A very common auxiliary function expresses the concepts ‘almost’ or ‘about to’. This categorization conflates the categories (AP)PROXIMATIVE (on the verge of, about to, etc.) and AVERTIVE (nearly happened, but did not happen); see, for example, Kuteva et al. (2019, 26, 32). I combine these conceptually similar but distinct categories for two reasons: first, because a number of the markers can clearly have both kinds of readings, as in (7); and second, because many sources do not provide enough information to make a distinction, if such a distinction can in fact be made.

- (7) Silozi K21 (Gowlett 1967, 161)

a. *Njà i-bàtìlè i-nì-lúm-à*
 9.dog SP₉-AUX.PFV SP₉.SIT-OP_{1SG}-bite-FV
 ‘The dog almost bit me.’

- b. *Mbútùtù ú-bàtilè á-lòbézi.*
 1.baby SP₁-AUX.PFV SP₁.SIT-sleep.PFV
 ‘The baby is almost asleep.’

- (8) Setswana S31 (Creissels forthcoming, 28)

Pula e-losetsa go-n-a.
 9.rain SP₉-AUX INF-rain-FV
 ‘It looks like it’s about to rain.’

- (9) siSwati S43 (Ziervogel and Mabuza 1976, 121)

Lí-phòsè / lí-císhè kú-ngì-w-ís-à.
 SP₅-AUX / SP₅-AUX INF-OP_{1SG}-fall-CAUS-FV
 ‘It almost makes me fall.’

As noted, forms with these meanings are very common. S33 alone has five distinct approximative auxiliaries. Sources for these forms mostly come from diverse lexical items meaning ‘**want (lack; need; search for, etc.)**’ and/or ‘**want (like; love; desire, etc.)**’, or a combination of these meanings (S30 as a group, S40 as a group, S62). Other sources include ‘**extinguish**’ (S42, S43?); ‘**be greedy**’(?)⁷ (S10); ‘**come**’ (S31); ‘**throw**’ (S42, S43, S44, S53?⁸); **quotative** (K21); and an applicative causative form of ‘**struggle**’ (S31). ‘Almost’ forms mentioned in the literature without clear etymology (although similar to *pho(n)sa* ‘throw’) are S407 *pheze*, S408 *phase*, *phoswe*, *phoso*, S41 *phantsa*, *phantse*, and S41A *phantsa*.

Kuteva et al. (2019, 477, 486) list ‘come to’, ‘love’, ‘near’, ‘promise’, ‘threaten’, and ‘want’ as proximative sources, and ‘copula’, ‘fail’, ‘love’, ‘near’, and ‘want’ as avertive sources. It would be interesting to see if there are correlations between these two sets of meanings and the approximative vs. avertive functions in Southern Bantu.

Table 4: (Ap)proximative and avertive

Source Meaning	Language / Auxiliary
come	S31 <i>tsile</i>
extinguish	S42 <i>cishe</i> ; S43 <i>cishe</i>
be greedy?	S10 <i>karo</i>
struggle	S31 <i>loetsa</i>
throw	S42 <i>phonse</i> , <i>phose</i> ; S43 <i>phose</i> ; S44 <i>phose</i> ; S53 <i>phòse?</i>

⁷Fortune (1955, 341) notes this as a possible source.

⁸S53 Xitsonga has *phòse* and the lexical verb *phòsà*, defined by Cuenod (1967, 167) as ‘use magic to attract or harm person’. While most S40 sources define *pho(n)sa* as ‘throw’, Pelling (1971, 57) defines *phosa* in S44 as ‘cast, throw, bewitch’, suggesting a link between these lexical items.

want (etc.)	K21 <i>bata</i> ; S31 <i>batla</i> ; S33 <i>batla</i> S41A <i>funa</i> ; S42 <i>funa</i> S32 <i>nyakile</i> S31 <i>rata</i> ; S33 <i>ratla</i> S31 <i>senka</i> S62 <i>haja</i> S42 <i>thanda</i>
quotative	K21 <i>li</i>
unknown source	S41A <i>phantsa</i> ; S41 <i>phantsa</i> , <i>phantse</i> S408 <i>phase</i> , <i>phoswe</i> , <i>phoso</i> ; S407 <i>pheze</i>

2.4 Experiential ('(have) ever', 'once') (S10; S20; S30; S40)

The most common experiential markers lack an obvious lexical source and take the form *k(h)V* (*h* represents aspiration): S31 (*e*)*kilê*, (also S32?); S33 *ka*, *kile*; S41(A), S407, S408 *khe*; S42 *ke*; S43 *ke/se*; S44 *ke*; S53 *khanga*.

- (10) Sesotho S33 (Doke and Mofokeng 1957, 266)
N-kile ka-'mòn-a Gauteng.
 SP_{1SG}-AUX.PFV SP_{1SG}.CSC-OP₁.see-FV 1A.G
 'I once saw him in Johannesburg.' [sic.]

- (11) isiXhosa S41 (Oosthuysen 2016, 296)
Ndi-khe nda-nenz-a na=buhlungu yini na?
 SP_{1SG}-AUX SP_{1SG}.CSC-OP_{2PL}.do-FV COM=14.pain why Q
 'Did I ever cause you [pl.] any pain?'

Oosthuysen (2016, 296) posits the source *kha* 'to pluck [e.g. fruit], to dip up [e.g. water]', but I find this link tenuous. Similar forms are widespread in Southern Bantu: for example, S33 Sesotho has experiential *ka*, but the verb meaning 'pluck' is *kga* (see Moeketsi 1991, 81); S42 isiZulu has experiential *ke* but the verb 'pluck, dip up water (etc.)' is *kha* (see Doke and Vilakazi 1972, 372). Furthermore, the pathway of semantic change from 'pluck' to experiential is not clear to me, unless the route involves generalizing from a semelfactive-like action.

Doke and Mofokeng (1957, 266) equate the form in Sesotho S33 with a modal auxiliary, potential *ka*. Pretorius (1997, 129) and Creissels (this volume) also make this connection for Setswana. This conceptual overlap is attested in Swahili and possibly in some Great Lakes languages (Rasmus Bernander, p.c., March 30, 2026). The tone patterns of the experiential auxiliaries do seem to match those of the potential in the languages mentioned. It may be that the experiential forms in Sotho-Tswana languages have a modal source, and that their use as experientials arose via phonological similarity to the Nguni experiential forms, or vice versa, because the Nguni *k(h)a* forms do not correspond to potential prefixes and related morphemes, which take the form *nga*.

However, the sound correspondences seen in experiential forms are not the regular ones seen between these languages (for example, [k] in Sotho-Tswana corresponds to [ng] in Nguni), and with so little phonological material in these auxiliaries, it is difficult to draw firm conclusions

about their sources. Forms meaning ‘long ago’ are one additional candidate (see also S408 *kade* in Table 5), but these have similar challenges in terms of the initial consonant: the experiential form does not have the same initial consonant as the word ‘long ago’ in every language.

These markers seem to play a role in the formation of other auxiliaries as well, for example S408 *khange* ‘never (past)’ and S44 *ngeke* ‘cannot; will not; can/will never’.

Other experiential sources include **quotative** (S10), **‘return; come back’** (S21), and the adverb (likely with nominal source) *kade* ‘**long ago**’ (S408).

Table 5: Experiential

Source Meaning	Language / Auxiliary
quotative	S10 <i>ti</i>
return	S21 <i>vhuya</i>
long ago	S408 <i>kade</i>
<i>k(h)V</i>	S33 <i>ka/kile</i> ; S53 <i>khànga</i> ; S41 <i>khe</i> ; S41A <i>khe</i> ; S42 <i>ke</i> ; S44 <i>ke</i> ; S43 <i>ke, se</i> ; S407 <i>khe</i> ; S408 <i>khe</i> ; S31 <i>kilê, ekilê</i> ; S32 <i>kilê</i>

2.5 Phasal polarity

Kramer (2017, 1) describes phasal polarity as “involv[ing] reference points at two related phases implying situations which are contrasted as opposites with different polarity values, i.e. one of the two situations in question holds (+) whereas the other does not (-)” – relevant meanings include ‘already’, ‘still’, ‘no longer’, and ‘not yet’. Phasal polarity meanings are commonly encoded in Bantu as auxiliaries or verbal affixes, and both strategies are found in Southern Bantu, although affixation is very common. The interactions of phasal polarity and negation (see e.g. Löbner 1989, 72 and Kramer 2017, 3) in auxiliary constructions, as well as their overall semantics and relationships to other auxiliary categories, are complex and beyond the scope of this paper; further targeted study is obviously called for. This section probably does not capture the full extent of the phenomenon within Southern Bantu auxiliary systems.

2.5.1 ‘Already’ (S10; S30 incl. K21; S40)

The most common markers of ‘already’ appear to be related to a verb *sala* ‘**stay, remain**’ (PB 2911 **tígad* ‘remain’) and in some languages are shortened as *se* (K21, S33, S40), often in addition to a longer form *sele*. These appear throughout S30 and S40. Many of these shortened forms are also (or even mostly) used as prefixes (12).

(12) isiXhosa S41 (Oosthuysen 2016, 289)

- a. *Isikolo sikatitshala uGoqo si-se si-vul-iwe.*⁹
 7.school of_1A.teacher 1A.Goqo SP₇-AUX SP₇-open-PASS.PFV
 ‘The school of teacher Goqo has already been opened.’

⁹ According to Oosthuysen (2016, 289), this form tends to be written as a single word with two subject markers (*sisesivuliwe*). The same pattern, with *se-* functioning both as an auxiliary and as a prefix, is found in other languages, as can be seen, for example, by searching for *base* [followed by *ba-X*] at glosbe.com.

- b. *Se-ndi-sebenz-a*.
 ALT-SP_{1SG} -work-FV
 ‘I am already working.’

Other ‘already markers’ are **quotative** *ti* (S10)¹⁰ – also an experiential marker – and the forms *biyo* (S408) and *piŋgo* (S10).

Finally, an auxiliary derived from a noun, S43 *khatsi*, from *sikhatsi* ‘**time**’, means something like ‘only now (not before)’. This is a common meaning of the *se-* prefix, as well (see Nichols 2011 for extensive discussion).

Table 6: ‘already’

Source Meaning	Language / Auxiliary
quotative	S10 <i>ti</i> [‘not yet’ under negation]
stay / remain	K21 <i>se</i> ; S33 <i>se</i> ; S407 <i>sele, se</i> ; S408 <i>sele</i> ; S41 <i>sele, se</i> ; S42 <i>se</i> ; S43 <i>se</i> ; S44 <i>se</i> ; S32 <i>šetše</i> ; S31 <i>sētse, setswe</i>
time	S43 <i>khatsi</i>
unknown source	S408 <i>biyo</i> [‘not yet’ under negation] S10 <i>piŋgo</i> [‘not yet’ under negation]

2.5.2 ‘Still’ (S30 incl. K21; S40)

The phasal polarity concept ‘still’ is generally expressed as a prefix in Southern Bantu and can be found as a ‘persistent’ prefix in all the languages under investigation (with cognates found widely across Bantu; see e.g. Nurse 2008, 145–148).

However, a few auxiliary forms that can express some notion related to ‘still’ are also found, including K21 *nze*, S33 *ntse*, and S44 *lokhe* and *lokhu*. All of these forms are connected to imperfective (‘continue to’, ‘keep on’, etc.) but the strength of the ‘still’ meaning is not totally clear to me, based on the descriptive literature. For example, the S44 forms are translated with ‘still’ when used with stative lexical verbs (Pelling and Pelling 1974, 198). Creissels (forthcoming, 16–17) classifies S33 *ntse* as a kind of ‘continuative’, and Fortune (1977, 97) gives both ‘keep on’ and ‘still’ as translations for K21 *nze*. Both S33 *ntse* and *nze* are optionally prefixed with the persistent ‘still’ marker *sa-*.

An example of Silozi (K21) *nze* (apparently meaning ‘no longer’ when the main verb is negated) is given in (13). Apparently, similar internally negated constructions with S44 *lokhe/lokhu* (Pelling and Pelling 1974, 198) and S33 *ntse* (Pretorius 1997, 176) give the reading ‘still not’ (i.e. ‘not yet?’) rather than ‘no longer’, suggesting interpretive complexities that may not be as simple as straightforward scope of negation. More investigation is needed.¹¹

¹⁰ Unlike what appears to be the case for the markers derived from ‘stay’, when S10 *ti* is under negation, it can mean ‘not yet’; see Fortune (1955, 353).

¹¹ On the other hand, the situation of fruit ceasing to ripen seems an odd one outside of artificial conditions, so it may be that the translation of (14b) is not the best one.

(13) Silozi K21 (Gowlett 1967, 161)

a. *Ú-nzè à-húl-à*

SP₁-AUX SP₁.SIT-grow-FV

‘He is still growing.’

b. *Misèlò í-nzè í-sà-bùzw-ì.*

4.fruit SP₄-AUX SP₄.SIT-NEG-ripen-FV.NEG

‘The fruit is no longer getting ripe.’

Skhosana (2009, 355) also lists *se* for S407 and S408, but this may be a typographical error, or it might refer to the persistive copula *sese* used with non-verbal predication (Ziervogel 1959, 103; see Oosthuysen 2016, 60 for a similar example from S41).¹²

Table 7: ‘still’

Source Meaning	Language / Auxiliary
sit	S33 <i>ntse</i>
unknown source	S44 <i>lokhe, lokhu</i> ; K21 <i>nze</i> ; S408 <i>se</i> (?)

2.5.3 ‘Not yet’ (S30; S40)

A small number of auxiliaries appear to occur under negation with the meaning ‘not yet’ (14). Some of these, such as S32 *ešo* and S31 *ise*, only occur in negated form. In at least the case of S31 *ise*, overt negation is not needed; that is, the auxiliary is (or is becoming) inherently negative (14b). Sources are posited to be ‘take’ (S31 *ise*), ‘dawn (?)’ (S32 *ešo*),¹³ and quotative (S408 *tjho*). Note also that at least a few auxiliaries with the meaning ‘already’ can mean ‘not yet’ under negation (see also Section 2.5.1). Note that with S408 *biyo*, the lexical verb, and not the auxiliary, is negated (16).

(14) Setswana S31

a. Setshedi (1974, 33)

Ga-kè-isé kè-is-è diaparo kogo

NEG-SP_{1SG}-AUX SP_{1SG}.SIT-take-FV.NEG s8?.clothes there

‘I have not yet taken clothes there.’

b. Setshedi (1974, 41)

Ke-robal-a ke-ise ke-j-e

SP_{1SG}-sleep-FV SP_{1SG}.SIT-AUX SP_{1SG}.SIT-eat-CSC.FUT

‘I sleep having not yet eaten, i.e. I sleep before I eat.’

¹² I suggest that this listing of *se* may be in error because all my own data for S407 show *se* to mean ‘now’, or ‘already’, with *sese* meaning ‘still’ in non-verbal predication in both S407 and S408. The prefix *sa-* is used in both S407 and S408, as in the rest of Nguni, to express ‘still’.

¹³ Lexical source meaning from Kriel (1976, 222). Poulos and Louwrens (1994, 275) state that the source of *ešo* is unknown.

(15) siNdebele S408 (Ziervogel 1959, 156)

A-ń-ká-tjhó *ń-khá:mbh-e*

NEG-SP_{1SG}-NEG.PST-AUX SP_{1SG}-go-SBJV

‘I have not yet gone.’

(16) siNdebele S408 (Ziervogel 1959, 153)

...*ú-bíyó* *á:-wáti* *kú-swáphel-a sibáyá sá:khe.*

...SP₁-AUX NEG.SP₁-AUX[know] INF-close-FV 7.kraal POSS.PRON_{7/1}

‘...he does not yet know how to close up his kraal.’

Table 8: ‘not yet’

Source Meaning	Language / Auxiliary
dawn?	S32 <i>ešo</i>
take	S31 <i>ise</i>
quotative	S10 <i>ti</i> (positive polarity ‘already’); S408 <i>tjho</i>
unknown	S408 <i>biyo</i> (positive polarity ‘already’); S44 <i>lokhe, lokhu?</i> (‘still not’; positive polarity ‘still’)

2.5.4 ‘No longer’ (S31)

To the best of my knowledge, the phasal polarity meaning ‘no longer’ is usually expressed with a persistive prefix on a negated verb in Southern Bantu, as in (17).

(17) isiNdebele S407 (Aunio et al. in prep., 44)

A-ngi-sa-fund-i.

NEG-SP_{1SG}-PERS-read-FV

‘I don’t read anymore. / I’m not reading anymore’

However, the dataset also shows an auxiliary strategy: when negated, at least some forms meaning ‘still’ (Section 2.5.2) and/or imperfective forms indicating continuing situations (Section 2.1) can mean ‘no longer’ under negation. An example is S31 Setswana *tlhola*, from ‘**spend the day somewhere**’. This may be a more general characteristic of auxiliaries meaning ‘continue to’ (depending on the scope of negation), but more data are needed before making generalizations.

(18) Setswana S31 (Creissels forthcoming, 19).

Ga-ke-(sa-)thlole *ke-lem-a* *tshimo e*

NEG-SP_{1SG}-(PERS-)AUX.NEG SP_{1SG}.CSC-cultivate-FV 9.field DEM₉

‘I do not cultivate this field anymore.’

Table 9: ‘no longer’

Source Meaning	Language / Auxiliary
sit	S33 <i>ntse</i>
spend the day	S31 <i>tlhola</i>

3 Sequentiality

I classify as ‘sequentiality’ auxiliaries that express the ordering and general temporality of eventualities with respect to one another. Some of these functions might also reasonably be classified under tense, aspect, or discourse structure. Many of the meanings listed in this section are interrelated, with numerous auxiliaries described as having several of these functions. Marking sequentiality and other relationships between events appears to be an important use of auxiliaries across Southern Bantu, with many forms and many intersecting functions.

3.1 ‘Until’ (S10; S30 incl. K21; S40; S50; S60)

At least 20 auxiliaries in the dataset have a meaning including ‘until’ (19). Some ‘until’ readings are listed in their respective descriptions as part of more complex auxiliary semantics. For example, Pretorius (1997, 150) describes the auxiliary functions of *tsamaya* (from ‘walk, go (etc.)’) as ‘keep on doing, usually, continuing, until’; other auxiliaries have ‘until’ listed as their primary function. See also Section 3.10 on ‘eventually’ auxiliaries, which are sometimes noted to have an ‘until’ function.

(19) siSwati S43 (Ziervogel and Mabuza 1976, 124)

li-té li-f-è

SP₅-AUX SP₅-die-SBJV

‘until it dies’

The most frequent source of ‘until’ is the verb ‘**come**’ (K21, S31, S32, S407, S408, S42, S43, S44), also a common source noted in Kuteva et al. (2019, 487). Interestingly, S43 Siswati *te* (the subjunctive form of ‘come’) is used, in positive polarity contexts, to mean ‘until’ (Ziervogel and Mabuza 1976, 124), while its borrowed ‘Zunda’¹⁴ cognate *ze* is used in S43 as an alternate expression for ‘until’ but can also “express disgust or surprise” (Ziervogel and Mabuza 1976, 160).

Other sources of auxiliaries reported to express ‘until’ include ‘**go and reach**’ (S53); ‘**arrive at**’ (applicative-marked form) (K21, S31); ‘**lack; have a scarcity of**’ (S53); ‘be(come)’ (K21); and a borrowing of the Portuguese *até* ‘until’ (S62). S41(A) *de* might come from the adjective *de* ‘long’. There are a few forms in S43 whose origin is unclear to me (*dzinwa* means ‘get tired’ but is not directly mentioned as a source): *dzine*, *dzimane*, *dzimate*, *ndzibane*, *ndzimate* (Ziervogel and Mabuza 1976, 118–121).

Also relevant is S10 *dzimara*, from ‘**end by**’ and *dakaro*, from ‘**end up**’, both of which are characterized as meaning ‘at last, in the end, until’ and ‘end up [as a result]’ (Fortune 1955, 362–365). Forms including S10 *dzimara*, S31 *fitlhela*, K21 *fetela*, and S31 *tsamaya* have the ‘until’ reading when inflected with infinitive marking rather than agreeing subject marking,

¹⁴The ‘Zunda’ vs. ‘Tekela’ distinction is a traditional classification of Nguni languages that differentiates the varieties on the basis of their use of [t] vs. [z] in particular contexts, as well as a few other phonological variables.

thereby making their auxiliary status less clear, although they otherwise seem to function very similarly to the other ‘until’ auxiliaries. An example is given in (20).

(20) Silozi K21 (Fortune 1977, 96)

U-lu-libelezi ku-fitela lu-fit-a
 SP₁-OP_{1PL}-wait_for.PFV INF-AUX SP_{1PL}.SIT-arrive-FV
 ‘He waited for us until we arrived.’

Table 10: ‘until’

Source Meaning	Language / Auxiliary
arrive at	(S31 <i>fitlhêla</i>); (K21 <i>fitela</i>)
come	K21 <i>te</i> ; S43 <i>te</i> ; S31 <i>tla</i> ; S32 <i>tlê</i> ; S42 <i>ze</i> ; S44 <i>ze</i>
copula	K21 <i>be</i>
go / leave / travel / walk	(S31 <i>tsamaya</i>)
go and reach	S53 <i>kóndza</i>
lack	S53 <i>kála</i> ; <i>ká</i>
long?	S41A <i>de</i> ; S41 <i>de</i>
borrowing	S62 <i>ate</i>
unknown origin	S43 <i>dzine</i> , <i>dzimane</i> , <i>dzimate</i> , <i>ndzibane</i> , <i>ndzimate</i> ; (S10 <i>dzimara</i>)

3.2 ‘After’/ ‘then’ / consecutive (S20; S30; S40; S60) (cf. ‘as soon as’)

Many forms in the dataset indicate that an action took (/takes/will take) place shortly or immediately after something else occurred (or occurs); most of these have a variety of meanings surrounding this concept (e.g. ‘as a result of’; ‘rather’; ‘for the time being’; ‘even’). This meaning seems to have a close connection with the near/immediate future (Section 4.3) and it was not always straightforward to disentangle the meanings as presented in the literature; in many cases, the two readings are likely to be slightly different interpretations of the same basic concept. Lexical sources include ‘stay; remain’ (S32, S407, S408, S41, S42); ‘leave; depart’ (S31, S407, S408, S42); ‘arrive’ (S10, S31, S407, S408, S41A, S43); ‘come’ (S31, S41, S41A); ‘find’ (S10); ‘come from’ (S53) ‘hurry’ (S31) ‘return’ (S41A, S42); ‘pass; surpass’ (S31); ‘finish’ (S41, S42); ‘stretch out; extend’ (S31, S32); copula; ‘be(come)’ (S31, S32); ‘able’ (S21); ‘travel’ (S31); ‘see; appear’ (S41) and ‘not have (?)’ (S31). S10 quotative *ti* may also have this role (Fortune 1955, 346–351 describes it as ‘introductory’). Auxiliaries of uncertain origin include S21 *namba*; S32 *napa*; S41 *andula* (see Section 4.4); S41A *se* (from *sala*?); S41A *tfuba*; and S42 *nce*.

(21) Tshivenda S21 (Poulos 1990, 287)

... *a-kona u-pos-a marifhi anga.*
 SP₁.CSC-AUX INF-post-FV 6.letters POSS.PRON_{6/1SG}
 ‘[Vele went to the post office, bought stamps] and then posted my letters.’

Table 11: ‘after’ (etc.)

Source Meaning	Language / Auxiliary
able; succeed	S21 <i>kona</i> / <i>konou</i> < <i>kona</i> + INF
appear	S41 <i>bon</i> ’
arrive	S43 <i>fika</i> , <i>efika</i> ; S41A <i>fika</i> , <i>fike</i> ; S407 <i>fike</i> ; S408 <i>fike</i> ; S31 <i>fitlha</i> (S10 <i>šiko</i> – see also Section 3.4)
copula	S32 <i>bile</i> ; S31 <i>ba</i>
come	S31 <i>tla</i> ; S31 <i>tlê</i> ; S41 <i>za</i> ; S41A <i>za</i> , <i>ze</i>
come from	S10 <i>bva</i>
finish	S41 <i>khova</i> S42 <i>qede</i>
leave	S43 <i>suka</i> , <i>esuka</i> ; S407 <i>suke</i> ; S42 <i>suke</i> ; S408 <i>suke</i> , <i>suka</i>
neg. comitative (not have)	S31 <i>se-na</i> / <i>sena</i>
pass	S31 <i>feta</i>
quotative	S42 <i>thi</i> ; S10 <i>ti</i>
remain	S32 <i>šala</i> ; S408 <i>sala?</i> ; S407 <i>sale</i> ; S41 <i>sala</i> ; S42 <i>sale</i>
return	S41A <i>buye</i> ; S42 <i>buye</i>

3.3 Subsequent contradictory process (S41)

S41 *suke* from ‘leave, depart’ (the same lexical item as used in S407, S408 for ‘after’; see Section 3.2) is described by Oosthuysen (2016, 299) as indicating a “subsequent contradictory process”. The examples given by Oosthuysen suggest deviation from a plan or the expected course of action.

(22) isiXhosa S41 (Oosthuysen 2016, 299)

Baku-ba=ke *be-nge-na-nto* *yoku-hlawul-a* *u-suke*
 SP₂-AUX=then SP₂.PST-NEG-COM-9.thing POSS₉.INF-pay-FV SP₁-AUX

wa-ba-xolel-a.

SP₁.CSC-OP₂-pardon-FV

‘When they had nothing with which to pay, he/she pardoned them.’

Table 12: Subsequent contradictory process *ocess*

Source Meaning	Language / Auxiliary
leave	S41 <i>suke</i>

3.4 ‘As soon as’ (S30 incl. K21; S40)

Forms with this meaning come from ‘arrive’ (S10); ‘suffice’ (S33, S407, S42, S44); ‘finish (?)’¹⁵ K21; and possibly ‘deny; object; refuse (?)’ (S33 *hana*). These auxiliary meanings are obviously connected to ‘after’ (Section 3.2) but may also have links to ‘just, merely’ (Section 7.8), especially S40 (*anela*, from ‘suffice’).

(23) isiZulu S42 (Doke 1992, 205)

Ngi-nele ngi-fik-e=nje ba-jabul-e.
 SP_{1SG}-AUX SP_{1SG}-arrive-SBJV=just SP₂-become_happy-SBJV?
 ‘As soon as I come, they become happy.’

Possibly also related are S10 *mba* ‘do at once’; S44 *hle* ‘do immediately/right away’; and S62 *jegela* ‘do immediately’, with semantics that seem to overlap at least partially with ‘as soon as’. These forms are also discussed in Section 4.3 (near future).

Table 13: ‘as soon as’

Source Meaning	Language / Auxiliary
arrive	S10 <i>siko</i>
deny / object / refuse	S33 <i>hana</i>
finish (?)	K21 <i>mana</i>
suffice	S44 <i>anela</i> ; S407 <i>nele</i> ; S42 <i>nele (anele?)</i> ; S44 <i>nela</i>
Possibly also related:	
take for	S62 <i>jegela</i>
unknown origin	S10 <i>mba</i> S44 <i>hle</i> (< sit / stay?)

3.5 ‘Furthermore’ (S20, S30, S40)

Also related to ‘after’ (Section 3.2) are a few forms described as meaning ‘furthermore’ (associated meanings mentioned include ‘also’, ‘again’, ‘even’, ‘besides’, ‘for that reason’, and ‘subsequently’, among others) An example is given in (24). S42 has forms based on ‘go’ and ‘lead; collect’. S31 has the form *bile*, possibly related to ‘be(come)’. S21 *namba* and S408 *nambha* are listed without source verbs, although these forms are somewhat reminiscent of S31 *nama* ‘stretch’, and Makwarela (1992, 55) lists ‘stretch out’ as a possible meaning for *namba* in S21 Tshivenda.

(24) isiXhosa S41 (du Plessis and Visser 1992, 249)

Ù-qòkèlè wá-tshò.
 SP₁-AUX SP₁.CSC-say_so
 ‘He further said so.’

¹⁵ *Mana* is not listed as a lexical verb in Jalla (1982), but it has the meaning ‘finish’ in other Zone K languages.

Table 14: ‘furthermore’

Source Meaning	Language / Auxiliary
copula?	S31 (<i>e</i>) <i>bile</i>
go	S41 <i>ye</i>
lead / collect	S41 <i>qokélà</i>
stretch?	S21 <i>namba</i> ; S408 <i>nambha</i>

3.6 Conditional: ‘if’ / ‘in the event of’ (S10?; S30?; S40?)

siSwati S43 has two forms that mean ‘if’ or ‘in the event of’ and that might be considered auxiliaries. The form *na* “is occasionally still heard with a [subject prefix] although it is generally regarded as a conjunction” (Ziervogel and Mabuza 1976, 121), and *hleze*, likely a borrowing from ‘Zunda’ Nguni languages, also means ‘in the event of’, although the example in Taljaard et al. (1991, 154) does not take a subject prefix and might also be considered a conjunction. Similarly, **quotative** *re* in S31 is cited as an auxiliary in several references (Pretorius 1997, 129, 337–339; Setshedi 1974, 70–71; Cole 1955, 302–303), and while Cole (1955, 302) notes that it is sometimes marked with agreeing subject concords, most examples (especially in Pretorius 1997) show an invariant concord *e-*, and the form can be followed by elements other than a verb, suggesting that its current status is more like a conjunction, as Cole (1955, 302) also notes. Connections between auxiliary forms and conjunctions should be explored further in Southern Bantu (see e.g. Sekhu 1994).

(25) siSwati S43 (Ziervogel and Mabuza 1976, 121)

á-ná á-yí-bám-b-à-kó

SP₁-AUX SP₁.SIT-OP₉-catch-FV-REL¹⁶

‘if he catches it’

Other **quotative** sources with meanings that seem to encode ‘if’ (/ ‘when’ / ‘while’) as well as a consecutive- and/or simultaneous-like meaning (Section 3.2) include S10, S408, and S42. The functions of quotative-derived auxiliaries are frequently so broad that it can be somewhat difficult to categorize them.

Table 15: ‘if’ (etc.)

Source Meaning	Language / Auxiliary
comitative?	(S43 <i>na</i>)
stay? (borrowing)	(S43 <i>hleze</i>)
quotative	(S10 <i>ti</i>); (S31 <i>re</i>); (S408 <i>ri</i>); (S42 <i>thi</i>)

3.7 ‘First’ / ‘before’ (S10; S30; S40)

A number of verbs mean that the action described by the lexical verb is done ‘first’, or ‘before’ something (or anything) else. They come from sources meaning ‘begin’ or ‘start’ (S10, S41, S42, S43); ‘arrive’ (S33, S42); ‘appear’ (S41, S42); and ‘use quickly’ (S41).

¹⁶The suffix *-ko* occurs with relative clauses and with some situative forms, including after the auxiliary *na* (Ziervogel and Mabuza 1976, 163).

(26) isiZulu S42 (Poulos and Msimang 1998, 330)

U-fike a-dl-e bese e-phuz-a
 SP₁-AUX SP₁-eat-SBJV then SP₁.SIT-drink-FV
 ‘He first eats and then drinks.’

At least S33 *fhla*¹⁷ and S41 *vela, vele* / S42 *vele* also have links to concepts of immediately / immediately after. Judging from Oosthuysen’s (2016, 305) description, S41 *phanga* may relate more to the concept of ‘before’ than to ‘first (in sequence)’.

Table 16: ‘first’ (etc.)

Source Meaning	Language / Auxiliary
arrive	S33 <i>fhla</i> ; S42 <i>fike</i>
appear, come out	S41 <i>vela, vele</i> ; S42 <i>vele</i>
begin	S43 <i>cale</i> ; S41 <i>qala</i> ; S44 <i>qala</i> ; S42 <i>qale</i> ; S10 <i>tanga</i>
use quickly	S41 <i>phanga</i>

3.8 ‘Meanwhile’ (S30; S40; S50)

Many of the forms described as meaning ‘do meanwhile’ or ‘do in the meantime’ are also described as ‘do after; (e.g. S31 *sala*, S42 *sale* from ‘stay’; S31 *feta* from ‘pass’; S31 *nama* from ‘stretch’). These meanings are therefore rather hard to categorize, even with the help of the few examples provided in the sources. It is my impression, based on the examples, that ‘in the meantime’ tends to refer to a phase between implied other eventualities, or at least eventualities not specified in the example sentences. Example (27) from Xitsonga S53 includes the persistive ‘still’ prefix *ha-*, but this marker is not necessary for the ‘in the meantime’ meaning (see e.g. Baumbach 1987, 251).

(27) Xitsonga S53 (Lee and Hlungwani 2015, 121)

Wá-há-pfá á-khíy-á rívàntì.
 SP₁-PERS-AUX SP₁.SIT-lock-FV 11.door
 ‘He is still locking the door in the meantime.’

Lexical sources include ‘**stay; remain**’ (S31, S42); ‘**come from**’ (S53); ‘**pass; go past; surpass**’ (S31); and ‘**stretch**’ (S31). S408 *jwa* ‘meanwhile, so long’ is unclear in origin (cf. after/then).

Table 17: ‘meanwhile’

Source Meaning	Language / Auxiliary
come from	S53 <i>pfá</i>
pass	S31 <i>feta</i>
stay / remain	S31 <i>sala</i> ; S42 <i>sale</i>
stretch	S31 <i>nama</i>

¹⁷Doke and Mofokeng (1957, 287) translate S33 *fhla* as ‘act immediately, do straightaway’.

unknown origin	S408 <i>jwa</i> S10 <i>sano</i>
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3.9 Simultaneous ('while') (S30 incl. K21; S40)

A few markers are described as marking simultaneity. Two derive from a **quotative** (K21 *li* and S43 *tsi*). Other sources are 'come' (S31) and 'travel' (S31; cf. Section 2.1), with one unknown source (S10).

(28) Setswana S31 (Creissels forthcoming, 32)

O-apay-a a-tla a-tlhatsw-a.

SP₁-cook-FV SP₁.SIT-AUX SP₁.SIT-wash-FV

'She does the cooking, and at the same time she does the washing.'

Table 18: Simultaneous

Source Meaning	Language / Auxiliary
come	S31 <i>tla</i>
travel	S31 <i>eta</i>
quotative	K21 <i>li</i> ; S43 <i>tsi</i>
unknown source	S10 <i>nguno</i>

3.10 'Eventually' (S30, S40)

Auxiliaries described as meaning 'eventually' are often listed with other meanings, as well, especially (and unsurprisingly, given their multifaceted auxiliary functions in general) verbs from 'come' (S407 and S408, both translated by Skhosana 2009, 353 as 'eventually, in order, so that, until') or the copula 'be(come)' (S33, with the auxiliary function translated variously as 'eventually', 'until' [see also Section 3.1] 'even', and 'moreover' in Doke and Mofokeng 1957, 279; and as 'to even do' and 'fully planning to do' in Chaphole 1988, 184). I am not entirely certain whether the meanings discussed here and in Section 3.11 should be characterized as relating to tense or to sequence, or whether they should be filed under 'other' adverbial functions. I have tentatively put them in this section, as they seem to suggest a series of situations (including the lack of anything happening) culminating in the eventuality named by the lexical verb.

Additional sources include 'go and reach' (S53); 'finish' (S31); 'stretch' (S31; Creissels forthcoming, 17–18 describes this as 'conclusive aspect'); and 'put; place' (S32 *bea*, translated as 'in course of time' in Mphasha et al. 2021, 364). S41 *hle* (< *hlala* 'sit; stay'?) can also mean 'eventually'.

(29) Setswana S31 (Creissels forthcoming, 17)

Pula e-feletse e-n-a.

9.rain SP₉-AUX SP₉.SIT-rain-FV

'It eventually rained.'

Table 19: ‘eventually’

Source Meaning	Language / Auxiliary
come	S408 <i>te</i> ; S407 <i>ze</i>
copula	S33 <i>ba</i>
go and reach	S53 <i>kóndza</i>
put / place	S32 <i>bea</i>
finish	S31 <i>fêla</i> , <i>felela</i>
stretch	S31 <i>nama</i>
unknown origin	S41 <i>hla</i> , <i>hle</i> (< ‘sit / stay’?)

3.11 ‘In the end’ / ‘at last’ / ‘end up’ (S10; S40)

As mentioned in Section 3.1, S10 *dzimara*, from ‘end by’, and *dakaro*, from ‘end up’, both mean ‘at last, in the end, until’ (Fortune 1955, 362–363). Seemingly similar is S41 *phetha*, from ‘finish off; end’, meaning ‘ultimately; at last; end up’.¹⁸ It may ultimately make sense to unify this category with auxiliaries meaning ‘eventually’ (Section 3.10).

(30) isiXhosa S41 (du Plessis and Visser 1992, 250)

Ndì-phèthà ndì-ncám-è.

SP_{1SG}-AUX SP_{1SG}-despair-SBJV

‘I ultimately despair.’

Table 20: ‘in the end’ (etc.)

Source Meaning	Language / Auxiliary
end	S10 <i>dzimara</i> S10 <i>dakaro</i> S41 <i>phetha</i>

4 Tense

Many auxiliaries mark the relationship between a reference time (often the utterance time) and the topic time, or the time being talked about (the latter being related to the eventuality named by the lexical verb via aspect). Only in a few cases (aside from relative tense) do they mark general past or future, but more specific temporal relationships are usually referenced, including temporal remoteness distinctions, or may relate to the specific time (day, night, morning, etc.) when an eventuality occurred.

4.1 (Relative) tense (all sample languages)

All languages in the sample (with K21 Silozi forming a slight exception) use a copula-like form ‘**be(come)**’, inflected for tense, to introduce a reference time against which the lexical verb’s temporality is evaluated: for example, future (31) or past (32). The lexical verbs can also be inflected for tense and aspect; for example, a perfective marking on the lexical verb with future marking on the auxiliary could give a reading ‘I will have worked’. K21 Lozi differs in that the

¹⁸ For ‘end up’, see also <https://glosbe.com/xh/en/ndiphetha> (accessed July 17, 2025).

auxiliary *be* is restricted to future time, and another auxiliary *li* (quotative: ‘say; do’) is used without temporal restriction (Fortune 1977, 96). See Botne (1986) for extensive discussion of related forms and their semantics.

(31) Sesotho S33 (Chaphole 1988, 54)

Ke-tla-be ke-sebetsa.
 SP_{1SG}-FUT-AUX SP_{1SG}.SIT-work
 ‘I shall be working.’

(32) Sesotho sa Leboa S32 (Mphasha et al. 2021, 363)

Ba-šemane ba-be ba-tany-a inonyana.
 2-boy SP₂-AUX SP₂.SIT-catch-FV 10.bird
 ‘The boys were catching birds.’

S10 *nge/nga* ‘seem, be like’ (>potential?) may play a similar role in some contexts.

Table 21: Relative tense

Source Meaning	Language / Auxiliary
copula / ‘be(come)’	all languages
quotative	K21 <i>li</i>
potential?	S10 <i>nge, nga</i>

4.2 Future (S30, S40)

Futures are most frequently realized as grammaticalized prefixes deriving from ‘go’ and ‘come’. However, in some languages, and in certain registers, auxiliary forms are also possible. See Savić (2020, 130–142) for discussion of S41 isiXhosa. The dataset has one other example of an apparently still active auxiliary, S32 *tla*, from ‘come’ (see Mphasha et al. 2021, 352),¹⁹ which is usually realized as a prefix *tla-* or *tlo-* (Lombard et al. 1985, 189–190). See also Section 4.7.2.

(33) Sesotho sa Leboa S32 (Mphasha et al. 2021, 352)

Ke-r-ile ga-re-sa-tla go-ithut-a Sesotho sa-Leboa.
 SP_{1SG}-say-PFV NEG-SP_{1PL}-NEG-AUX INF-learn-FV 7.Sotho POSS₇-North
 ‘I said that we will not learn Northern Sotho.’

¹⁹Note that the auxiliary vs. prefix question in this case is at least partially an orthographic decision, as is evident in Savić (2020, 130–142).

Table 22: Future

Source Meaning	Language / Auxiliary
come	S32 <i>tla</i> ; (e.g.) S41 <i>za</i>
go	(e.g.) S41 <i>ya</i>

4.3 Near future (‘(very) soon’; ‘immediately’) (S10; S20; S30 incl. K21; S40?; S60?)

Auxiliaries indicating that an eventuality will occur in the near future are fairly common. However, their semantics typically appear to indicate more than straightforward immediate future, many seeming to have both absolute tense and sequentiality functions, among other meanings. K21 *tuha* is described in various sources as indicating ‘nearness in time, soon’ (Jalla 1982), ‘soon; probably’ (Fortune 1977, 97), and ‘to be about to’ (O’Sullivan 1993, 2). S10 *fuma* (from ‘rise early’) indicates that an ‘action will happen on the morrow or quite soon’ (Fortune 1955, 359).

Sources include ‘go (away)’/‘leave’ (S21, K21, S31, S31); ‘rise early’ (S10); and possibly ‘take for’ (applicativized form) (S62).

(34) Tshivenda S21 (Makwarela 1992, 59)

Ndi-nga-tuwa nda-lwal-a
 SP_{1SG}-POT-AUX SP_{1SG}.CSC-be(come)_sick-FV
 ‘I may soon get sick.’

Possibly also related are S10 *mba* ‘do at once’ and *bva* ‘at once; immediately; forthwith; there-upon’; S44 *hle* ‘do immediately/right away; happen suddenly’, and S62 *jegela* ‘do immediately’, which seem to relate both to sequence (‘immediately after’) and to nearness in time, although more information is needed. Some of the forms expressing ‘go (away)’ or ‘leave’ may also turn out to relate to temporal sequence, with the default interpretation being near future.

S53 *vhèla*, of uncertain origin, is reported to mean ‘now’ (Baumbach 1987, 251; Lee and Hlungwani 2021, 135 have an example where the function is not made explicit, but the ‘now’/‘immediately’ interpretation is plausible). Translated examples on glosbe.com frequently correspond to ‘immediately’. One wonders whether this form may be a borrowing of S40 *vele/vela* (< *vela* ‘appear; come out’), which has similar immediacy readings, among many other, related functions (see Sections 3.7 and 7.8).

Table 23: Near future

Source Meaning	Language / Auxiliary
go (away) / leave	S31 <i>ya</i> S21 <i>tuwa</i> ; K21 <i>tuha</i> ; S31 <i>tloga</i> ; S32 <i>tloga</i> S31 <i>tsamaela</i>
rise early	S10 <i>fuma</i>
Possibly also related:	
take for	S62 <i>jegela</i>
come from	S10 <i>bva</i>

unknown origin	S10 <i>mba</i> S44 <i>hle</i> (< sit / stay?) S53 <i>vhèla</i> (< Nguni <i>vela</i> ‘come out’?)
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4.4 Immediate/recent past (S30; S40)

A few forms are described as indicating that something has just occurred or has occurred recently: S31 *tswa* and S32 *tšwa*, from ‘go out; leave’; and a series of similar forms across S40 (possibly excepting S43, and with unclear frequency in S407 and S408) that seem to be formed from the persistive (‘still’) prefix *sa-* and the root *anda* ‘increase; multiply; accumulate’ or *andula* (apparently used in S41 only as an auxiliary). S31 *ilê* (from ‘go’?) can indicate recent past or ‘at a certain time (referring to the past), then, when’ (Pretorius 1997, 269–270).²⁰

(35) isiZulu S42 (Canonici 1995, 134)

Ngi-sand’ uku-m-bon-a.

SP_{1SG}-AUX INF-OP₁-see-FV

‘I’ve just seen him.’

Table 24: Immediate past

Source Meaning	Language / Auxiliary
go?	S31 <i>ilê</i>
go out / come out / leave	S31 <i>tswa</i> ; S32 <i>tšwa</i>
persistive + increase	S407 <i>sanda</i> ; S408 <i>sanda</i> ; S42 <i>sanda</i> S44 <i>sanda</i> ; S41 <i>sandula</i>

4.5 Distant / remote past (‘long ago’) (S10; S30; S40)

The S10 auxiliary *nguva*, noted by Fortune (1955, 358) as being used only in the Karanga variety, comes from ‘spend time’ and indicates that the situation “took place a long time ago” (Fortune 1955, 358). S31 *sa-le* (persistive ‘still’ + copula; see also Section 4.6) can also indicate that a situation took place – or started – long ago (Creissels forthcoming, 19–20). As suggested in examples (36)–(37), both forms appear to be ambiguous between ‘[happened] for a long time’ and ‘[happened] long ago’, suggesting a logical path of semantic change between the two meanings (see Figure 1).

Other forms related to the remote past are S31 *bolo* (possibly from ‘tell’); S42 *kade* (< *de* ‘long’; adv. *kade* ‘long ago’); and S43 *kadze*, a remote past continuous marker (see also Section 2.1).

(36) Setswana S31 (Creissels forthcoming, 19)

Dikgomo di-sa-le di-timel-a

8/10.cow SP_{8/10}-PERS-AUX SP_{8/10}.SIT-get_lost-FV

‘The cows have been lost for a long time.’

‘The cows got lost long ago.’

²⁰These forms are negated as *aka*, e.g. *hakeaka kareka* ‘I didn’t buy’ (Chaphole 1988, 185).

(37) Karanga Shona S10 (Fortune 1955, 358)

Hoŋo, wa-ŋguva a-gar-a pamukova.
 yes SP₁.RECPST?-AUX SP₁.PST.SIT?-sit_down-FV 16.3.door
 ‘Yes, he sat down at the door a long time [ago? – Auth.]’

Table 25: Distant past

Source Meaning	Language / Auxiliary
spend time	S10 <i>ŋguva</i>
persistent + copula	S31 <i>sa-le</i>
tell?	S31 <i>bolo</i>
long (ago)	S42 <i>kade</i> ; S43 <i>kadze</i> ; others in S40?

4.6 ‘The last time’ / ‘most recent’ (S30, S40)

Two auxiliaries in the dataset are used to refer to the last or most recent time something occurred (i.e. the event has not occurred since): S31 *sa-le* (from a persistent prefix and a **copula** form; see also 4.5), and S41 *gqibela*, the applicative form of ‘finish’.

(38) Setswana S31 (Creissels forthcoming, 19–20)

Ke-sa-le ke-m-mon-a ka laboraro
 SP_{1SG}-PERS-AUX SP_{1SG}.SIT-OP₁-see-FV by Wednesday
 ‘I saw him for the last time on Wednesday.’ [i.e. ‘I last saw him on Wednesday.’ – Auth.]

The links between ‘long ago’, ‘for a long time’, and ‘the last time’ for *sa-le* are logical, since the original meaning is ‘still be’ (see Creissels forthcoming, 19), seemingly interpreted as something like ‘situation ongoing for long[er than normally expected]’. Semantic connections are schematized in Figure 1.

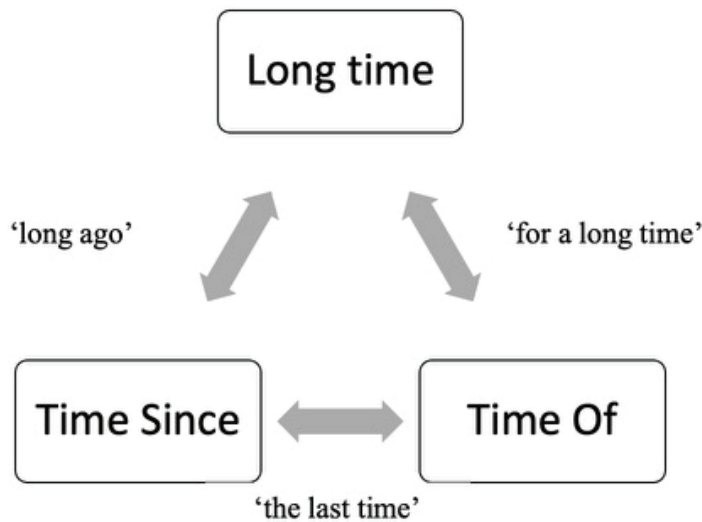


Figure 1: ‘long ago’ – ‘for a long time’ – ‘the last time’

(41) Setswana S31 (Creissels forthcoming, 23)

Ke-tsogile ke-lem-a.

SP_{1SG}-AUX.PFV SP_{1SG}.SIT-cultivate-FV

‘I’ve been ploughing today.’

Table 28: Hodiernal past

Source Meaning	Language / Auxiliary
get up early	S31 <i>phakêla</i>
rise / get up	S31 <i>tsogile</i>

4.7.2 Crastinal future (‘tomorrow’)

The same forms that are used as hodiernal pasts in S31 are also used (without perfective marking) as crastinal futures. According to Creissels (forthcoming, 24), *tsoga* has also generalized so that it can refer to more general future time.

(42) Setswana S31 (Creissels forthcoming, 24)

N-ka-se-tsoge ke-y-a toropong.

SP_{1SG}-POT-NEG-AUX.NEG SP_{1SG}.SIT-go-FV 9.town.LOC

‘I will not be able to go to town tomorrow.’

Table 29: Crastinal future

Source Meaning	Language / Auxiliary
get up early	S31 <i>phakêla</i>
rise / get up	S31 <i>tsoga</i>

4.8 ‘At night’ / ‘spend the night’ (S20; S30 incl. K21)

Verbs meaning ‘sleep’ (S21, S30 as a group) come to mean ‘do at night’ as auxiliaries. Like ‘early’, these forms are generally not restricted to past or future. Whether the night in question is in the future or the past seems to depend on tense morphology on both the auxiliary and on the main verb (as also shown in the next two sections regarding S31 Setswana).

Table 30: ‘spend the night’

Source Meaning	Language / Auxiliary
sleep	S21 <i>lala</i> ; K21 <i>lobala</i> ; S31 <i>lala, létse</i> ; S32 <i>lala</i> ; S33 <i>lala</i>

4.8.1 ‘At night’ / hesternal past (S30)

S31 Setswana seems to have at least partially lost the ‘night’ component of *lala* ‘sleep’ / *letse* ‘(have) slept’ when used as auxiliaries. *Letse* can either refer to something that happened the previous night, or it can be used as a hesternal (‘yesterday’) past. Creissels (forthcoming, 22) notes that when the lexical verb is unmarked for tense (what Creissels labels ‘present circumstantial’, often referred to as ‘situative’ or ‘participial’ form), either an ‘at night’ or ‘yesterday past’ interpretation is possible, but when the lexical verb is also marked as perfective (what Creissels analyses as ‘perfect’, in ‘circumstantial’ form), the hesternal past reading is unambiguous (43).

- (43) Setswana S31 (Creissels forthcoming, 22)
Re-letse re-m-monye kwamasimo.
 SP_{1PL}-AUX SP_{1PL}-OP₁-see.PFV.SIT LOC.6.field
 ‘We saw him in the fields yesterday’

Table 31: Hesternal past

Source Meaning	Language / Auxiliary
sleep	S31 <i>létse</i>

4.8.2 ‘At night’ / hodiernal future (S31)

Similarly, in S31 Setswana, *lala* with future orientation (e.g. prefixed with potential *ka-*, with future *tlaa-*, or after a modal verb like *tshwanetse*) can either mean ‘at night’ or ‘later today’ (Creissels forthcoming, 23). Again, when the lexical verb is in the perfect(ive) form, the meaning is unambiguously a hodiernal (‘today’) future (44).

- (44) Setswana S31 (Creissels forthcoming, 23)
Pula e-tlaa-lala e-nele.
 9.rain SP₉-FUT-AUX SP₉.SIT-rain.PFV
 ‘It will rain today.’

As Creissels (forthcoming, 22–23) indicates in his literal translations, the readings with the perfect(ive) make sense, as they indicate that something had occurred, or will have occurred, before sleep/nighttime.

Table 32: Hodiernal future

Source Meaning	Language / Auxiliary
sleep	S31 <i>lala</i>

4.9 ‘Spend the day’ / ‘during the day’ (S20; S30)

Some verbs meaning ‘spend the day’ or ‘spend some time’ have auxiliary functions meaning ‘spend the (whole) day doing’ or ‘during the day’ (S10, S21, S31, S33); this meaning is reported in S31 for perfective *tlhôtse* (cf. Section 2.1 for imperfective readings of *tlhòla* (*thlola*) with unmarked tense and aspect). S33 *hlòla* also has imperfective readings (‘repeatedly’ and ‘permanently’; see Section 2.1). In this context, the forms seem to be more like temporal adverbials and not restricted to past or future.

- (45) Tshivenda S21 (Poulos 1990, 327)²¹
Vhatukana vha-ṭwela u-bambal-a.
 2.boy SP₂-AUX INF-SWim-FV
 ‘The boys spend the day swimming.’

²¹ See Poulos (1990, 327) for arguments for the auxiliary status of *ṭwela*.

Table 33: ‘spend the day’

Source Meaning	Language / Auxiliary
spend a/the day / spend time	S10 <i>wiro</i> , <i>wiriro</i> S21 <i>ṭwela</i> ; S31 <i>tlhôtse</i> ; S33 <i>hlòla</i>

5 Mood and modality

A few auxiliary expressions mark illocutionary mood (here, imperatives). Many more relate to modality and the expression of possibility, necessity, and adjacent concepts.

5.1 Illocutionary mood

5.1.1 Imperative / hortative (some notes)

A few auxiliaries in the dataset appear to be frequently used in the imperative, but these also express additional semantics, as with S53 *jinga* ‘nevertheless’ in (46); see Section 7.6. The imperative force comes from the form and context rather than the semantics of the auxiliary, which rather seem to add a manner element or pragmatic nuance to the command.²²

(46) Xitsonga S53 (Cuenod 1967, 60, slight illegibility of translation in source)

jinga *u-tirh-a* *hambi* *va-ku-hlek-a*
AUX.IMP SM2SG.SIT-work-FV although SM2-OM2SG-laugh-FV
‘Go on working although they laugh at you.’

For S41, du Plessis and Visser (1992, 254) note that with second-person marking and followed by a subjunctive form, *ze*, from ‘**come**’, “appears i.a. in commands”, as in (47). It is my impression, supported by discussions with expert colleagues (Onelisa Slater, WhatsApp messages, October 22, 2025), that the contribution of *ze* in this context is not imperative force but rather something temporal or directional.

(47) isiXhosa S41 (du Plessis and Visser 1992, 254)

Ú-zè *ú-búz-è* *kú-yé*.
SP_{2SG}-AUX SP_{2SG}-ask-SBJV 17-PRON₁
‘You must ask at him.’ [sic]

In summary, then, I have not found convincing support for imperative force as the primary function of any Southern Bantu auxiliaries. That said, ‘come’ is a known cross-linguistic source for imperatives (Kuteva et al. 2019, 481).

A few other forms that appear to be related to experiential auxiliaries can also be used in hortative/politeness contexts: S407 *akhe*; S408 *nkhe*; S41 *makhe* (also *maze*; cf. 47); S43 *ake*. Many of these appear to involve the hortative prefix (*m)a-*.

When used in the subjunctive mood, S31 *nê* is described by Cole (1955, 300) as hortative; Creissels (this volume) describes the same form as meaning ‘it would be better if...’.

²²The question of which auxiliaries can be used in commands is given relatively little attention in the descriptive literature, and is a topic worth pursuing further.

5.1.2 Negative imperative: ‘do not’; ‘must not’ (S40, S50)

At least S407, S41, S41A, S42, and S44 use *musa* ‘must not’ as a negative imperative. S53 has *tshùkà* ‘start in surprise; in fear’ (see Section 5.2.2), used with negation marking, as a prohibitive, usually in biblical contexts (Cordelia Nkwinika, p.c. 2024). These forms share a subject with the lexical verb, but are not themselves subject-marked, because imperative forms do not bear subject-marking prefixes. Here, too, the imperative force comes from the verb form, and it could possibly be argued that the auxiliary itself has only negative semantics, but because *musa* is *always* used in negative imperative contexts, I include it here.

(48) isiXhosa S41 (du Plessis and Visser 1992, 262)

Músà úkù-théth-à.
 AUX.IMP INF-speak-FV
 ‘Don’t talk!’ (sg.)

Oosthuysen (2016, 309) reconstructs *musa* as being derived from the causative of *muka/mka* ‘go away’ > causative *mkisa* ‘cause to go away’. This seems to me to be a plausible semantic derivation, although it is not clear to me why the *ki* is elided. I have not found other sources in the literature proposing this grammaticalization pathway. Ziervogel and Mabuza (1976, 120) suggest that *musa* in siSwati (S43) is a borrowing from isiZulu (S42). Overall, the derivation and spread of *musa* appears to be a complex matter and merits further study. Sources also note that *musa* is often realized as a prefix-like element, sometimes shortened, as in, for example, *Mùsùkùthéthà!* or *Sùkùthéthà!* ‘Don’t talk!’ (du Plessis and Visser 1992, 262).²³

Also possibly relevant is the chiShona (S10) verb *rega* ‘stop; leave’, which has a meaning akin to the negative imperative (‘stop doing’ > ‘don’t do’) when followed by an infinitive complement (Fortune 1955, 363 considers this a non-auxiliary use), but a hortative-like use (‘let X do Y’) when followed by a subjunctive form.²⁴

Table 34: Negative imperative

Source Meaning	Language / Auxiliary
stop; leave	S10 <i>rega</i>
start in surprise / fear	S53 <i>tshuki</i>
unknown origin (‘cause to go away’?)	S407 <i>musa</i> ; S41 <i>musa</i> ; S41A <i>musa</i> ; S42 <i>musa</i> ; S43 <i>musa</i> ; S44 <i>musa</i>

5.2 Modal

Modal expressions tend to be outliers in Southern Bantu auxiliary systems, with many having different syntactic properties. Some, for example, take full clausal complements; others take

²³ The plural negative imperative is *musani uku-*, which in prefix form appears as *musanuku-* or *sanuku-* (du Plessis and Visser 1992, 262).

²⁴ By this article’s criteria, *rega* + INF would at least marginally be an auxiliary use, since ‘don’t do X’ can apply to situations that have not yet started (see Carbo et al. 2025 for details), but the *rega* + SBJV hortative use is not an auxiliary function, since *rega* has a different subject from that of the subjunctive-marked verb.

object marking and can stand on their own without verbal complements. Because of these features, my impression is that many expressions of ability and necessity are at early stages in the grammaticalization process (cf. Bernander et al. 2022, 23 on East African Bantu), and their auxiliary status is questionable. Nevertheless, they also exhibit some of the properties of auxiliaries (such as their complementation patterns) and I include them for the sake of giving a more complete survey, since they form a system with other modal expressions that are clearly auxiliaries (some of which also alternate with prefixes).

5.2.1 Ability (/ possibility) (S30 incl. K21, S40, S50, S60)

All languages in the sample probably have at least one auxiliary or auxiliary-like expression for ‘ability’ (participant-internal possibility), many of which are also used with other modal flavours (see e.g. Crane, Lubambo et al. 2025). The main sources are ‘**know**’ (at least S31, S32, S40 as a group, and S53) and ‘**be able**’ (at least K21, S31, S33, S407, S408, S41?, S42?, S43, S53, and S63). Some of these forms are likely to be borrowings (e.g. ‘be able’ in S40 is probably from S30), and others may be restricted in their usage and less than fully modal (e.g. possibly ‘know’ in some S30 languages). An example of ‘be able’ is given in (49).

- (49) Sesotho S31 (Chaphole 1988, 55)
U-kgona ho-ngol-a dithoko.
 SP₁-AUX INF-WRITE-FV 10.praise_poem
 ‘He can write praise poems.’

See Crane, Savić et al. (2025) for discussion of the S41 (circumstantial) possibility auxiliary *nak(h)o*, its semantics, and its origins: we analyse *nak(h)o* as deriving from **comitative na-** and a pronominal form.

One form indicates inability. S408 *bhalelwa* ‘be unable’ is the passive form of *bhalela* ‘overcome’.

At least some auxiliaries with an ability/possibility meaning seem sometimes to allow for ellipsis of the lexical verb, when it is contextually salient, similar to English *I can’t*.

Table 35: Ability / circumstantial possibility

Source Meaning	Language / Auxiliary
able	S407 <i>kghona</i> ; S33 <i>kgona</i> ; S62 <i>koja</i> ; K21 <i>kona</i> ; S408 <i>kxhona</i> ; S31 <i>kgôna</i>
know	S43 <i>kwati</i> ; S407 <i>kwazi</i> ; S41 <i>kwazi</i> ; S42 <i>kwazi</i> ; S53 <i>tiva</i> ; S32 <i>tseba</i> ; S408 <i>wati</i> ²⁵
unable	S408 <i>bhalelwa</i>
comitative+pronoun	S41 <i>nak(h)o</i>

²⁵ Although these forms look different, all are clearly related to PB 6209 *jǝjǝb ‘know’. The initial *kw-* on S40 reflexes is the infinitive/class 15 prefix, which has undergone (de)grammaticalization in at least some S40 languages to be analysed as part of the modal verb itself.

5.2.2 Epistemic possibility / probability (S10; S30 incl. K21; S40; S50)

Many languages also have auxiliaries that appear to relate to epistemic possibility and/or probability. A main source seems to be related to the **potential** marker (see Nurse 2008, 251–252 for discussion) (S10? K21, S32), sometimes combined with additional auxiliary material (S41 *ngaba* and *ngahle*; S42 *ngahle* and *ngase*). Other sources mentioned in the literature include ‘**be(come)**’ (S31); ‘**come**’ (S31); ‘**become full; be abundant**’ (S53); ‘**be greedy**’ (S19); ‘**resemble; be like**’ (K21, S41); and possibly ‘**start in surprise**’ (S53 *tshùkà*). Although the meaning of *tshùkà* seems to be more mirative, it is also described as ‘it may happen that’ and ‘by/per chance’ (see Cuenod 1967, 206; Baumbach 1987, 251).

(50) Silozi K21 (Gowlett 1967, 161)

Nì-tá-swànà *nì-zámày-à.*
 SP_{1SG}-FUT-AUX SP_{1SG}.SIT-leave-FV
 ‘I might go.’

Table 36: Epistemic possibility

Source Meaning	Language / Auxiliary
copula	S31 <i>bô</i>
become full / be abundant	S53 <i>tála</i>
be greedy?	S10 <i>karo</i>
resemble / be like	K21 <i>swana</i> ; S41 <i>fana</i>
start in surprise / fear	S53 <i>tshùkà</i>
potential (+ ...)	S10 <i>nge</i> (?) ²⁶ ; K21 <i>ke</i> ; S32 <i>ka</i> S41 <i>ngaba</i> S41 <i>ngahle</i> ; S42 <i>ngahle</i> S42 <i>ngase</i> S31 <i>(e)kete</i>

5.2.3 ‘Apparently’ (S31)

S31 *kete* has the modal-adjacent (evidential?) meaning ‘apparently’ (51).

(51) Setswana S31 (Setshedi 1974, 42)

Ga-re-kete *re-tshab-a* *maphodisa.*
 NEG-SP_{1PL}-AUX SP_{1SG}.SIT-fear-FV 6.police
 ‘We are not apparently scared of the police.’

²⁶This form, translated as ‘seem’ (Fortune 1955, 360), is probably related to a predecessor of the potential marker; see Nurse (2008, 251–252). Some other languages (e.g. isiXhosa S41; see Oosthuysen 2016, 286) have this form meaning ‘seem (like), as if’ in auxiliary-like constructions in which the lexical verb appears in main-verb form (i.e. as an independent clause), thereby differing from the forms focused on in this paper.

Table 37: ‘apparently’

Source Meaning	Language / Auxiliary
unknown origin (?experiential + ?)	S31 <i>kete</i>

5.2.4 Bouletic possibility? (‘wish’) (S41)

S41 **potential** *nga* as an auxiliary means ‘wish’; it can also mean ‘as if’ something were the case, both meanings possibly related to the reconstructed sense of non-verbal *nga* as ‘as, like, though’ (see Nurse 2008, 252). This meaning of *nga* requires the potential *nga*- prefix on the lexical verb.

(52) isiXhosa S41 (Oosthuysen 2016, 287)

Si-nga si-nga-bon-a ukumkani,
 SP_{1PL}-AUX SP_{1PL}-POT-see-FV 1A.king
 ‘We wish to see the king.’

Table 38: Bouletic possibility

Source Meaning	Language / Auxiliary
potential	S41 <i>nga</i>

5.2.5 Deontic possibility (S31)

Setshedi (1974, 30) mentions S31 Setswana *mma/mmê*, which can be used either to mean ‘allow (s.o.)’, or as an auxiliary (53).

(53) Setswana S31 (Setshedi 1974, 30).

Phuthego e-mmê e-ntse.
 9.congregation SP₉-AUX SP₉-sit
 ‘The congregation may be seated.’

Table 39: Deontic possibility

Source Meaning	Language / Auxiliary
unknown origin	S31 <i>mma, mmê</i>

5.2.6 Necessity (all groups)

Necessity auxiliaries and auxiliary-like verbs are complex in their syntax and semantics (see e.g. Crane et al. 2024 for a discussion of necessity verbs in Xhosa), and a few (e.g. S40 *funeka*) may fit less neatly into the auxiliary mould, for example, taking expletive rather than agreeing subject prefixes. I include them here to give a fuller picture of the semantic field

They derive from an applicative form of ‘**resemble**’ (at least K21, S30 as a group, S40 as a group, S51, and S63); ‘**appear**’ (S43); an applicative form of ‘**be(come) straight, right (etc.)**’ (K21, S33); ‘**be desirable**’ (S407, S408, S41, S43); ‘**be bound to**’ (S32, S33, S53); ‘**need; lack; want**’ (S33, S40); an applicative (and sometimes passive) form of ‘**stand**’ (S407, S41, S42, S51?); ‘**stay; remain**’ (S42, S43); ‘**have**’ (S31); and several verbs of uncertain origin

(S407 *fuze*; S44 *sake*; S41 *nge* (< pot *nga*-?); S62 *fela* (posited *fa* ‘die’+appl.; see Lanham 1955, 180).

S31 *nama*, from ‘stretch’, may also indicate obligation.

(54) siSwati S43 (Ziervogel and Mabuza 1976, 124)

Bà-vélé bá-m-tsétsís-è.

SP₂-AUX SP₂-OP₁-scold-SBJV

‘It is necessary that they scold him.’

Table 40: Necessity

Source Meaning	Language / Auxiliary
appear	S43 <i>vele</i>
be bound to	S53 <i>boheka</i> S32 <i>tlamegile</i> ; S33 <i>tlameha</i>
die for (?)	S62 <i>fela</i>
comitative (+ cop.) (have)	S31 <i>na (le)</i>
need / lack / want	S33 <i>hloka</i> S40 (e.g. S42) <i>dinga</i>
remain	S42 <i>sale</i> ; S43 <i>sale</i>
resemble / be suitable	K21 <i>swanela</i> ; S31 <i>tshwanêla</i> ; S32 <i>swanetše</i> ; S33 <i>tshwanela</i> ; S407 <i>fanele</i> ; S408 <i>fanele</i> ; S42 <i>fanele</i> ; S43 <i>fanele</i> ; S41 <i>fànèlè</i> ; S51 <i>fanela</i> ; S62 <i>yela</i>
be(come) straight / right	K21 <i>lukela</i> ; S33 <i>lokela</i>
be needed / wanted	S407 <i>funeka</i> ; S408 <i>funeka</i> ; S41 <i>funeka</i> ; S43 <i>funeka</i>
stand for (?)	S407 <i>mele</i> ; S41 <i>mel(w)e</i> ; S42 <i>mele</i> ; S51 <i>yimelwa?</i>
unclear origin	S407 <i>fuze</i> S44 <i>sake</i> S41 <i>nge</i> (< potential?)

5.2.7 ‘Intend to’ (S40)

Several S40 languages have auxiliaries indicating intent. They derive from ‘go/be straight; understand; decide’ (S42, S43); ‘hate’ (S42 *zondelele*, from *zonda* ‘hate’; S43 *jinge*); ‘hunt; pursue’ (S42) and ‘stand’ (S408 *jamisela*, from *jama* ‘stand’).

(55) isiZulu S42 (Poulos and Msimang 1998, 332)

Ba-zondelele uku-m-dubul-a.

SP₂-AUX INF-OP₁-shoot-FV

‘They are bent on shooting him.’

Table 41: ‘intend to’

Source Meaning	Language / Auxiliary
hate	S42 <i>zondelele</i>
hunt / pursue	S42 <i>zingela, zingele</i>
stand	S408 <i>jamisela</i>
go / be straight; understand; decide	S43 <i>condze</i> ; S42 <i>qonde</i>

5.2.8 ‘Insist on’ / ‘persist’? (S43)

S43 *jinge*, likely from ‘**follow closely, continue**’, is used as an auxiliary to mean ‘insist on’, but also to indicate that something “will happen eventually or that it happens continually or insistently” (Ziervogel and Mabuza 1976, 156; see Section 3.10). The few examples I have found suggest a situation eventually or inevitably brought about through insistence or persistence.²⁷

(56) siSwati S43 (Ziervogel and Mabuza 1976, 119)

Ū-jǐngè á-m-àng-è.

SP₁-AUX SP₁-OP₁-kISS-SBJV

‘He insists on kissing her.’

Table 42: ‘insist on’

Source Meaning	Language / Auxiliary
follow closely, continue	S43 <i>jinge</i>

6 Negation**6.1 General negation (S30)**

A few auxiliaries mark straightforward negation. The main source is ‘**refuse**’ (S31, S32). S31 also has *bisa* and *nke*, with unclear origin.

(57) Setswana S31 (Creissels forthcoming, 30)

Pula e-gana go-w-a.

9.rain SP₉-AUX INF-fall-FV

‘It is not raining.’

‘It refuses to rain.’

Table 44: General negation

Source Meaning	Language / Auxiliary
refuse	S31 <i>gana</i> ; S32 <i>gana</i>
unknown origin	S31 <i>bisa</i> ; S31 <i>nke</i>

²⁷ For example, <https://glosbe.com/ss/en/wajinge> (accessed July 17, 2025).

6.2 ‘never’ (S10, S30, S40, S50)

More common than negation by auxiliary is the combination of negation and temporality, with the meaning ‘never’. Some auxiliaries specifically mark future ‘never’ (i.e. ‘will never’, often also meaning ‘cannot’); others mark past/experiential ‘never’; and others are either underspecified for time, or temporal information is not given in the descriptive literature. Most of these include some kind of negation marker, either integrated as part of the auxiliary, or as a prefix.

6.2.1 Future negative / future ‘never’ (S30, S40)

Many of these forms are built on what appears to be a negated version of the **potential** marker *nga-/ka-*, followed by a marker reminiscent of the **experiential** (*kelkhe*) (S407, S42, S43, S44) or by ‘**come**’ (S407, S43, S44). These markers also commonly convey the negated modal meaning ‘cannot’. Other forms seem to be built on the **persistentive** (‘still’) *sa-* prefix with ‘**come**’ (S41, S42, S43, S44). One form is argued to come from ‘**strike with an object**’ (S31), although it also includes morphology reminiscent of the other forms noted here. It is very common for these forms also to express (future / general) impossibility (58).

(58) Sindebele (Pelling and Pelling 1974, 197)

Si-ngeke si-qed-e lumsebenzi
 SP_{1Pl.}-AUX SP_{1Pl.}-finish-SBJV this.3.work
 ‘We cannot finish this job.’

S31 *lala*, from ‘**sleep**’, also a hodiernal future (Section 4.8.2), has a future ‘never’ reading (along with a hodiernal future negative reading) when used with the potential negative (Creissels forthcoming, 29).

Table 45: Future negative / ‘never’

Source Meaning	Language / Auxiliary
comitative (+ COP) + NEG	S31 <i>na (le)</i> + negation
neg. potential + experiential?	S407 <i>ngekhe</i> ; S42 <i>ngeke</i> ; S43 <i>ngeke</i> ; S44 <i>ngeke</i>
neg. potential + come	S43 <i>ngete, (k)a(SC)te</i> ; S407 <i>ngeze</i> ; S44 <i>ngeze, ngaze</i>
persistentive + come	S43 <i>sete</i> ; S41 <i>soze</i> ; S42 <i>soze</i> ; S44 <i>soze</i>
sleep	S31 <i>lala</i>
strike with an object?	S31 <i>kitla, ketla</i>

6.2.2 Past negative / experiential ‘never’ (S30, S40, S50)

Most of these forms seem to be built from experiential *k(h)a* plus a negative or potential marker²⁸ (S31, S407, S41), or ‘come’ plus *nge/nga* (found in at least S407, S41, S41A, S42,

²⁸At this time, I am not sure how to differentiate the two.

S44, S53, with past specified or implied in S41(A)²⁹ and S53). S43 also has *mange*, with *ma* possibly related to ‘stand’. There may be subdistinctions in this group regarding whether the past negation refers to ‘not within a certain past period of time’ and ‘never in the past’: see, for example, Pelling and Pelling (1974, 195–196), who claim that *zange* in S44 Sindebele means only the former; however, the matter is not straightforward, even based on the examples given in the same reference, such as (59). Note that at least some of these auxiliaries, including the one in (59), are also marked for negation prefixally.

- (59) Sindebele S44 (Pelling and Pelling 1975, 196)
Ka-si-zanga si-bon-e inyoka lapha.
 NEG-SP_{1PL} -AUX SP_{1PL} -see-SBJV 9.snake here
 ‘We have never seen a snake here.’

Table 46: Past / experiential ‘never’

Source Meaning	Language / Auxiliary
experiential + neg. / pot.?	S31 <i>ke</i> S407 <i>khange</i> ; S41 <i>khanga, khange</i>
come + neg. / pot.?	S41 <i>zange</i> ; S41A <i>zange</i> ; S44 <i>zanga, zange</i> ; S53 <i>zanga</i>
stand? + neg. / pot.?	S43 <i>mange</i>

6.2.3 General ‘never’ (or time unspecified in the dataset) (S10, S30, S40, S50)

This section deals with forms that are either unspecified for time (to the best of my understanding), or where the time is not specified in the references I accessed. Many of the latter may in fact have past or future orientation. A few forms have somewhat clear lexical sources: ‘die’ (S10) and ‘come’ (S408), ‘sit (down); stay’ (S31), while others seem to have similar components to future and past ‘never’, e.g. S31 (negated) *ka*; S408 *tákhe, tékhe, tjokhe*; S42 *bange, bonange, bonaze, kaze, vange*; S53 *kanga, zà*, among others.

S407 *phinde* is used after a negative auxiliary to mean ‘never again’ (see footnote 6).

- (60) SiNdebele S408 (Ziervogel 1959, 156)
A-ń-tjho·ke ndí-ń-món-e.
 NEG-SP_{1SG} -AUX SP_{1SG} -OP₁ -see-SBJV
 ‘I have never seen him.’

- (61) SiNdebele S408 (Ziervogel 1959, 156)
A-ń-te ń-gú:l-e.
 NEG-SP_{1SG} -AUX SP_{1SG} -be(come)_sick-SBJV
 ‘I never get sick.’

²⁹Oosthuysen (2016, 296) describes S41 *khange* as indicating ‘will not even once or never at all’, but Oosthuysen’s examples (and the examples I found in a brief survey of the glosbe online corpus of translations) all seem to have past orientation.

Table 47: General / unspecified ‘never’

Source Meaning	Language / Auxiliary
come (+ NEG / POT?)	S408 <i>tákhe, tékhe, te, tjhokhe</i> ;
die	S10 <i>fa</i>
experiential + NEG / POT?	S408 <i>khange</i> ; S53 <i>kanga</i>
sit / stay	S31 <i>nne</i> + negation
various / unknown origin	S42 <i>bange, bonange, bonaze, kaze, vange</i> ; S53 <i>zà</i> S407 <i>phinde</i>

7 Evaluative / other adverbial meaning

This category includes meanings that (debatably) do not fit clearly into tense, aspect, modality, and polarity categories. The auxiliaries discussed here have, as what seems to be their primary function, an element of speaker evaluation of the situation referenced (suggesting that it was surprising, it was good, and so forth) or have other adverbial-like meanings (e.g. ‘quickly’). As noted above, some of the TAMP-related auxiliaries mentioned above also have additional meanings, and some of the meanings here also relate to TAMP.

7.1 Mirative / ‘suddenly’ / ‘unexpectedly’ (S10; S30 incl. K21; S40; S50)

A number of auxiliaries in the dataset express a notion of surprise, conveying that something happened suddenly or unexpectedly. Most come from a verb with a meaning along the lines of ‘**fear; take fright; get a start**’ (S31, K21, S33 [with reciprocal marking], S407, S408, S53). Other sources include ‘**leave; go away; depart**’ (S33, S53) and ‘**meet with by chance, suddenly**’ (S10). Kuteva et al. (2019, 483) list mostly grammatical sources for miratives (adversative, inferred evidential, and perfect), but the Southern Bantu lexical sources seem logical, and in any case, these cannot be considered fully fledged grammatical miratives.

Also found are S41 *hle* and S43 *ze*, the latter of which is a borrowing and can indicate surprise or disgust (see Section 3.1). Cole (1955, 299) also notes that S31 *nama* (from ‘**stretch**’) “implies condescension or rather unexpected action” (Setshedi 1974 gives examples with similar readings).

(62) Silozi K21 (Jalla 1917, 43)

Lu-suhane ku-ba-bon-a.
 SP_{1PL}-AUX INF-OP₂-see-FV
 ‘We chanced to see them.’

(63) Setswana S31 (Cole 1955, 299)

Ó-namilê a-kgôn-a ditlhatlhobô.
 SP₁-AUX.PFV SP₁.SIT-succeed-FV 10.exam
 ‘He actually managed to pass the examinations.’

Table 48: Mirative

Source Meaning	Language / Auxiliary
fear	K21 <i>suha, suhana</i> ; S31 <i>tshogana</i> ; S407 <i>thuke</i> ; S408 <i>thuke</i> ; S33 <i>tshoha (tšōha)</i>
leave	S33 <i>tlōha</i> S53 <i>tshika</i>
meet with by chance	S10 <i>yerekana</i>
stretch	S31 <i>nama, namile</i>
come (borrowing)	S43 <i>ze</i>
potential (PFV)	K21 <i>kile</i>
unknown origin	S411 <i>hle</i> (< ‘sit / stay’?)

7.2 ‘Quickly’ / ‘soon’ (S21; S30 incl. K21; S40; S50)

Eleven auxiliaries in the dataset mean ‘quickly’, and sometimes also ‘soon’, making this an important auxiliary function in Southern Bantu. All of those with clear sources come from verbs meaning ‘**hasten**’, ‘**be fast**’, ‘**hurry**’, or similar (K21, S33, S41, S42, S43, S53), although the auxiliaries themselves take many different forms (e.g. S33 *phakisa* vs. S43 *sheshe*). Others are of unclear origin: S408 *tjh(w)e*; S41 *ṭavhanya*; S41 *behle*. Some languages have several auxiliaries with this function (e.g. S41 *khawuleza, tshetsha, and behle*).

(64) siSwati S43 (modified from Nkuna et al. 2021, 231)

Lilanga li-hlala li-sheshe li-shon-e ebusika.
 5.sun SM₅-AUX SM₅-AUX.SBJV SM₅-set-SBJV LOC.14.winter
 ‘The sun always sets quickly in winter.’

Table 49: ‘quickly’

Source Meaning	Language / Auxiliary
hurry / be fast	S10 <i>cimbidzo</i> S53 <i>hàtla</i> S41 <i>khawuleza</i> K21 <i>pakisa</i> ; S33 <i>phakisa</i> S43 <i>phange</i> S43 <i>sheshe, shesha</i> ; S41 <i>tshetsha</i> ; S42 <i>sheshe</i>
unknown origin	S41 <i>behle</i> S21 <i>ṭavhanya</i> S408 <i>tjhwe, tjhe</i>

7.3 ‘Do the right thing’ (S20; S40)

A few auxiliaries indicate ‘do the right thing’. Putative sources are ‘**work**’ (S21); ‘**make; do**’ (S21); and ‘**satisfy**’ (S41). These auxiliary constructions are mostly translated as ‘**did well to do X**’, in that the situation turned out well because of that action.

- (65) isiXhosa S41 (du Plessis and Visser 1992, 258)
U-kholisile u-hamb-e kwangonyezi namhlanje...
 SM_{2SG}-AUX.PFV SM_{2SG}-go-SBJV early today
 ‘It is a good thing you left very early today...’

Table 50: ‘do the right thing’

Source Meaning	Language / Auxiliary
do / make	S21 <i>ita</i>
satisfy	S41 <i>kholisa</i>
work	S21 <i>shuma</i>

7.4 ‘Do well’ (S30; S40)

Another occasional auxiliary meaning is ‘do well’. One auxiliary has ‘come’ as a source (S33), one comes from ‘improve’ (S10), and one form is of unclear origin (S42 *ive*, which also means ‘do very much’).

- (66) Sesotho S33 (Chaphole 1988, 193)
A-tla a-bu-a Mosotho.
 SP₁.PST-AUX SP₁.CSC-speak-FV 1.Sotho
 ‘He spoke well, the Mosotho.’

Table 51: ‘do well’

Source Meaning	Language / Auxiliary
come	S33 <i>tla</i>
improve	S10 <i>natso, nyatso</i>
unknown origin	S42 <i>ive</i>

7.5 ‘Do in vain (fail)’ (S10; S30; S40)

Some auxiliaries indicate that something was attempted but failed, done in vain, or done futilely. This category might be related to ‘almost’ (Section 2.3). Sources include ‘come from’ (S33); ‘resemble’ (S41, S41A); ‘find’ (S41); and a quotative (S10).

S43 *sa* (< ‘dawn’?) is reported to imply continued effort without success. Another form, S43 *batse*, has the same meaning, but does not have the typical complementation patterns of the auxiliaries, although Ziervogel and Mabuza (1976) discuss it under the umbrella of auxiliaries. S43 *sa* has a pattern typical of necessity auxiliary(-like) forms (see Crane et al. 2024), which often take expletive (class 17) subject marking, followed by a subject-agreeing subjunctive-marked lexical verb.

- (67) isiXhosa S41 (Oosthuysen 2016, 293)
Ukuba abafundi a-ba-phulaphul-i u-fumana e-theth-a utitshala.
 if 2.student NEG-SP₂-listen-NEG SP₁-AUX SP₁.SIT-speak-FV 1A.teacher
 ‘If the pupils do not listen the teacher speaks in vain.’

Table 52: ‘do in vain’

Source Meaning	Language / Auxiliary
come from	S33 <i>tswa</i>
find	S41 <i>fumana</i>
resemble	S41 <i>fana</i> ; S41A <i>fana</i>
quotative	S10 <i>ti</i>
unclear origin	S43 <i>sa</i> (< dawn?) (S43 <i>batse</i> (< copula?))

7.6 ‘Nevertheless’ (S30; S40; S50)

Three auxiliaries are described as meaning ‘nevertheless’. S42 *dlula* derives from ‘pass; surpass’, while other examples are of unclear origin. One of these is S33 *mpa*, meaning “do nevertheless withstanding opposition” (Chaphole 1988, 142, 185, 201). Chaphole notes several related forms, with descriptions suggesting that these other forms might be used more like conjunctions than like auxiliaries proper. The other relevant form is S53 *jinga* ‘nevertheless’ (Baumbach 1987, 250), also used in hortative or imperative contexts to mean ‘make an effort and...; take it upon you to’ (Cuenod 1967, 60).³⁰

(68) isiZulu S42 (Poulos and Msimang 1998, 330)

Wa-m-qand-a wa-dlula wa-yi-shay-a ingane.

SP₁.PST-OP₁-stop-FV SP₁.CSC-AUX SP₁.CSC-OP₉-beat-FV 9.child

‘She stopped him but he beat the child nevertheless.’

Table 53: ‘nevertheless’

Source Meaning	Language / Auxiliary
pass / surpass	S42 <i>dlula</i>
unknown origin	S33 <i>mpa</i> S53 <i>jinga</i>

7.7 ‘Rather’ / ‘preferably’ (S10; S30; S40)

Four forms are described as indicating ‘rather’ or ‘preferably’. One is from ‘spoil’ (S10), while the others are of unclear origin (S33 *mpa*,³¹ S408 *swe*, S42 *ngamane*).

(69) chiShona S10 (Fortune 1955, 358)

Ndi-nga-ise nda-f-a zangu.

SP_{1SG}-POT-AUX SP_{1SG}.CSC-die-FV indeed?

‘I would rather die.’

³⁰ Perhaps related is S43 *jinge*; see Section 5.2.8.

³¹ Setshedi (1974, 29) translates *mpa* as ‘rather’; see Section 7.6 on ‘nevertheless’ for what is possibly a conjunction built on *mpa*.

Table 54: ‘rather, preferably’

Source Meaning	Language / Auxiliary
spoil	S10 <i>iša</i>
unknown origin	S33 <i>mpa</i> S42 <i>ngamane</i> S408 <i>swe</i>

7.8 ‘Just, merely (etc.)’ (S30; S40)

Many auxiliaries are described as meaning ‘just’ or ‘merely’, although these terms are somewhat ambiguous, and most descriptions also include additional senses. I will therefore list the auxiliaries along with their described meanings here. Sources include ‘find’ (S41); ‘resemble’ (S41, S43); ‘finish; end’ (S31, S32, S33?, S407, S408); ‘appear; be born (etc.)’ (S407, S41, S42); ‘go’ (S41); ‘leave; move off’ (S41, S42); ‘refuse; deny’ (S44) ‘suffice’ (S33, S42); and ‘stand’ or ‘stop; halt’(?) (S407, S42, S43, S44). Several auxiliaries are of unclear origin (S10, S32, S407, S41A, S42), although some of these contain components seen in other auxiliaries (e.g. markers reminiscent of the potential or the experiential). Like the range of imperfective meanings seen in Section 2.1, these functions need to be studied in more detail to see to what extent they overlap and to what extent they represent distinct concepts; however, descriptive sources do not provide enough data to do so, and a closer look at (for example) corpus uses is beyond the scope of the present article.

(70) isiZulu S42 (Poulos and Msimang 1998, 333)

U-mane a-khal-e uma si-m-buz-a lokho.
 SP₁-AUX SP₁-CRY-SBJV if SP_{1PL}-OP₁-ask-FV that
 ‘She simply cries if we ask her that.’

(71) Attested meanings (compilations of descriptions across sources):

S33 *anela*: only just be able to do; S42 *anela*, (*a*)*nele*: do nothing but; as soon as
 S10 *bango*: just; precipitately, rashly, without thought; neg: even think of, even begin to
 S41 *fumana*, *fana*: just; merely; carelessly; in vain; irresponsibly; at random³²
 (NB: S41A *fana* ‘do at random’)
 S43 *fane*: simply; merely; might as well
 S31 *fela*: merely; without reason; simply; finally; at last
 S32 *fela*: only [in order to?]
 (S33 *fela*: in fact do; end up doing; do indeed; do in reality)
 S41A *hle*: just
 S42 *hle*, *se*: just; merely
 S407 *je*: just; motivational; meanwhile; so long
 S32 *ke* a little; just³³

³²Oosthuysen (2016, 293) and du Plessis and Visser (1992, 256) are in agreement that a situative complement gives the reading ‘in vain’ (see Section 7.5), but their descriptions of the meanings with subjunctive complements differ slightly, with du Plessis and Visser emphasizing ‘just, merely’, while Oosthuysen highlights the “irresponsible, arbitrary or careless fashion”. These seem to me to be different aspects of the same meaning.

³³This use, described in Lombard et al. (1985, 188), seems to be directly related to the experiential (‘once; at all’ meaning).

- S407 *mane*: just; only; simply; rather
 S42 *mane*: simply; just; intensifies commands or desires; merely
 S43 *mane*: simply; for no reason; merely
 S44 *mane*: just; simply
 S42 *ngake*: just
 S408 *phela*: just; sometimes; simply
 S407 *phele*: just; sometimes; simply
 S42 *phike*: merely
 S42 *simze*: simply; merely
 S41 *suka*: just; merely; (and) then; without reason³⁴
 S42 *suke*: simply; merely; just
 S44 *suke* [with *nje*]: simply; without cause
 S41 *vela*: without any reason; just; start with; do immediately/from the outset; heedlessly, carelessly
 S407 *vele*: of course; just
 S42 *vele*: from the outset; simply; just; merely; of course; naturally
 S41 *ye*: just; merely

Table 55: ‘just, merely’ (etc.)

Source Meaning	Language / Auxiliary
appear	S407 <i>vele</i> ; S42 <i>vele</i> ; S41 <i>vela</i>
finish	S31 <i>fêla</i> ; S32 <i>fêla</i> ; S33 <i>fela</i> (?); S408 <i>phela</i> ; S407 <i>phele</i>
go	S41 <i>ye</i>
leave / move off	S41 <i>suka</i> ; S42 <i>suke</i> ; S44 <i>suke</i>
refuse	S42 <i>phike</i>
resemble	S41A <i>fana</i> ; S43 <i>fane</i>
stand / finish (?)	S407 <i>mane</i> ; S42 <i>mane</i> ; S43 <i>mane</i> ; S44 <i>mane</i>
suffice	S33 <i>anela</i> ; S42 <i>anela</i> , <i>anele</i> , (<i>nele</i>)
unknown origin	S41A <i>hle</i> ; S42 <i>hle</i> / <i>se</i> ; S407 <i>je</i> ; S32 <i>ke</i> ; S42 <i>ngake</i> ; S42 <i>simze</i>

7.9 Emphatic; ‘certainly’ (S30, S40)

A small number of auxiliaries are described as representing something like emphatic certainty. S42, S44 *vele* may be derived from ‘**come forth; appear**’, or, perhaps more likely, may be a borrowing from the Afrikaans emphatic adverb *wel*, which has similar functions; *vele* is also used as an adverb meaning ‘of course; naturally’ in isiZulu (isiZulu.net).³⁵ Other relevant forms include S31 *nta* and S33 *hle/hla*, the latter of which Chaphole (1988) describes as having both emphatic and habitual meaning. These forms have significant form overlap with those in Section 7.8, and the meanings are also likely to be linked. There are also links to modal (necessity) concepts (Section 5.2.6).

³⁴ Du Plessis and Visser (1992, 248) additionally note that *suka* “denotes an element of surprise in the action”.

³⁵ Thanks to Hilde Gunnink (p.c. November 20, 2025) for pointing out this connection.

- (72) Sesotho S33 (Chaphole 1988, 53)
O-hle o-se-rek-a sefofane seo?
 SP_{2SG}-AUX SP_{2SG}.SIT-OP₇-buy-FV 7.aircraft DEM₇
 ‘Are you certainly buying that aircraft?’

Table 56: ‘certainly’

Source Meaning	Language / Auxiliary
appear / Afrikaans <i>wel</i>	S42, S44 <i>vele</i>
unclear origin	S31 <i>nta</i> S33 <i>hle, hla</i>

7.10 ‘Extremely’ / ‘excessively’ / ‘completely’ (S40)

S41 *shiya* from ‘leave behind’ has the adverbial meaning ‘extremely, to a great extent’. Along the same lines, S41 quotative *tsho* can mean ‘to such an extent; excessively’, and S41 *betha* (from ‘beat’) can mean ‘excessively’ as well as ‘at last’.

S42 *shaya/shaye* ‘completely’ apparently comes from ‘strike’. Doke (1992, 207) describes the meaning as “to do a thing completely, with full energy”. S10 has *nyanyo* from ‘exceed’ and *išo* from ‘spoil’.

- (73) isiZulu S42 (Doke 1992, 207)
U-shaye wa-shantshul-a.
 SP₁-AUX SP₁.CSC-go_off?-FV
 ‘He went off at full speed.’

Table 57: ‘extremely, excessively, completely’

Source Meaning	Language / Auxiliary
exceed	S10 <i>nyanyo</i>
leave behind	S41 <i>shiya</i>
quotative	S41 <i>tsho</i>
beat, strike	S41 <i>betha</i> ; S42 <i>shaya/shaye</i>
spoil	S10 <i>išo</i>

7.11 ‘At the right time’ (S30)

S31 and S33 both have auxiliaries meaning something like ‘opportunistically’ or ‘at the right time’. S31 *jafilê* may be related to *jafa* ‘act speedily; do quickly’, while S33 *nyafa* and *phaka* are of unknown origin.

- (74) Sesotho S33 (Chaphole 1988, 190, typo corrected)
Mosadi a-nyafa a-fihl-a.
 SP₁.WOMAN SP₁-AUX SP₁.SIT-arrive-FV
 ‘His wife arrived at the right moment.’

Table 58: ‘at the right time’

Source Meaning	Language / Auxiliary
quickly	S31 <i>jafilé</i>
unknown origin	S33 <i>nyafa</i> S33 <i>phaka</i>

7.11.1 ‘In someone’s absence’ (S10; S30)

S31 *sala*, from ‘**stay; remain**’, indicates that something took place or will take place in someone’s absence. Creissels (forthcoming, 32) notes that usually “the person in question is not designated explicitly, and his/her identity is inferred from the context”. S10 *sara* (also from ‘**stay; remain**’) seems to have a similar function, although Fortune (1955, 360) describes it as meaning ‘after a separation’.

(75) Setswana S31 (Creissels forthcoming, 32)

Ba-sadile ba-bets-a ngwana wame.
 SP₂-AUX.PFV SP₂.SIT-beat-FV 1.child POSS.PRON_{1/1SG}
 ‘They beat my child during my absence.’

Table 59: ‘in someone’s absence’

Source Meaning	Language / Auxiliary
remain	S10 <i>sara</i> ; S31 <i>sala</i>

7.12 Functions attested for only one lexical item

In this final subsection, I include non-TAMP meanings that were described for only one language in the dataset. Some of these involve one the several meanings of multifunctional auxiliaries, some of which have already been discussed in previous sections. The functions listed here are interesting and merit further investigation, both to better understand their properties and to see whether they are, in fact, more widespread in Southern Bantu (and beyond).

7.12.1 ‘Do further’ / ‘do more than expected’ (S31)

S31 *eketsa* (from ‘**add; increase**’) means ‘do further; act besides’ (cf. Section 3.5) (Doke and Mofokeng 1957, 286), as well as ‘do over and above what was expected’ (Chaphole 1988, 86).³⁶

(76) Setswana S31 (Doke and Mofokeng 1957, 286)

N-ka-eketsa ka-bu-a.
 SP_{1SG}-POT-AUX SP₁.CSC-speak-FV
 ‘I may speak more.’

7.12.2 ‘At the wrong time’ / ‘inopportunistly’ (S33)

S33 *haba* is described as meaning ‘do inopportunistly’ (Chaphole 1988, 192).

³⁶Doke and Mofokeng give examples like ‘We shall write more’ (1957, 286); Chaphole gives the example ‘Phakwane further hacked his wife with a matchet [sic]’ (1988, 190).

(77) Setswana S31 (Chaphole 1988, 192)

Seka-haba o-bu-e.

NEG.IMP-AUX SP_{2SG}-speak-SBJV

‘Do not speak yet.’ [i.e. it is not yet the right time – Auth.]

7.12.3 ‘Repetition (of undesirable process)’ (S41)

S41 *phikela*, the applicative form of *phika* ‘**contradict**’, indicates that “a usually undesirable process occurs repeatedly” (Oosthuysen 2016, 311).

(78) isiXhosa S41 (Oosthuysen 2016, 311)

UMpayipheli wa-phikela uku-tshay-a endlwini

1A.M SP₁-AUX INF-smoke-FV LOC.9.house.LOC

e-m-qumb-is-a umkakhe

SP₁-SIT-OP₁-get_angry-CAUS-FV 1.his_wife

‘Mpayipheli repeatedly smoked in the house, angering his wife.’

7.12.4 ‘A little’ (S42)

S42 **quotative** *thi* can mean ‘a little’. Canonici (1995, 133) lists the function but does not appear to give an example.

7.12.5 ‘In desperation’ (S33)

S33 *tena* means ‘do in desperation’ as well as ‘to do tiresomely, inappropriately’ (Chaphole 1988, 186, 191). Its source is ‘**annoy**’.

(79) Sesotho S33 (Chaphole 1988, 191)

Ke-tena ke-o-shap-a tjena ka botlokotsebe bona bahao

SP_{1SG}-AUX SP_{1SG}-SIT-OP_{2SG}-lash-FV so about 14.crime PRON₁₄ POSS.PRON_{14/2SG}

‘I end up lashing you in this manner because of your delinquency.’

7.12.6 ‘Be inclined to’ (S43)

S43 *cinetele*, from *cina* ‘**be strong**’, is used to express “an inclination” (Ziervogel and Mabuza 1976, 151) (i.e. ‘she is inclined to do X’).

(80) siSwati S43 (Ziervogel and Mabuza 1976, 151)

U-cinetele ku-phik-a=nje...

SP₁-AUX INF-deny-FV=just

‘He is inclined to deny it...’

7.12.7 ‘Contrary to expectation or right usage’ (S10)

S10 *dzoka*, from ‘**return**’, expresses the sense that “the action indicated by its complement is contrary to expectation or right usage” (Fortune 1955, 359; cf. Section 3.3).

(81) chiShona S10 (Fortune 1955, 359)

Panzimbo poku-p-a muviri wedu vitamins,
 16.instead 16.INF-give-FV 3.body POSS.PRON_{3/1PL} vitamins

ti-no-dzoka to-p-a tupukanana.

SP_{1PL}-PRES-AUX SP_{1PL}.OP₃.SIT-give-FV 14.microbes

‘Instead of giving our body vitamins, we instead give them microbes.’ [sic]

7.12.8 ‘Approximately’ (S31)

S31 *nê* (**copula**) is used with a potential (*ka*) prefix to mean ‘about’ or ‘approximately’, followed by another copula (*le*) in the participial form and a number (with a seeming literal meaning of ‘it can/might be [that] it is [this many]’) (see Cole 1955, 300).

(82) Setswana S31 (Cole 1955, 300)

Ò-ka-nê o-le dinyaga di-le mašomê amararo.
 SP_{2SG}-POT-AUX SP_{2SG}.SIT-be 10.year SP₁₀.REL-be thirty

‘You are about thirty years of age.’

7.12.9 ‘Always be ready to?’ (S41)

S41 *hlalele/hlelele*, the applicative form of ‘**sit; stay**’ is reported to mean ‘always be ready to’ (du Plessis and Visser 1992, 261). This meaning seems to be clearly derived from the imperfective function of *hlala* ‘sit; stay’.

(83) isiXhosa S41 (du Plessis and Visser 1992, 261)

Bá-hlálélé úkú-mk-à.

SP₂-AUX INF-leave-FV

‘They are always ready to leave.’

7.12.10 ‘For that matter’ (S31)

Setshedi (1974) gives examples of S31 *tswa* (from ‘**go out**’) meaning ‘as it is’ or ‘for that matter’ (1974, 73) and ‘in the meantime’ (1974, 74).

(84) Setswana S31 (Setshedi 1974, 73)

O-tswa o-tshab-a bankane bagago.

SP_{2SG}-AUX SP_{2SG}-fear-FV 2.fellows POSS.PRON_{2/2SG}

‘As it is or for that matter, you are afraid of your equals.’

7.12.11 ‘What else’ (S408)

This meaning is mentioned for *swa* in S408.

(85) Sindebele S408 (Skhosana 2009, 356)

Kwa-swa kwa-yent-w-a njani?

SP₁₇.CSC?-AUX SP₁₇.CSC-do-PASS-FV what

‘What else was done?’

7.12.12 'Whatever, whenever' (S41)

Oosthuysen (2016, 292) mentions this meaning for S41 *sukuba*, apparently the grammaticalization of *suka* 'leave; move off' and the complementizer *ukuba*.

(86) isiXhosa S41 (Oosthuysen 2016, 292)

Ndi-ya ku-ku-xhas-a entweni yonke o-sukuba
 SP_{1SG}-AUX INF-OP_{2SG}-support-FV LOC.9.thing.LOC all₉ SP_{2SG}.REL-AUX
u-y-enz-a.
 SP_{2SG}.SIT-OP₉-do-FV
 'I will support you in whatever thing you do.'

7.12.13 'Even though; although' (S10 + S31?)

S10 has an auxiliary *nyango* that often appears in prefix-like form, with the meaning 'although' or 'even though'. S31 has a form (*e*)*ntswa* with similar function, analysed by Pretorius (1997, 129, 342) as an auxiliary; Cole (1955, 389–390) describes it rather as a "conjunctive possibly of verbal origin", and this analysis seems to me to best match the data as I understand it. Further investigations may uncover more auxiliary-like uses, however.

(87) chiShona S10 (Fortune 1955, 342)

U-ka-nyango=wan-a pfuma dzose
 SP_{2SG}-PST-AUX=find-FV 10.riches all₁₀
 'Even if you have got all riches'

8 Conclusion

Auxiliaries in Southern Bantu are used to express a wide range of meanings, almost certainly wider even than the survey in this article. The most significant recurring auxiliary functions identified in this article are summarized in (88), which lists functions attested in three or more subgroups in the dataset.

(88) Widespread auxiliary functions in Southern Bantu (3+ subgroups)

- i. **aspectual**: 'again'; approximative/avertive; continuous; experiential; phasal polarity (esp. 'already' and 'not yet', possibly 'still'); repeated/habitual
- ii. **sequentiality**: 'until'; 'after, then, consecutive'; 'furthermore'; conditional ('if, in the event of'), 'first, before, begin'; 'meanwhile'
- iii. **tense/time**: relative tense; near future; 'spend / during the day'
- iv. **modality**: ability/ circumstantial possibility; epistemic possibility; necessity
- v. **negation**: never (future / past / general)
- vi. **other**: mirative ('suddenly, unexpectedly'); 'quickly, soon'; 'do well'; 'do in vain' / 'fail'; 'nevertheless'; 'rather, preferably'; 'just, merely'

Table 60 lists the generalized meanings attested in more than one subgroup. It additionally notes whether these meanings are expressed by auxiliaries deriving from more than one lexical source, suggesting an auxiliary concept widespread enough that diverse sources are recruited

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to fill it; and whether, within lexical sources with (roughly) the same translation, non-cognate forms are found, suggesting a recurring cognitive process from source meaning > auxiliary function.

Table 60: Meanings by subgroup and multiplicity of expressions

Meaning	# of subgroups attested	>1 lexical source	Non-cognate forms (with same source translation)
again	6	Y	Y
imperfective (continuative or habitual)	6	Y	Y
relative tense	6	Y	-
approximative, avertive	5	Y	Y
experiential	5	Y	-
quickly	5	Y	Y
until	5	Y	-
ability	4+	Y	-
necessity	4+	Y	Y
after, then, consecutive	4	Y	Y
as soon as	4	Y	-
epistemic possibility	4	Y	-
meanwhile	4	Y	-
mirative	4	Y	Y
near future	4	Y	Y
never	4	Y	-
already	3	Y	-
do in vain	3	Y	-
do well	3	Y	-
first	3	Y	Y
furthermore	3	Y	-
just, merely	3	Y	-
nevertheless	3	Y	-
not yet	3	Y	-
preferably	3	Y	-
spend the day	3	-	Y?
future	2+	Y	-
at night	2	-	-
certainly	2	Y	-
distant past	2	Y	-
do the right thing	2	Y	-

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Meaning	# of subgroups attested	>1 lexical source	Non-cognate forms (with same source translation)
eventually	2	Y	-
immediate/recent past	2	Y	-
in someone's absence	2	-	-
in the end	2	-	Y
last (most recent) time	2	Y	-
neg. imperative	2	Y	-
simultaneous	2	Y	-
still	2	-	Y
conditional	(3)	Y	-

The Eastern Bantu clade to which Southern Bantu belongs appears to have much more constrained auxiliary systems outside of Southern Bantu, both in terms of the number of auxiliaries and in their functions. For example, Gibson (2025) reports that Rangi (F33, Tanzania) has just two auxiliary forms and (citing Guérois 2015) that Cuwabo (P34, Mozambique)³⁷ has three. Much typological work remains to be done (see Gibson 2025, 315–316; Gibson 2019; Bernander et al. 2022), but assuming that descriptions of Eastern Bantu languages are not massively underreporting auxiliary forms,³⁸ this situation raises the question of how the Southern Bantu auxiliary systems came to be: are they retentions from Proto-Bantu (and wider Niger-Congo) – with other Eastern Bantu languages having subsequently simplified their auxiliary inventories – or are they innovations, possibly influenced by historical interactions with speakers of Khoisan languages?

Auxiliary systems in Northwest Bantu languages and other Niger-Congo languages (as well as other languages of Africa) are reported to have many of the properties seen in Southern Bantu auxiliary systems (Creissels et al. 2008, 105–106), including large inventories and functions that go beyond tense, aspect, modality, and polarity.

Table 61 lists functions noted in Southern Bantu and compares them with the brief survey of Emai (Edoid) and several other African languages given in Schaefer and Egbokhare (2025). Omitting from consideration very basic and widespread auxiliary functions such as imperfective (progressive, habitual) aspect, common modal expressions, negation, or tenses such as

³⁷ Cuwabo belongs to the Makhuwa subclade, which is sometimes categorized as Southern Bantu, due to some similarities with Sotho languages. However, the linguistic phylogeny in Gunnink et al. (2023, 96–97) does not support this grouping.

³⁸ Auxiliary systems are understudied across Africa, and perhaps especially in Bantu languages, where elaborate agglutinative verbal systems have received far more attention than have multiverb constructions, so it seems possible that many auxiliary forms have simply been overlooked, underreported, or not considered ‘auxiliaries proper’ and therefore not dealt with extensively in grammatical descriptions. Auxiliary systems in other Eastern Bantu languages may, in fact, be more extensive than is commonly believed. The kinds of auxiliaries described in this paper are extremely common and constitute salient features of Southern Bantu languages, so I find it somewhat unlikely that they would have been totally overlooked in other Eastern Bantu languages. However, areal descriptive traditions can be surprisingly powerful in predetermining what is considered a phenomenon worthy of treatment in a grammar, and we should not take anything for granted.

present or future, about a third of the auxiliary functions attested for Southern Bantu are also found even in Schaefer and Egbokhare's small survey of auxiliaries in Africa.

Table 61: Comparison of attested functions with those mentioned in Schaefer and Egbokhare's (2025) brief survey

Function found in Southern Bantu	Mentioned in Schaefer and Egbokhare (2025)
again	Emai (Edoid) and others
avertive / approximative	Yoruba and others 'almost, nearly'
experiential	Emai (Edoid) <i>mò</i> 'once in past'
already	
still	Nupe and others
not yet (under negation)	(mentioned)
no longer (under negation)	
until	
in the end / at last / end up	Yoruba <i>jàjà</i> 'at last, finally'
after / then / consecutive	Dinka (Nilo-Saharan) <i>look</i> 'do afterwards' <i>jaal</i> 'do next'
subsequent contradictory process	
as soon as	
furthermore	Yoruba <i>túbò</i> 'further, more'?
if / in the event of	
first / before / begin	Nupe and others
meanwhile	
the last time	
simultaneous /while	Emai <i>ghe</i> 'simultaneous'
future, near / soon / immediately	Dinka <i>gwoor</i> 'immediately' <i>daac/laac</i> 'soon'
past, immediate / recent	Dinka <i>pyaac</i> 'have done recently'
past, distant / long ago	
early	Yoruba <i>tètè</i> 'early'
past, hodiernal	
future, crastinal	
at night	
past, hesternal	(mentioned)
future, hodiernal	
eventually	
spend /during the day	
apparently	
possibility, bouletic/wish	
certainly	

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intend to	
insist on / persist	
imperative	Emai
imperative, negative / must not	Emai
mirative	Yoruba <i>dédé</i> ‘suddenly, by chance’
quickly / soon	(very common)
do the right thing	
do well	Dinka <i>nyeek</i> ‘do properly’
do in vain / fail	Yoruba <i>wulè</i> ‘in vain’
nevertheless	
rather / preferably	Emai <i>wòò</i> ‘preferably’
just / merely	Yoruba <i>kòn</i> ‘merely, just’
at the right time	
in s.o.’s absence	
do further	Yoruba <i>túnbò</i> ‘further’
at the wrong time	
repetition (undesirable)	
a little	Emai <i>zèzè</i> ‘a bit, not quite’
completely	
extremely	Emai <i>tótóbò</i> ‘great intensity’?
in desperation	
happen by chance	Yoruba <i>dédé</i> ‘by chance’
be inclined to	
be pleased to	
randomly	Yoruba <i>sáà</i> ‘for no purpose’
contrary to expectation or right usage	
approximately	
always ready to	
for that matter	
what else?	
whatever, whenever	

It may therefore be that the Southern Bantu systems are at least partially retentions from Proto-Bantu and even from broader Niger-Congo, and that the systems in many other East Bantu languages have diminished over the years. Such a scenario would probably have required multiple processes of loss and simplification over the years, since Eastern Bantu as a group is significantly more diverse than is its Southern subclade. That is, ‘unusual’ auxiliary functions seem to be common across Africa, and rather than asking why they are present in Southern Bantu, the more pertinent question might turn out to be why they seem to be absent in some other Bantu subgroups.

Another scenario is that extensive auxiliary systems are common innovations across Africa, including in Southern Africa, possibly supported in Southern Africa by contact with speakers of Khoisan languages, which also make extensive use of multiverb constructions (Güldemann and Fehn 2017; Fehn and Phiri 2022), although their semantics are underdescribed. Contact with speakers of Khoisan languages played a role in the development of many distinctive Southern Bantu features (see e.g. Pakendorf et al. 2017). Although many Southern Bantu auxiliaries seem to be traceable to Proto-Bantu origins in their forms (Gunnink 2023; Carbo et al. 2025), and there is little evidence for the direct borrowing of auxiliaries, the importance of multiverb constructions in these languages may have contributed to the retention or (re)introduction of certain auxiliary constructions in Southern Bantu. This article provides a basis for comparing auxiliary concepts found in Southern Bantu with those found in other languages in the area, to determine the plausibility of this scenario.

This article is meant to be an initial step in the bigger project of understanding why and how elaborate auxiliary systems arose and are maintained in Southern Bantu languages, with this comparative overview of Southern Bantu auxiliary semantics enabling more precise comparison with other systems. I hope this work can be used to spur further study of the Southern Bantu systems, refining and correcting the data and generalizations presented here, and testing for the presence of auxiliaries and their functions in languages where they are not yet attested, making use of the known forms and their lexical sources as possible hints. I also hope that it will aid in future studies that aim to disentangle some of the more complex semantic fields (e.g. the imperfective in Section 2.1 and ‘just, merely’ in Section 7.8), as well as studies tracing semantic pathways between lexical sources and auxiliary functions.

Glosses and abbreviations

1A noun class 1a; 7 noun class 7 (etc.); 1PL first person plural; 1SG first person singular; ALT alterative; ASSC associative; AUX auxiliary; COM comitative; CONJ conjunction; CSC consecutive; DEM demonstrative; FUT future; FV final vowel; IMP imperative; INF infinitive; LOC locative; NEG negative; OP₁ object prefix, class 1 (etc.); PASS passive; PB Proto-Bantu; PERS persistent; PFV perfective; POSS possessive; PRON pronoun; POSS.PRON_{7/1} possessive pronoun, class 7 possessee, class 1 possessor; POT potential; PST past; RECPST recent past; REL relative; SBJV subjunctive; SIT situative; SP_{1SG} subject prefix, first person singular (etc.); TAMP tense, aspect, mood and polarity

Glossing conventions

I have occasionally used rough English equivalents for grammatical categories when doing so made the examples easier to follow and the grammatical specifics were not central to understanding the example (or, a few times, if I was not certain about the underlying grammatical structures). For verbal complements of auxiliaries, I gloss the infinitive form on the infinitive prefix. In general, consecutive, situative, and subjunctive forms concern the whole verb form and not a specific morpheme, raising the conundrum of where to mark them, especially when the forms themselves are not segmentally distinct from main-clause indicative forms. For the consecutive and situative forms, I gloss them on the subject prefix, since this is where segmental changes, if any, occur. For subjunctive forms, I gloss them on the final vowel (usually *-e*), as this is the most consistent segmental indicator of subjunctive mood.

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Editorial note

Thera Marie Crane is currently serving as an Editor-in-Chief of the *Nordic Journal of African Studies* and as an editor of this special issue. This article was subject to the same double-blind review process as all other articles in this issue, and the author had no access to reviewer information.

References

- Anderson, Gregory. 2011. "Auxiliary Verb Constructions in the Languages of Africa." *Studies in African Linguistics* 40 (1 & 2): 1–409.
- Aunio, Lotta, Thera Marie Crane, Axel Fanego, and Stephan Schulz. In prep. *Sketch Grammar of isiNdebele*.
- Bastin, Yvonne, André Coupez, Evariste Mumba, and Thilo C. Schadeberg, eds. 2002. *Bantu Lexical Reconstructions 3 / Reconstructions Lexicales Bantoues 3*. <http://linguistics.africamuseum.be/BLR3.html>
- Baumbach, Erdmann J. M. 1987. *Analytical Tsonga Grammar*. Studia Originalia 3. University of South Africa.
- Bernander, Rasmus, Maud Devos, and Hannah Gibson. 2022. "Modal Auxiliary Verb Constructions in East African Bantu Languages." *Journal of African Languages and Literatures* 3: 22–85.
- Burger, J. P. 1960. *An English-Lozi Vocabulary*. Morija Printing Works.
- Cable, Seth. 2013. "Beyond the Past, Present, and Future: Towards the Semantics of 'Graded Tense' in Gĩkũyũ." *Natural Language Semantics* 21: 219–276.
- Canonici, Noverino N. 1995. *Zulu Grammatical Structures*. 3rd ed. Dept. of Zulu Language and Literature, University of Natal.
- Cantrell, John V. 1946. "Some Aspects of Mpondo and Its Relation to Xhosa and Zulu." MA thesis, University of South Africa.
- Carbo, Matilda, Thera M. Crane, and Hilde Gunnink. 2025. "Comparative Auxiliary Spreadsheet for Southern Bantu Languages" [Data set, v2.1]. Zenodo. <https://doi.org/10.5281/zenodo.17424457>.

- Chaphole, Solomon Rampasane. 1988. "A Study of the Auxiliary in Sesotho." MA thesis, University of Cape Town.
- Cole, Desmond T. 1955. *An Introduction to Tswana Grammar*. Longman.
- Cole, Desmond, and Lally Moncho-Warren. 2011. *Setswana and English Illustrated Dictionary*. MacMillan South Africa.
- Comrie, Bernard. 1976. *Aspect: An Introduction to the Study of Verbal Aspect and Related Problems*. Cambridge University Press.
- Crane, Thera Marie, Remah Lubambo, Msuswa Petrus Mabena, Cordelia Nkwini, Muhle Sibisi, and Onelisa Slater. 2025. "What Can Be Said? Variation Among Expressions of Modal Possibility in a South African Language Cluster." *Studies in Language* 49 (1): 44–92.
- Crane, Thera Marie, Stefan Savić, Onelisa Slater, and Rasmus Bernander. 2024. "Modal Expressions in Xhosa, Part I: Necessity." *Africana Linguistica* 30: 39–70.
- Crane, Thera Marie, Stefan Savić, Onelisa Slater, and Rasmus Bernander. 2025. "Modal Expressions in Xhosa, Part II: Possibility." *Africana Linguistica* 31: 31–67.
- Crane, Thera Marie, Hannah Gibson, and Kristina Riedel. Forthcoming (2026). "A Microtypological Overview of Auxiliary Verb Constructions in Southern Bantu". *Linguistic Typology*.
- Creissels, Denis, Gerrit J. Dimmendaal, Zygmunt Frajzyngier, and Christa König. 2008. "Africa as a Morphological Area." In *A Linguistic Geography of Africa*, edited by Bernd Heine and Derek Nurse, 86–150. Cambridge University Press.
- Creissels, Denis. Forthcoming. "Verbal Complex Predicates and Auxiliarization in Tswana (Bantu S31)." In *Verbal Complex Predicates: A Comparative Handbook*, edited by Walter Bisang, Alexandre François, Andrej Malchukov, and Martine Vanhove. De Gruyter Brill.
- Creissels, Denis. 2025. "Verbal Complex Predicates and Auxiliarization in Tswana (Bantu S31)." In *Verbal Complex Predicates: A Comparative Handbook*, edited by Walter Bisang, Alexandre François, Andrej Malchukov, and Martine Vanhove. De Gruyter Brill. (13 June 2025 version.)
- Cuenod, R. 1967. *Tsonga-English Dictionary*. Sasavona.
- Doke, Clement Martyn, and Sophonia Machabe Mofokeng. 1957. *Textbook of Southern Sotho Grammar*. Longmans, Green & Co.
- Doke, Clement Martyn, and Benedict Wallet Vilakazi. 1972. *Zulu-English Dictionary*. 2nd ed. Witwatersrand University Press.
- Doke, Clement Martyn. 1992 [1927]. *Textbook of Zulu Grammar*. 6th ed. Maskew Miller Longman.
- du Plessis, Jan Adriaan, and Marianna W. Visser. 1992. *Xhosa Syntax*. Via Afrika.
- Fehn, Anne-Maria, and Admire Phiri. 2022. "Juncture-Verb Constructions in Northeastern Kalahari Khoe: A Comparative Perspective." *Stellenbosch Papers in Linguistics Plus* 65 (1): 147–190.
- Fortune, George. 1955. *An Analytical Grammar of Shona*. Longmans, Green & Co.

- Fortune, George. 1977. *An Outline of Silozi Grammar*. Bookworld Publishers.
- Gibson, Hannah. 2025. "Auxiliary Constructions." In *The Oxford Guide to the Bantu Languages*, edited by Lutz Marten, Ellen Hurst-Harosh, Nancy C. Kula, and Jochen Zeller, 308–318. Oxford: Oxford University Press.
- Gibson, Hannah, and Lutz Marten. 2016. "Variation and Grammaticalisation in Bantu Complex Verbal Constructions: The Dynamics of Information Growth in Swahili, Rangi and SiSwati." In *Approaches to Complex Predicates*, edited by Léa Nash and Pollet Samvelian, 70–109. Brill.
- Gibson, Hannah, and Kristina Riedel. 2021. "Auxiliaries in Southern Bantu Languages." Presentation given at SALALS 2021, online conference, University of the Free State.
- Gowlett, Derek F. 1967. "Morphology of the Verb in Lozi." MA thesis, University of the Witwatersrand.
- Gowlett, Derek F. 1989. "The Parentage and Development of Lozi." *Journal of African Languages and Linguistics* 2: 127–149.
- Guérois, Rozenn. 2015. "A Grammar of Cuwabo (Mozambique, Bantu P34)." PhD diss., University of Lyon 2.
- Güldemann, Tom, and Anne-Maria Fehn. 2017. "The Kalahari Basin Area as a 'Sprachbund' Before the Bantu Expansion." In *The Cambridge Handbook of Areal Linguistics*, edited by Raymond Hickey, 500–526. Cambridge University Press.
- Gunnink, Hilde, Natalia Chousou-Polydouri, and Koen Bostoen. 2023. "Divergence and Contact in Southern Bantu Language and Population History: A New Phylogeny in Cross-Disciplinary Perspective." *Language Dynamics and Change* 13 (1): 74–131.
- Gunnink, Hilde. 2023. "Auxiliary Constructions in Southern Bantu." Presentation at the Department of Languages and Cultures, Ghent University.
- Guthrie, Malcolm. 1967–1971. *Comparative Bantu*. 4 vols. Gregg Press.
- Hammarström, Harald. 2019. "An Inventory of Bantu Languages." In *The Bantu Languages*, 2nd ed., edited by Mark O. Van de Velde, Koen Bostoen, Derek Nurse, and Gérard Philippson, 17–78. Routledge.
- Haspelmath, Martin. 2024. "Biverbal Predicate Constructions and Related Concepts: Serial Verbs, Converbs, Auxiliaries, and Grammaticalization." Unpublished manuscript, August 2024. Accessed January 21, 2026. <https://ling.auf.net/lingbuzz/008802>
- Iziko lesiHlathululi-mezwi sesiNdebele. 2006. *IsiNdebele-English/English-IsiNdebele Isihlathululi-Mezwi/Bilingual and Explanatory Dictionary*. Phumelela.
- Jalla, Adolphe. 1917. *Elementary Grammar of the Sikololo Language*. Imprimerie Alpine.
- Jalla, Adolphe. 1936. *Dictionary of the Lozi Language, 1: Lozi-English*. 2nd ed. United Society for Christian Literature (USCL).
- Jalla, Adolphe. 1982. *Silozi-English Dictionary*. 3rd ed. Revised and enlarged by the Literature Committee of the United Church of Zambia. National Educational Company of Zambia (NECZAM). Accessed March 4, 2026. <https://www.barotseland.net/sil-eng1.htm>

-
- Kramer, Raija. 2017. "Position Paper on Phasal Polarity Expressions." Accessed July 18, 2025. <https://www.aai.uni-hamburg.de/afrika/php2018/medien/position-paper-on-php.pdf>
- Kriel, Theunis Johannes. 1976. *Popular Northern Sotho Dictionary: Northern Sotho-English, English-Northern Sotho*. 2nd ed. J. L. van Schaik.
- Kriel, Theunis Johannes. 1976. *Popular Northern Sotho Dictionary: Northern Sotho-English, English-Northern Sotho*. 2nd ed. J. L. van Schaik.
- Kuteva, Tania. 2001. *Auxiliation: An Inquiry into the Nature of Grammaticalization*. Oxford University Press.
- Kuteva, Tania, Bernd Heine, Bo Hong, Haiping Long, Heikko Narrog, and Seongha Rhee. 2019. *World Lexicon of Grammaticalization*. 2nd ed. Cambridge University Press.
- Lanham, Leonard Walter. 1955. *A Study of Gitonga of Inhambane*. Bantu Linguistic Studies I. Witwatersrand University Press.
- Lee, Seunghun J., and Crous Hlungwani. 2015. "Aspectual Auxiliary Verbs in Xitsonga." *Stellenbosch Papers in Linguistics Plus* 48: 113–135.
- Löbner, Sebastian. 1989. "'Schon – erst – noch': An Integrated Analysis." *Linguistics and Philosophy* 12 (2): 167–212.
- Lombard, Daniel P., Egidius Benedictus van Wyk, and Pothinus C. Mokgokong. 1985. *Introduction to the Grammar of Northern Sotho*. J. L. van Schaik.
- Makwarela, Vhangani Petrus. 1992. "The Consecutive in Venda." MA thesis, Randse Afrikaanse Universiteit.
- Meeussen, A. E. 1967. "Bantu Grammatical Reconstructions." *Africana Linguistica* 3: 80–121.
- Miestamo, Matti. 2005. *Standard Negation: The Negation of Declarative Verbal Main Clauses in a Typological Perspective* (Empirical Approaches to Language Typology 31). Mouton de Gruyter.
- Mini, Buyiswa Mavis, Sonwabo Lungile Tshabe, Fewize Martha Shoba, and P. N. van der Westhuizen. 2003. *The Greater Dictionary of IsiXhosa*. Vol. 2: K to P. University of Fort Hare.
- Mkhatshwa, Simon Nyana. 1991. "Metaphorical Extensions as a Basis for Grammaticalization with Special Reference to Zulu Auxiliary Verbs." MA thesis, University of South Africa.
- Mphasha, Eleazar L., Sannah L. Baker, Leften M. Matheere, and Yuko Abe. 2021. "Northern Sotho/Sesotho Sa Leboa (S32)." In *Descriptive Materials of Morphosyntactic Microvariation in Bantu*, vol. 2: A Microparametric Survey of Morphosyntactic Microvariation in Southern Bantu Languages, edited by Seunghun J. Lee, Yuko Abe, and Daisuke Shinagawa, 333–386. Tokyo University of Foreign Studies.
- Netshisaulu, N. C., Salphina Mbedzi, and Seunghun J. Lee. 2021. "Tshivenda (S21)." In *Descriptive Materials of Morphosyntactic Microvariation in Bantu*, vol. 2: A Microparametric Survey of Morphosyntactic Microvariation in Southern Bantu Languages, edited by Seunghun J. Lee, Yuko Abe, and Daisuke Shinagawa, 77–133. Tokyo University of Foreign Studies.
- Nichols, Peter John. 2011. "A Morpho-Semantic Analysis of the Persistent, Alterative and Inceptive Aspects in SiSwati." PhD diss., SOAS, University of London.

- Nkuna, Khulisile Judith, Hannah Gibson, Kyoungwon Jeong, Bongane Nyambi, and Sikhumbuzo Sibusiso Khoza. 2021. "Siswati (S43)." In *Descriptive Materials of Morphosyntactic Microvariation in Bantu, vol. 2: A Microparametric Survey of Morphosyntactic Microvariation in Southern Bantu Languages*, edited by Seughun J. Lee, Yuko Abe, and Daisuke Shinagawa, 77–133. Tokyo University of Foreign Studies.
- Nurse, Derek. 2008. *Tense and Aspect in Bantu*. Oxford University Press.
- Nurse, Derek. 2019. *Data for Tense and Aspect Systems in Bantu*. Royal Museum for Central Africa. <https://www.bantugent.ugent.be/wp-content/uploads/2022/06/D.-Nurse-Data-for-tense-and-aspects-def.pdf>
- Nurse, Derek, and Maud Devos. 2019. "Aspect, Tense and Mood." In *The Bantu Languages*, 2nd ed., edited by Mark Van de Velde, Koen Bostoen, Derek Nurse, and Gérard Philippson, 204–236. Routledge.
- O’Sullivan, Owen. 1993. *English-Silozi Dictionary*. Zambia Educational Publishing House.
- Oosthuysen, Jacobus Christiaan. 2016. *The Grammar of IsiXhosa*. SUN Press.
- Pakendorf, Brigitte, Hilde Gunnink, Bonny Sands, and Koen Bostoen. 2017. "Prehistoric Bantu-Khoisan Language Contact: A Cross-Disciplinary Approach." *Language Dynamics and Change* 7 (1): 1–46.
- Pelling, James N. 1966. *A Practical Ndebele Dictionary*. Daystar Publications.
- Pelling, J. N. 1971. *A Practical Ndebele Dictionary*. Longman.
- Pelling, James, and Pamela Pelling. 1974. *Lessons in Ndebele*. Longman Zimbabwe.
- Persson, J. A. 1932. *Outlines of Tswa Grammar with Practical Exercises*. Central Mission Press.
- Pietraszko, Joanna. 2017. "Inflectional Dependencies: A Study of Complex Verbal Expressions in Ndebele." PhD diss., University of Chicago.
- Poulos, George. 1990. *A Linguistic Analysis of Venda*. Via Afrika.
- Poulos, George, and Louis J. Louwrens. 1994. *A Linguistic Analysis of Northern Sotho*. Via Afrika.
- Poulos, George, and Christian T. Msimang. 1998. *A Linguistic Analysis of Zulu*. Via Afrika.
- Pretorius, Rigardt Samuel. 1997. "Auxiliary Verbs as a Subcategory of the Verb in Tswana." PhD diss., North-West University (South Africa).
- Pretorius, Rigardt, and Ansu Berg. 2019. "An LFG Analysis of Setswana Auxiliary Verb Phrases Indicating Tense." In *Proceedings of the LFG’19 Conference*, 233–250.
- Rycroft, D. K. 1981. *Concise SiSwati Dictionary: SiSwati–English/English–SiSwati*. J. L. van Schaik.
- Sandilands, Alexander. 1953. *Introduction to Tswana*. London: The London Missionary Society.
- Savić, Stefan. 2020. "Tense and Aspect in Xhosa." PhD diss., Rhodes University.
- Schaefer, Ronald P., and Francis O. Egbokhare. 2025. "Auxiliaries: Primary and Secondary in West Benue Congo and Beyond." Paper presented at Syntax and Semantics of Auxiliaries Workshop, Paris, June 2025.

- Sekhu, Hermina Mmapula. 1994. "Rank and Category Shifting in Tswana, with Special Reference to Conjunctions." MA thesis, Rand Afrikaans University, Johannesburg.
- Setshedi, Jacob Ediasefagwa. 1974. "The Auxiliary Verbs and the Deficient Verbs in Tswana." MA thesis, University of the North (South Africa).
- Skhosana, Philemon Buti. 2009. "The Linguistic Relationship Between Southern and Northern Ndebele." PhD diss., University of South Africa.
- Taljaard, P. C., J. N. Khumalo, and Sonja E. Bosch. 1991. *Handbook of Siswati*. J. L. van Schaik.
- Tshabe, Sonwabo Lungile, and Feziwe Martha Shoba. 2006. *The Greater Dictionary of IsiXhosa*. Vol. 1: A to J. University of Fort Hare.
- Van Baar, Theodorus M. 1997. *Phasal Polarity*. Foris Publications.
- van der Auwera, Johan, and Vladimir A. Plungian. 1998. "On Modality's Semantic Map." *Linguistic Typology* 2: 79–124.
- Van Warmelo, N. J. *Venda Dictionary: Tshivenda–English*. J. L. van Schaik.
- Ziervogel, D., and E. J. Mabuza. 1976. *A Grammar of the Swati Language*. Pretoria: J. L. van Schaik
- Ziervogel, Dirk, and P. C. Mokgokong. 1985. *Comprehensive Northern Sotho Dictionary: Northern Sotho Afrikaans/English*. J. L. van Schaik.
- Ziervogel, Dirk, P. J. Wentzel, and T. N. Makuya. 1972. *A Handbook of the Venda Language*. 2nd ed. University of South Africa.
- Ziervogel, Dirk. 1959. *A Grammar of Northern Transvaal Ndebele*. J. L. van Schaik.
- Zulu-English Dictionary. 2004–2025. <https://isizulu.net/>

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Appendix A: Table with functions and corresponding auxiliaries.

This table omits S51, which has only three auxiliaries in the dataset, and S41A, which does not have much documentation and is generally rather similar to – although not identical to!– S41).

Function	S10	S21	K21	S31	S32	S33	S407	S408	S41	S42	S43	S44	S53	S62	Sect.
Imperfective (various senses)	<i>gara</i> <i>garo</i> <i>pota</i> <i>ramba</i> <i>zivo</i> , <i>ziviro</i>	<i>dzula</i> <i>dzulela</i> <i>ɸwa</i>	<i>atisa</i> <i>na</i> <i>nze</i> <i>swala</i> <i>tola</i>	<i>(n)ntse</i> <i>aga</i> <i>agile</i> <i>atisa</i> <i>êta</i> <i>ɸêla</i> <i>ka</i> <i>na (le)</i> <i>nama</i> <i>nê</i> <i>nê</i> <i>nna</i> ; <i>(n)ntse</i> <i>nne</i> <i>nnela</i> <i>tlê</i> <i>tlhôla</i> <i>tsamaya</i> <i>tshela</i>	<i>dula</i> <i>hlwa</i> <i>tlwaetše</i>	<i>atisa</i> <i>be</i> <i>dulela</i> <i>êe</i> <i>ke</i> <i>ne</i> <i>nna</i> <i>nne</i> <i>ya</i> <i>ye</i>	<i>hlale</i> <i>hle</i> <i>nonde</i> <i>vame</i> <i>vane</i>	<i>hlalela</i> <i>hleli</i> <i>hlwe</i> , <i>hlwa</i> <i>nja</i> <i>nojwa</i> <i>phele</i> <i>se</i> <i>swe</i>	<i>dla</i> <i>hamba</i> <i>hlala</i> <i>khohisa</i> <i>mana</i> <i>sólókò</i> <i>ya</i>	<i>damane</i> <i>/damene</i> <i>dane</i> <i>de</i> <i>hambe</i> <i>hlale</i> <i>hlalele</i> <i>helzi</i> <i>khohisa</i> <i>libele</i> <i>lokhu</i> <i>(P&M;</i> <i>Doke)</i> ; <i>lo:</i> <i>(Doke)</i> <i>vama</i> <i>zinge</i>	<i>hambe</i> <i>hlala</i> <i>hle</i> <i>kadze</i> <i>solo</i> <i>ye</i>	<i>hlala</i> <i>hlezi</i>	<i>hámba</i> <i>phika</i> <i>tála</i> <i>támà</i> <i>tshámala</i> <i>/</i> <i>tshámela</i>	<i>ba</i> <i>na</i> <i>ra</i> <i>talela</i>	2.1
again	<i>wiro</i> , <i>wiro</i>	<i>dovha</i>	<i>buela</i> <i>ekeza</i> <i>kuta</i>	<i>boa/ boela</i>		<i>boela</i> <i>phêta</i>	<i>buye</i>	<i>buya</i>	<i>buya</i> <i>phinde</i>	<i>buye</i> <i>phinde</i>	<i>buye, buya</i> <i>phindze</i>	<i>buya</i> <i>phinde</i>	<i>èngeta</i> , <i>engete</i> <i>tlhèla</i>	<i>òwelela</i>	2.2
almost / about to	<i>karo</i>		<i>bata</i> <i>li</i>	<i>batla</i> <i>loetsa</i> <i>rata</i> <i>senka</i> <i>tsile</i>	<i>nyakile</i>	<i>batla</i> <i>ratla</i>	<i>pheze</i>	<i>phase</i> , <i>phoswe</i> , <i>phoso</i>	<i>phantsa</i> , <i>phantse</i>	<i>cishe</i> <i>funa</i> <i>phonse</i> , <i>phose</i> <i>thanda</i>	<i>cishe</i> <i>phose</i>	<i>phose</i>	<i>phòse</i>	<i>haja</i>	2.3
experiential	<i>ti</i>	<i>vhuya</i>		<i>kilê</i> , <i>ekilê</i>	<i>kilê</i>	<i>ka</i>	<i>khe</i>	<i>biyo</i> <i>kade</i> <i>khe</i>	<i>khe</i>	<i>ke</i>	<i>ke, se</i>	<i>ke</i>	<i>khànga</i>		2.4
already	<i>piŋgo</i>		<i>se</i>	<i>sêtsê</i> , <i>setswe</i>	<i>šetše</i>	<i>se</i>	<i>se</i> <i>sele</i>	<i>sele</i> <i>biyo</i>	<i>se</i> <i>sele</i>	<i>se</i>	<i>khatsi</i> <i>se</i>	<i>se</i>			2.5.1
still			<i>nze</i>	<i>ntse</i>				<i>se?</i>				<i>lokhe</i> , <i>lokhu</i>			2.5.2
not yet (under negation)	<i>ti</i>			<i>ise</i>	<i>ešo</i>			<i>biyo</i> <i>tjho</i>				<i>lokhe</i> , <i>lokhu?</i>			2.5.3
no longer				<i>tlhole</i>		<i>ntse</i>									2.5.4

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Function	S10	S21	K21	S31	S32	S33	S407	S408	S41	S42	S43	S44	S53	S62	Sect.
(under negation)															
until	<i>dzimara dakaró</i>		<i>be fetela te</i>	<i>fiŋhêla tla tsamaya</i>	<i>tlê</i>		<i>ze</i>	<i>te</i>	<i>de</i>	<i>ze</i>	<i>dzine, dzimane, dzimate, ndzibane, ndzimate te za</i>	<i>ze</i>	<i>kála, ká kóndza</i>	<i>ate</i>	3.1
eventually				<i>fêla, felela nama</i>	<i>bea</i>	<i>ba</i>	<i>ze</i>	<i>te</i>	<i>hla, hle</i>						3.10
in the end / at last / end up	<i>dzimara dakaró</i>								<i>phetha</i>						3.11
after / then consecutive	<i>bva ti wana (šiko)</i>	<i>kona namba</i>		<i>ba feta fiŋha se-na, sena tla tlê</i>	<i>bile nama napa šala</i>		<i>fike sale suke</i>	<i>fike sala? suke, suka ri?</i>	<i>andula khova sala za</i>	<i>buye nce qede sale suke thi</i>	<i>fika, efika suka, esuka</i>				3.2
subsequent contradictory process									<i>suke</i>						3.3
as soon as	<i>šiko mba?</i>		<i>mana</i>			<i>hana</i>				<i>nele (anele?)</i>		<i>anela nela hle?</i>	<i>jegela?</i>		3.4
furthermore		<i>namba</i>		<i>bile</i>		<i>eketsa</i>		<i>nambha</i>	<i>qokélà ye</i>						3.5
conditional: if / in the event of	<i>(ti)</i>			<i>(re)</i>				<i>(ri)</i>		<i>(thi)</i>	<i>(hleze) (na)</i>				3.6
first / before / begin	<i>taŋga</i>					<i>fiŋha</i>	<i>phanga qala</i>		<i>vela, vele</i>	<i>fike gale qale vele</i>	<i>cale</i>	<i>qala</i>			3.7
meanwhile	<i>sano</i>			<i>nama sala</i>				<i>jwa</i>		<i>feta sala</i>			<i>pfâ</i>		3.8
simultaneous / while			<i>li</i>	<i>tla eta?</i>							<i>tsi</i>				3.9
relative tense	<i>ŋge, ŋga</i>		<i>li</i>												4.1

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Function	S10	S21	K21	S31	S32	S33	S407	S408	S41	S42	S43	S44	S53	S62	Sect.
(besides 'be(come)')															
future (incomplete list)					<i>tla</i>				<i>ya</i>						4.2
future, near / soon / immediately	<i>bva?</i> <i>fuma</i> <i>mba?</i>	<i>ɬuwa</i>	<i>tuha</i>	<i>tloga</i> <i>tsamaela</i> <i>ya</i>	<i>tloga</i>									<i>jegela?</i>	4.3
past, immediate / recent				<i>ilê</i> <i>tswa</i>	<i>tšwa</i>		<i>sanda</i>	<i>sanda</i>	<i>sandula</i>	<i>sanda</i>		<i>sanda</i>			4.4
past, distant / long ago	<i>ɱguwa</i>			<i>sa-le</i>						<i>kade</i>	<i>kadze</i>				4.5
the last time				<i>sa-le</i>					<i>ggibela</i>						4.6
early	<i>fumo</i>			<i>phakêla</i>		<i>tsoha</i>									4.7
past, hodiernal				<i>phaketse</i> <i>tsogile</i>											4.7.1
future, crastinal				<i>phakêla</i> <i>tsoga</i>											4.7.2
at night		<i>lala</i>	<i>lobala</i>	<i>lala</i>	<i>lala</i>	<i>lala</i>									4.8
past, hesternal				<i>letse</i>											4.8.1
future, hodiernal				<i>lala</i>											4.8.2
spend / during the day	<i>wiro</i> , <i>wiriro</i>	<i>ɬwela</i>		<i>tlhotse</i> <i>(tlhola)</i>		<i>hlôla</i>									4.9
imperative, negative / must not	<i>rega</i>						<i>musa</i>		<i>musa</i>	<i>musa</i>	<i>musa</i>	<i>musa</i>	<i>tshuki</i>		5.1.2
possibility, ability			<i>kona</i>	<i>itse</i> <i>kgôna</i>	<i>kgona</i> <i>tseba</i>	<i>kgona</i>	<i>kghona</i> <i>kwazi</i>	<i>kxhona</i> <i>wati</i>	<i>kwazi</i> <i>nak(h)o</i>	<i>kwazi</i>	<i>kwati</i>		<i>tiva</i>	<i>koja</i>	5.2.1
possibility, epistemic / probability	<i>karo</i>		<i>swana</i>	<i>bô</i> <i>e kete, ekete</i> <i>ka-tla</i>	<i>ka</i>				<i>fana</i> <i>nga+ba</i> <i>ngahle</i>	<i>ngahle</i> <i>ngase</i>			<i>tála</i> <i>tshùkà</i>		5.2.2
apparently				<i>kete</i>											5.2.3
possibility, bouletic / wish									<i>nga</i>						5.2.4
possibility, deontic				<i>mma</i> <i>mmê</i>											5.2.5
necessity			<i>lukela</i> <i>swanela</i>	<i>na (le)</i> <i>tšhwanêla</i>	<i>swanetše</i> <i>tamegile</i>	<i>hloka</i> <i>lokela</i> <i>tlameh</i> <i>a</i> <i>tshwan</i> <i>ela</i>	<i>fanele</i> <i>funeka</i> <i>fuze</i> <i>mele</i>	<i>fanele</i> <i>funeka</i>	<i>fànèlè</i> <i>funeka</i> <i>mel(w)e</i> <i>nge</i>	<i>dinga</i> <i>fanele</i> <i>mele;</i> <i>melwe</i> <i>sale</i>	<i>fanele</i> <i>funeka</i> <i>sale</i> <i>vele</i>	<i>sake</i>	<i>boheka</i>	<i>fela</i> <i>yela</i>	5.2.6

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Function	S10	S21	K21	S31	S32	S33	S407	S408	S41	S42	S43	S44	S53	S62	Sect.
intend to								<i>jamisela</i>		<i>qonde zingela, zingele zondelele</i>	<i>condze</i>				5.2.7
insist on / persist											<i>jinge?</i>				5.2.8
negation				<i>bisa gana nke</i>	<i>gana</i>										6.1
never, future (some forms involve additional morphology)				<i>kitla, ketla lala na (le) +negation</i>			<i>ngekhe ngeze</i>		<i>soze</i>	<i>ngeke soze</i>	<i>ngete, (ka)(SC)te →kasite, asite, kete, ete sete</i>	<i>ngeke ngeze, ngaze soze</i>			6.2.1
never, past / experiential (some forms involve additional morphology)				<i>ke</i>			<i>khange</i>		<i>zange</i>				<i>zanga</i>		6.2.2
never (general / unspecified) (some forms involve additional morphology)	<i>fa</i>		<i>ke nne + neg.</i>				<i>zange</i>	<i>khange táke, tékhe te tjhokhe</i>	<i>khange (etc.)</i>	<i>bange bonange bonaze kaze vange zange</i>	<i>mange ngeke</i>	<i>zanga, zange</i>	<i>kanga zà</i>		6.2.3
mirative (suddenly, by chance, etc.)	<i>yerekana</i>		<i>kile suha, suhana</i>	<i>nama, namilê tshogana</i>		<i>tlôha tshoha (tšôha)</i>	<i>thuke</i>	<i>thuke</i>	<i>hle</i>		<i>ze</i>		<i>tshika</i>		7.1
quickly / soon	<i>cimbidzo</i>	<i>javhany a</i>	<i>pakisa</i>			<i>phakis a</i>		<i>tjhwe, tjhe</i>	<i>behle khawulez a tshetsha</i>	<i>sheshe</i>	<i>phange sheshe, shesha</i>		<i>hàtla</i>		7.2
do the right thing		<i>ita shuma</i>							<i>kholisa</i>						7.3
do well	<i>natso, nyatso</i>					<i>tila</i>				<i>ive</i>					7.4
do in vain / fail		<i>ti</i>				<i>tswa tswats wa</i>			<i>fumana, fana</i>		<i>batse sa</i>				7.5

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Function	S10	S21	K21	S31	S32	S33	S407	S408	S41	S42	S43	S44	S53	S62	Sect.
nevertheless						<i>mpa</i>				<i>dlule</i>			<i>jinga</i>		7.6
rather / preferably	<i>iša</i>			<i>mpa</i>				<i>swe</i>		<i>ngamane</i>					7.7
just / merely	<i>bangō</i>			<i>fēla</i>	<i>fēla ke (kê)</i>	<i>anela fela?</i>	<i>je mane phele vele</i>	<i>phela</i>	<i>fana fumana suka vela ye</i>	<i>anela, anele, (nele) hle / se mane ngake phike simze suke vele</i>	<i>fane mane</i>	<i>mane suke</i>			7.8
emphatic / certainly				<i>nta</i>		<i>hla</i>				<i>vele</i>		<i>vele</i>			7.9
extremely / excessively / completely	<i>išo nyanyo</i>								<i>betha shiya tsho</i>	<i>shaya, shaye</i>					7.10
at the right time				<i>jafilê</i>		<i>nyafa phaka</i>									7.11
in s.o.'s absence	<i>sara</i>			<i>sala</i>											7.11.1
do further						<i>eketsa</i>									7.12.1
for that matter				<i>tswa</i>											7.12.10
what else?								<i>swa</i>							7.12.11
whatever, whenever									<i>sukuba</i>						7.12.12
although	<i>nyango</i>			<i>((e)ntswa?)</i>											7.12.13
at the wrong time						<i>haba?</i>									7.12.2
repetition (undesirable)									<i>phikela</i>						7.12.3
a little										<i>thi</i>					7.12.4
in desperation						<i>tena</i>									7.12.5
be inclined to											<i>cinele</i>				7.12.6
contrary to expectation or right usage	<i>dzoka</i>														7.12.7
approximately				<i>nê</i>											7.12.8
always ready to									<i>hlalele, hlelele</i>						7.12.9

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Appendix B: Data sources

Language	References
Central Shona [mostly Zezuru] (S10/S12, sna)	Fortune (1955)
Tshivenda (S21, ven)	Makwarela (1992); Netshisaulu et al. (2021); Poulos (1990); Ziervogel et al. (1972)
Silosi (K21, loz)	Burger (1960); Fortune (1977); Gowlett (1967); Jalla (1917, 1936, 1982); O’Sullivan (1993)
Setswana (S31, tsn)	Cole (1955); Creissels (forthcoming); Pretorius and Berg (2019); Pretorius (1997); Setshedi (1974)
Sesotho sa Leboa [N. Sotho] (S32, nso)	Kriel (1976); Lombard et al. (1985); Mphasha et al. (2021); Poulos and Louwrens (1994); Ziervogel and Mokgokong (1985)
Sesotho [S. Sotho] (S33, sot)	Chaphole (1988); Doke and Mofokeng (1957)
isiNdebele [S. Ndebele] (S407, nbl)	Crane, Lubambo et al. (2025); Iziko lesiHlathululi-mezwi sesiNdebele (2006)
Sindebele [N. Ndebele] (S408, no ISO)	Skhosana (2009); Ziervogel (1959); author’s fieldnotes
isiXhosa (S41, xho)	Crane et al. (2024); Crane, Savić et al. 2025); du Plessis and Visser (1992); Oosthuysen (2016); Tshabe and Shoba (2006); Mini et al. (2003); Pahl et al. (1989)
isiMpondo (S41a, no ISO)	Cantrell (1946)
isiZulu (S42, zul)	Canonici (1995); Doke and Vilakazi (1972); Doke (1992 [1927]); https://isizulu.net ; Mkhathswa (1991); Poulos and Msimang (1998)
siSwati (S43, ssw)	Gibson and Marten (2016); Gibson and Riedel (2021); Rycroft (1981); Taljaard et al. (1991)
Sindebele [Ndebele of Zimbabwe] (S44, nde)	Pelling (1966, 1971); Pelling and Pelling (1974); Pietraszko (2017)
Xitswa (S51, tsc)	Persson (1932)
Xitsonga (S53, tso)	Baumbach (1987); Crane, Lubambo et al. (2025); Cuenod (1967); Lee and Hlungwani (2015)
Gitonga (S62, toh)	Lanham (1955)