Chapter 7

Reconstructable main clause functions of Proto-Bantu applicative *-ɪd

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This chapter presents evidence in favour of reconstructing at least three main clause-level functions of the Proto-Bantu (PB) applicative *-ɪd: (i) the introduction of a semantic role which cannot be expressed otherwise with an underived verb root; (ii) the focalisation of a constituent with a Location-related semantic role (most commonly General Location of the event); and (iii) the addition of aspectual and semantic nuances of completeness, iterativity or thoroughness to the meaning of the verb root. With respect to the syntactic function in (i) evidence is provided in favour of the hypothesis that PB *-ɪd introduced a Spatial/Goal or Location argument and that this function later extended to Human Goals and Beneficiaries. Finally, the chapter establishes possible diachronic relations among the three reconstructed functions of *-ɪd.

1 Introduction

This chapter deals with the reconstructable main clause functions of the highly polyfunctional and semantically underspecified Proto-Bantu (PB) applicative suffix *-ɪd.[1] Although virtually all Bantu grammars and other scholarly work consider the applicative synchronically and diachronically first and foremost as a syntactic valence-increasing device, I argue that there are minimally three main

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[1]Most of this chapter is an updated and revised version of the chapter titled "Historical origin(s) and function(s) of the PB applicative *-ɪd" in Pacchiarotti (2020). I am much indebted to Thilo C. Schadeberg who made one of his unpublished manuscripts on the PB applicative suffix electronically available to me. His manuscript greatly helped me develop the ideas presented here.

clause functions of *-ɪd which can be reconstructed to PB: (i) introducing a semantic role which could not otherwise be expressed with an underived verb root; (ii) narrow-focusing a constituent which usually has a Location-related semantic role; and (iii) adding semantic nuances such as completeness, iterativity or thoroughness to the meaning of the verb root. My evidence comes from the synchronic distribution of these three functions and from attested directions of change within and outside Africa. I propose that one single PB *-ɪd suffix carried out these three functions. However, the possibility that two or more originally distinct verbal derivational suffixes ended up as *-ɪd in PB, due to phonological mergers (see Hyman 2007), can by no means be ruled out.

Second, with respect to the function in (i), I argue along the lines of Voeltz (1977) and Schadeberg (2003) and contra Trithart (1983) that *-ɪd had both a Spatial Goal and Beneficiary function in PB or further back. Specifically, I offer evidence for the fact that *-ɪd originally introduced a Spatial Goal argument and was only later extended to Human Goals, though still at the PB stage. Given that current scholarship believes that it is highly likely that minimally some Niger-Congo (NC) node higher than Benue-Congo had a system of so-called "extensions" (i.e. verbal derivational suffixes) (Hyman 2007; 2011; 2014; 2018; Blench (2022 [this volume])), these new historical insights on the original functions of PB *-ɪd are immediately relevant not only for the reconstruction of PB but also for higher nodes within NC.

In line with these objectives, this chapter is organised as follows. In §2, I present the synchronic construction types involving *-ɪd. In §3, I discuss two attempts at reconstructing the form(s) and function(s) of an applicative derivational suffix in PB and/or further back in NC (Voeltz 1977, Trithart 1983). Both attempts concur in reconstructing the applicative as a valence-increasing syntactic device, but they diverge in the peripheral semantic role that it would have introduced. In §4, I argue in favour of an original Spatial Goal or Location-oriented function of *-ɪd and against an original Beneficiary function as proposed by Trithart (1983). My argumentation assumes that one of the functions of PB *-ɪd was to introduce a Spatial Goal or a General Location participant to the argument structure of a root. In §5, I assess the synchronic distribution of the selected synchronic construction types laid out in §2 and argue that their corresponding functions should be reconstructed (minimally) to PB. In §5.1, I show the underlying conceptual relation (and hence diachronic link) between functions (i) and (iii) mentioned above. In §5.2, I do the same for functions (i) and (ii) mentioned above. In §5.3, I propose a diachronic path that could account for the conceptual and diachronic relatedness of the three functions. §6 concludes this chapter.

Because an internal classification of Bantu languages based on shared phonological and morphological innovations is lacking, in discussing the synchronic distribution of applicative constructions expressing the functions in (i), (ii), and (iii) in §5, I resort to the latest and most comprehensive lexicon-based Bantu phylogeny, i.e. Grollemund et al. (2015). Thus, by PB, I mean the ancestral language spoken at node 0 or 1 in their phylogeny, and all capitalised uses of cardinal directions refer to their subgroupings (e.g. Eastern, Central-Western, etc.).

2 Functions of widespread main clause construction types involving **-ɪd*

Based on novel data and on previous works on **-ɪd* (see especially Trithart 1983, but also Rugemalira 1993; Kimenyi 1995; Mabugu 2001; Creissels 2004; Jerro 2016), Pacchiarotti (2020) argues that es of **-ɪd* in modern Bantu languages can participate minimally in five structurally and functionally distinct constructions, called, for lack of better names, Types A, B, C, D and E. The structure and function(s) of each construction type are summarised in Appendix A. I take some of these structures and their corresponding functions as a synchronic point of departure for the diachronic considerations in the remainder of this chapter. For a more in-depth discussion of each type, see Pacchiarotti (2020).

In Type A applicative constructions, the applicative morpheme expands the argument structure of the verb root by introducing an obligatorily present applied phrase which could not otherwise be expressed with that root.[2] This expansion may result in a clear-cut, indisputable increase in the syntactic valence of the derived verb stem, but need not to. Roots participating in this construction type do not "subcategorise" for a particular semantic role and the sole morphological device to express such semantic role is applicative morphology. Within any given language, the semantic roles for which an applicative is required are a lexical property of individual verb roots.[3] Thus, the semantic roles that can be mapped onto the applied phrase vary on a root-by-root and language-by-language basis

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[2]I use the term "applied phrase" to refer to the morphosyntactic entity introduced or semantically/pragmatically manipulated by the applicative without any specification of its syntactic category or argumenthood status. This means that, on a language-specific basis, an applied phrase could be an adjunct phrase (infinitive complements and clausal adjuncts; see Hawkinson & Hyman 1974; Harford 1993), a prepositional phrase, a noun phrase marked by a locative noun class marker, or an unmarked noun phrase with (some) object properties.

[3]By "lexical" in this context I mean the properties of a linguistic unit which are memorised or cognitively stored in long-term memory, such as form, meaning, argument structure, and restrictions on morphological, syntactic, and pragmatic use.

but never include Agent or Patient. This mapping depends heavily on the lexical meaning of the verb root, the meaning of other constituents present in the clause, and on the communicative intention of the speaker (Stapleton 1903; Voeltz 1977; Schaefer 1985; Bresnan & Moshi 1990; du Plessis & Visser 1992; Rugemalira 1993; Rapold 1997; Mabugu 2001; Creissels 2004; Thwala 2006; Cann & Mabugu 2007; Seidel 2008; Jerro 2016; Sibanda 2016, among others). For instance, in the Eastern Bantu language Nyambo JE21, the root *gamb* 'speak' in (1) requires applicative derivation to co-occur with a locative phrase expressing General Location in a main clause.[4]

(1)   Nyambo JE21 (Rugemalira 1993: 71)

    a.   *gamb-ir-á*   *omu-nju*
        speak-APPL-FV LOC18-house
        'speak in the house'

    b.   * *gamb-á* *omu-nju*
        speak-FV LOC18-house
        (intended meaning: 'speak in the house')

In Type B constructions, as in Mbuun B87 in (2a), the applicative expands the root's argument structure by introducing an obligatorily present applied phrase expressing a semantic role which could have been syntactically expressed as an optional oblique, as in (2b).[5]

(2)   Mbuun B87 (Bostoen & Mundeke 2011: 187)

    a.   *o-á-kónné*   *máám ó-te*
        s3:1-PRS.PROG-plant.APPL mother CL3-tree
        'He is planting a tree for my mother.'

    b.   *o-á-kón*   *ó-te*   *óŋgírá máám*
        s3:1-PRS.PROG-plant CL3-tree for   mother
        'He is planting a tree for my mother.'

Unlike in Type A, in Type B, the function of applicative derivation is not purely syntactic. The fact that the free translation of alternations such as (2a) and (2b) is almost always the same in scholarly works might be misleading. Since there

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[4]General Location in this chapter means the location where the event takes place.

[5]Bostoen & Mundeke (2011: 182) observe that the Mbuun reflex of the vowel of PB *-ɪd* is /e/. The reflex of its consonant involves metathesis and assimilation to the root final consonant of the verb root, e.g. *ka-kón* 'to plant' > *ka-kónne* 'to plant-APPL', *ka-sɪs* 'to leave' > *ka-sɪsse* 'to leave-APPL'.

is an alternative way to express a given semantic role, with a given root, in a given construction, in a given language, there might be a semantic or discourse-related difference between the construction with and without the applicative. The applicative construction can imply something about the added semantic role that the construction with the root did not imply (Mabugu 2001), or the optional applicative construction is used when the participant expressed by the applied phrase is a discourse topic (Trithart 1983: 181; Rapold 1997; Peterson 2007). These functions are seldom described or investigated in Bantu literature.

In Type C constructions, the applicative suffix expands the argument structure of the verb root by introducing an obligatorily present applied phrase which could be optionally expressed in the construction with just the root. Unlike in Type B, based on data currently available, the obligatory present applied phrase in Type C usually has a Location-related semantic role, very often General Location, indicating where the event described by the verb root takes place. Besides introducing an obligatorily present applied phrase, the applicative suffix in Type C performs semantic or pragmatic functions on the applied phrase alone or on the whole clausal construction which are different from those observed for Type B. In Type C, the applicative can: (i) place the applied phrase under some kind of narrow focus; (ii) change the "orientation" of the Location applied phrase;[6] or (iii) indicate that the action described by the root occurs habitually at a certain location. The structure that expresses these three functions is identical (see Appendix A) and this is why I group them together in Pacchiarotti (2020). Crucially, only language-specific Bantu roots which do *not* require an applicative to express General Location within a main clause can participate in Type C applicative constructions. For reasons of space and for the relevance they bear on the present chapter, I only illustrate functions (i) and (ii) for Type C. The narrow-focusing ability of the applicative is illustrated in (3b). In the Fwe sentence in (3a), everything is new information, the locative phrase expressing General Location is not syntactically obligatory, and the clause could be an answer to "What do they do?" In (3b), the presence of applicative derivation on the verb makes the clause

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[6]The term "orientation" or "argument orientation" originates in formal semantics (Keenan & Faltz 1985; Nam 1995; Kracht 2002) and refers to the semantic effects of some English locative modifiers in combination with different types of predicate. To give an example, if the English sentence *John saw Mary in the park* is true, then *John saw Mary* and *Mary was in the park* are also true. However, *John was in the park* does not logically or necessarily follow as a true statement from *John saw Mary in the park* – John could have been across the street in a coffee shop when he saw Mary, and the sentence would still be true (see Keenan & Faltz 1985: 158ff). This means that the orientation of the locative modifier *in the park* in the English sentence *John saw Mary in the park* is towards the direct object NP but not necessarily towards the subject NP.

a more felicitous answer to the question "Where do they build?" Note that the presence of the applicative makes the locative phrase obligatory and the target of new information focus.

(3) Fwe K402 (Hilde Gunnink, p.c.)

   a. *βàʒá:kà kùmbárì yórwîʒì.*
       βa-ʒá:k-a   (ku-N-βári   í-o-ru-íʒi)
       s3:2-build-fv cl17-cl9-near pa9.conn-cl11-river
       'They build (close to the river).'

   b. *βàʒá:kìrà kùmbárì yórwîʒì.*
       βa-ʒa:k-ir-á   ku-N-βári   í-o-ru-íʒi
       s3:2-build-appl-fv cl17-cl9-near pa9-conn-cl11-river
       'They build close to the river.'

In some Bantu languages, applicative morphology can be used to widen the orientation of a locative phrase from involving the object of a transitive verb root to also involving the subject of that transitive verb root. Trithart (1977) and Hyman et al. (1980) report this phenomenon in Haya JE22. Consider (4a) vs. (4b).

(4) Haya JE22 (Hyman et al. 1980: 578)

   a. *ŋ-ka-bón-a   kat' ómú-nju*
       I-pst-see-fv Kato loc18-house
       'I saw Kato [while he was] in the house.'

   b. *ŋ-ka-bón-el-a   kat' ómú-nju*
       I-pst-see-appl-fv Kato loc18-house
       'I saw Kato [while I was] in the house.'[7]

Hyman et al. (1980) argue that in (4a) the locative phrase 'in the house' is part of the verb complement (i.e. it modifies 'Kato'), while in (4b) 'in the house' is outside of the verb complement and relates to the entire assertion, including the subject's relationship to the event. In other words, once the applicative is present in the construction, the locative phrase expressing General Location has scope over the entire event (see also Grégoire 1998).

In Type D constructions, the applicative suffix does not introduce an applied phrase. Instead, it indicates that the action described by the root is performed

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[7]The apostrophe in (4a) and (4b) means that the final vowel of the word *Kato* elides when a following word starts with a vowel, as *omunyu* does here.

to completion, or that the action is performed continuously, with intensity, persistence, excess, or repetition, among other qualities, as in (5). The number of applicative suffixes used to convey these meanings in North Boma B82 depends on the syllable shape: CVC shapes require one suffix, while C shapes require two.[8]

(5)   North Boma B82 (Stappers 1986: 41)

laʁ-a	'leave'	*liʁ-il-e*	'leave earnestly'
bɔm-a	'kill'	*bɔm-ɛŋ-ɛ*	'kill everything'
l-ɛ́	'eat'	*l-íl-il-ɛ́*	'eat up everything'

Finally, Type E pseudo-applicative constructions are irregular, non-productive results of applicative derivation. In this construction type, lexicalised applicativised verb stems (usually displaying one or two applicative derivations) do not introduce an applied phrase to the argument structure of the verb root from which they are synchronically or historically derived. Applicative suffixes present on the verb stem also do not perform semantic or pragmatic functions like those described for Types B, C, or D. As an example, consider the Tswana S31 applicative stem *lalel* [lál-ɛ́l] 'have dinner' which synchronically looks as derived from *lal* [lál] 'lie down, stay overnight, spend the night'.[9] As shown in (6a), *lal* is syntactically intransitive; *lalel* in (6b) is also syntactically intransitive, as the thing being eaten is optionally introduced by an instrumental preposition.

(6)   Tswana S31 (Creissels 1999: 148–149)

    a. *Re tlaa lala mo nageng.*
        rì-tɬàà-lál-à   (mó   nàχé-ŋ̀)
        S1PL-FUT-lie_down-FV LOC18 CL9.bush-LOC
        'We will lie down/spend the night/sleep (in the bush).'

    b. *Re tlaa lalela ka dikgobe.*
        rì-tɬàà-lálɛ́l-à   (ká dí-qʰɔ̀:bɛ̀)
        S1PL-FUT-have_dinner-FV INS CL10-beans_and_maize
        'We will have dinner (with beans and maize).'

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[8]This is true not only of North Boma, but of Bantu more generally. In some languages up to three applicative suffixes are required, depending on the phonotactics of the verb root, cf. e.g. Sharman (1963: 67–69) for Bemba M42. This suggests that Guthrie's (1967–71) *-ɪdɪd 'persistive' (Comparative Series 2189) should be amended to *-ɪd 'persistive'. Very likely, Guthrie's "persistive" label could be replaced by "applicative" (see §5.1).

[9]The pseudo-applicative *lalel* is the regular reflex of PB *dáadɪd 'have supper, look after, brood', present in zones J, L, M, and S according to BLR3 (Bastin et al. 2002), and derived from PB *dáad 'lie down, sleep, spend the night', attested in all Bantu zones except P. The applicative verb stem likely already existed in some higher nodes within Bantu.

In the remainder of this chapter I focus on Types A, C and D, because Type B constructions likely developed in languages which came to have other ways of expressing a given semantic role, for instance through prepositions, and Type E are the "death point" of productive applicative morphology. These three construction types express functions (i), (ii), and (iii) introduced in §1, respectively. From a historical perspective, there are at least three possibilities for how they might be related: (a) Types A, C, and D are not diachronically related (or only some are, e.g. Type A and Type D but not Type C), meaning that there would have been two or more morphemes which ended up looking like *-ɪd* through phonological mergers in PB or further back (see Hyman 2007); (b) there is a conceptual link between Types A, C, and D so that these constructions are diachronically related, i.e. *-ɪd* originally expressed one or more of the functions of these constructions from which others evolved by the PB stage or further back; and (c) PB *-ɪd* had only one function (i.e. either purely syntactic as in Type A, semantic as in Type D, or discourse-related as in Type C) and all synchronically attested construction types are independent, parallel innovations. All these possibilities will be assessed in §5. In §3, I briefly discuss the most elaborate attempts (Voeltz 1977; Trithart 1983) at reconstructing a valence-related applicative suffix at some higher node of Niger-Congo (i.e. Type A) and offer new insights on the semantic role it originally introduced.

3 Reconstructions of PB *-ɪd* and Proto-Niger-Congo *-de* as a syntactic device

Despite the difficulties involved in reconstructing verbal derivational suffixes in the NC phylum (Hyman 2007; 2014), current scholarship argues that there are unmistakable cognate suffixes going back to some earlier NC node which would include minimally Benue-Congo (of which Bantu is a prominent member), Kwa, and Gur-Adamawa (Hyman 2007; 2011; 2014; 2018; Blench (2022 [this volume])). Most scholars (see Hyman 2014 for details, Blench (2022 [this volume])) believe that the synchronically richer systems of verb extensions (e.g. in Bantoid and Central Nigerian within Benue-Congo, Gur, and Atlantic) represent the original situation of the proto-language, if they are not retentions from Proto-Niger-Congo (PNC).

Of all main clause affirmative functions of PB *-ɪd* in §2 and illustrated in Appendix A, the syntactic function of Type A constructions is believed to have been

the original function in PB or some higher node within NC.[10] In general, most scholars agree that *-ɪd* in PB (and possibly further back in NC) had a valence-increasing function in that it added a participant to the argument structure of a verb root. Authors differ, however, in what the original semantic role of the applied phrase might have been. Some (e.g. Trithart 1983) argue that it was a Beneficiary, others that it was more likely a Location or a Spatial Goal (e.g. Endemann 1876; van Eeden 1956; Kähler-Meyer 1966; Schadeberg 2003; Hyman 2007). Voeltz (1977), the first who attempted to reconstruct verbal extensions for what used to be known as Niger-Kordofanian,[11] believes that the phrase introduced by the applied suffix *-de* could originally be either Beneficiary or Location/Spatial Goal. Specifically, he argues:

> APPLIED […] is a cover term for a variety of semantic relationships also referred to as DIRECTIVE, BENEFACTIVE, APPLICATIVE, RELATIVE, PREPOSITIONAL, and others. Each of these constitutes a correct label for one of a number of semantic forces [the] applied [morpheme] "adds" to a given verb base […] The extent to which any or all of these notions were present in Niger-Congo-Kordofanian is unclear from the semantic data available on the individual languages outside of the Bantu domain. We feel safe in conjecturing that the APPLIED had minimally the benefactive *do for someone, on someone's behalf* reading and the directive reading of *move toward, to.* (Voeltz 1977: 59–60, capitalisation and italics in the original)

Like Voeltz (1977), Trithart (1983) attempts to establish Niger-Kordofanian cognates, but only of Bantu applicative *-ɪd* and with different criteria for the establishment of cognacy than those of Voeltz (1977) (see Pacchiarotti 2020: 264 for discussion). Trithart (1983: 155) claims that the indirective function of *-ɪd* appears throughout Bantu and should be reconstructed for PB; by "indirective" she means animate (usually human) NPs with the semantic roles of Beneficiary, Maleficiary, Recipient, Ethical Dative, and (certain instances of) Possessor. After reviewing all other functions that she finds for *-ɪd*, Trithart (1983: 198–199) concludes: "The earliest function of the applied affix was that of a marker for benefactive NPs.

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[10]An anonymous reviewer suggests that the emphasis on the syntactic function of *-ɪd* is probably just a reflection of how the field of linguistics developed since the 1960s, i.e. with a predominance of syntax over semantics.

[11]At the time Voeltz was writing, NC and Kordofanian were considered sister branches of a higher node called Niger-Kordofanian. Today Kordofanian or Kordofan is at best seen as a geographic group and its affiliation to NC is doubtful, at least for some of its members (see Hammarström et al. 2018).

Throughout Niger-Kordofanian, up to Proto-Bantu, this is the only function consistently exemplified. In Proto-Bantu, the affix began to spread to a variety of additional semantic relations: indirective, motive, locative, and time."[12] Trithart (1983) follows Heine's (1972/73) Bantu internal genetic classification and model of expansion. Before the breakup of the proto-language, Trithart (1983) posits the following steps for the functional development of *-ɪd*: benefactive > recipient > locative > (adverbs of) time.

Trithart (1983) does not provide specific evidence for this proposed directionality of change, except perhaps semantic plausibility. As we will see below, attested directions of change in other languages do not seem to support this directionality. Through different waves of migration the uses of the applicative suffix broaden and the applicative develops discourse functions (see Type C in §2). The path of changes further develops as follows: benefactive > recipient > locative > (adverbs of) time > (adverbs of) manner > instrumental.

Unlike Trithart (1983), other scholars argue that PB *-ɪd* originally added a Spatial Goal or a Location to the argument structure of its verb root (Endemann 1876; van Eeden 1956; Kähler-Meyer 1966; Schadeberg 2003; Hyman 2007). Schadeberg's view stands out among these in that he argues that original function of the applicative "was to *tie* the nonpatient complement *closer* to the verb. The first of such nonpatient complements may well have been locative ones, from which the other roles of the dative object have evolved" (Schadeberg 2003: 74, my emphasis). An original Spatial Goal function finds support in analyses of applicative functions (mostly Types A, B, and C) in individual Bantu languages, such as Shona S10 (Cann & Mabugu 2007) and Luba-Kasai L31a (De Kind & Bostoen 2012).

4 New insights on the original function of *-ɪd* as a syntactic device

In this section, I offer some degree of evidence in support of Schadeberg's (2003) hypothesis, and – to some extent – also Voeltz's (1977), although the latter does not argue for direction of change. Based on the synchronic behaviour of Type A constructions and attested directions of change, I argue in favour of an original Spatial Goal or Location-oriented function of *-ɪd* and against an original Beneficiary function as proposed by Trithart (1983).

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[12]Trithart (1983) does acknowledge, however, that not finding a function other than benefactive listed in the sources for a given branch suggests that functions other than benefactive are absent for a given affix, but obviously there is no guarantee that this is in fact the case.

First, in the literature on grammaticalisation and pathways of semantic change (among others Heine et al. 1993; Heine & Kuteva 2002; Givón 2013), no attested paths of change go from benefactive to allative (i.e. Spatial Goal) or from dative (i.e. Animate Goal) to allative; but many go from allative to benefactive. The extension from allative to dative to benefactive is also a major diachronic trend relevant to language evolution, where concrete words become more abstract (Givón 2015: 174; e.g. go to a place > do something for the benefit of someone). According to Heine et al. (1993: 12), allative markers (case marker or adposition) gave rise to purpose and reason markers in Bodic languages (Tibeto-Kanauri), Rama (Chibchan), and To'aba'ita (Austronesian), and eventually to infinitive markers (e.g. German, English, and Indo-European more generally).[13] The development allative > dative > benefactive (> causative) is reported by Endresen (1994) for Fula (Atlantic). In addition, Heine & Kuteva (2002) report the following grammaticalisations of allative: allative > dative (including benefactives) (Tamil, Lezgian, several Indo-European languages); allative > purpose (Imonda, Albanian, Lezgian, Basque); and allative > temporal (German, Albanian, Lezgian). The development of allative into a benefactive is also reported by Givón (2013) who proposes that ethical dative markers arose (apparently) independently in several languages (Biblical and Modern Hebrew, Aramaic, and other Semitic languages, Spanish, Polish, and perhaps Akkadian, among others) through a grammaticalisation chain such as allative > dative > benefactive > (reflexive-benefactive) > (ethical dative).[14]

Second, two facts stand out when looking at the function of Type A constructions, that is, those that introduce an applied phrase with a semantic role that could not be expressed in the construction with only the verb root. First, there is remarkable language-specific, root-specific variation and idiosyncrasy as to

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[13]Heine & Kuteva (2002: 37) add complementiser to the end of the chain of grammaticalisation allative > purpose/reason > infinitive > complementiser – with attested cases in Indo-European (Latin, French) and Maori. Perhaps this path of change could also explain why the applicative in Bantu may appear on verbs in *why*, *how* and other subordinate clauses (see Trithart 1983: 148).

[14]Heine & Kuteva (2002: 54) also report instances, however, of benefactive markers developing into dative markers. For instance, in Ewe (Kwa, Volta Congo), the verb 'give' developed into a benefactive marker and further into a dative marker (e.g. *He said it to me*). Further, benefactive markers can also develop into purpose markers (Bulgarian, English, Yaqui, Rapa Nui). Heine & Kuteva (2002: 54) observe that in this case, grammaticalisation appears to be achieved by context expansion, where benefactive adpositions are extended from human to inanimate complements. However, they argue that more diachronic data is needed to substantiate this claim of directionality. Heine et al. (1993) and Heine & Kuteva (2002) do not report any cases where a benefactive marker (case marker or adposition) develops into an allative marker, that is, into a marker for Spatial Goals.

whether a verb root requires the applicative to co-occur with a phrase expressing Spatial Goal and other types of Location-related semantic roles such as Specific Location, General Location, Path, etc. (see Trithart 1983; Rugemalira 1993; Pacchiarotti 2020: 124ff). On a language-specific, root-specific basis, the applicative is very often the only morphological means to introduce Spatial Goals and General Locations. According to Gérard Philippson and Denis Creissels (p.c.), the amount of diversification and accretion of complexity found in the Location-related function across Bantu might suggest that this function is older than the Beneficiary-related function (and the Instrument-related function) and thus has had more time to develop complexity and idiosyncrasy.[15] Second, applicative morphology is more often than not required to introduce a Beneficiary argument, especially in Eastern Bantu.

These two facts, along with the attested directions of change laid out in the preceding paragraphs, suggest that PB *-*ɪd* initially introduced or, in Schadeberg's (2003) words, "tied" a Spatial Goal closer to a verb root. This use was (occasionally) extended to Human or Animate Goals (i.e. Beneficiaries, Recipients) already in PB. According to this hypothesis, the obligatory introduction of a Beneficiary into a main clause through applicative morphology only happened as a later innovation. In this sense, PB was probably more like Mbuun in (2) where a Beneficiary can be introduced either by a preposition in the construction of the root or alternatively as a core object argument in the construction with the applicative (likely with some differences in meaning and/or discourse function). Positing that both Spatial and Human Goals were introduced by applicative morphology in the proto-language appears to be more economical than positing hundreds of independent parallel innovations in individual Bantu languages where es of *-*ɪd* originally introducing a Spatial Goal started to be used for Beneficiaries. Positing an original Spatial Goal function also accounts for the Purpose function of *-*ɪd* across Bantu, since Purpose is an abstract extension of a Spatial Goal meaning.

The hypothesis that *-*ɪd* originally introduced a Spatial Goal is supported by the meaning of some reconstructed stems in the BLR3 database which look as though an applicative suffix was already present at some node of PB – see Table 1.[16] Note that as suggested by their known distribution, not all reconstructions in Table 1 necessarily go back to PB. Several seem to be later innovations,

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[15]Strikingly, the obligatoriness of applicative morphology with certain verb roots to introduce either a General or a more Specific Location (e.g. wrap something in a leaf vs. wrap something in the house) is not epiphenomenal to Bantu but also found in Wolof (Atlantic) (Sylvie Voisin, p.c.). This might suggest that the syntactic function of introducing Location semantic roles is older than PB.

[16]BLR3 is a lexical database with almost "10,000 form-meaning associations of variable time-depth and reliability" (Bostoen & Bastin 2016: 8), drawing on more than a century of research on Bantu languages.

but some certainly do go back to the most recent common ancestor of all Narrow Bantu languages.

Table 1: Reconstructed applicative stems adding a Spatial Goal

BLR3 index	Reconstructed form and synchronic meanings	Reported distribution in BLR3
514	*cèdɪd 'come, go down'	E G K N P
1803	*kímbɪd 'run'	E G M N
2273	*nìatɪd 'tread'	A B C D
2279	*níngɪd 'come, go in'	A B
2817	*tèdɪd 'slip'	A B F G J M N S
3275	*jédɪɪd 'float'	A F G J M S
3486	*jíngɪd 'come, go in'	A B C D E F G J K L M N P R S
3397	*jíbɪd 'sink'	J L M N
3504	*jìtɪd 'pour'	B E G H K L M R S
6243	*jìkɪd 'come, go down'	J L M
7094	*jɔ́gɪd 'swim'	H L

BLR3 includes about 190 reconstructions of verbal stems with an applicative suffix (see further discussion in §5.2). The synchronic meanings of the es of some of these forms across Bantu suggest that they originally added a Spatial Goal argument – that is, 'to, into, towards' – to their verb roots. Other forms such as BLR1277 *gàbɪd 'give away' (B E G J M S), BLR 6771 *dòngɪd 'speak' (N, P) and BLR 6986 *còdɪd 'tell' (D, J) point rather to an original Animate Goal (e.g. Addressee, Recipient, Beneficiary). The problem is that none of these forms (except perhaps *gàbɪd) can be reconstructed to PB given their limited distribution across different Bantu zones following BLR3. According to Schadeberg (1978–79), the applicative developed its syntactic function to the fullest when it started to introduce Beneficiaries at the PB stage, because these complements assumed the syntactic role of the direct object as evidenced by rules of pronominalisation and passivisation (see Wald (2022 [this volume])).

The instrumental function of *-ɪd was probably an innovation limited to particular branches (see also Trithart 1983). According to Trithart (1983: 179), within individual Bantu languages, the instrumental function of es of *-ɪd looks newer compared to the benefactive and locative functions. There are two arguments in support of this statement. First, unlike for Beneficiaries and Location-related

semantic roles, the use of the applicative to introduce Instruments is never obligatory; that is, a verb root can always co-occur with an instrumental prepositional phrase to express nearly the same meaning expressed by its applicative counterpart. Second, lexicalised applicative forms, which would reflect an early instrumental function, are almost completely absent in Bantu.

An unanswered question at this point is how *-ɪd* became the only means to introduce other Location-related semantic roles such as General Location, Specific Location, Path, etc. In this respect, Schadeberg (1978–79) argues that the primary function of the applicative suffix in PB "was to relate the action expressed by the verb to a place". This locative use was expanded to Beneficiaries, Recipients, Time, Cause, and Reason. Schadeberg (1978–79; 2003) does not specify whether 'locative' is to be understood as General Location, Spatial Goal, or perhaps both. There are at least three logical possibilities. The first possibility is that originally *-ɪd* was the only means to express General Location with certain verb roots, and then extended its usage to cover Spatial Goals and other semantic roles, as in (7). Note that Animate Goal and Purpose/Reason could actually develop out of Spatial Goal simultaneously.

(7) General Location > Spatial Goal > Animate Goal > Purpose/Reason > Time

The second possibility is that originally *-ɪd* was the only means to express a Spatial Goal with certain verb roots, and then extended its usage to General Location and other semantic roles, as in (8).

(8) Spatial Goal > General Location > Animate Goal > Purpose/Reason > Time

The higher likelihood of (7) vs. (8) should be tested against attested directions of change. Another question worth answering is whether other Niger-Congo languages require special morphology to express General Location within a clause. For instance, in some Atlantic languages, such as Seereer (Renaudier 2012), cited in Creissels (Forthcoming), certain roots require an applicative suffix to express Location-related semantic roles such as Source. The existence of obligatory applicative constructions in both Atlantic and Bantu does not necessarily provide evidence in favour of reconstructing them to Proto-Niger-Congo, and by extension PB. It does show, however, that obligatoriness is a recurrent feature in Niger-Congo. This is seldom noted in the literature, but see Creissels et al. (2007: 109).

Whatever the case might be, (7) and (8) assume the existence of a single *-ɪd* suffix, originally used for one semantic role (either Spatial Goal or General Location), then broadening its meaning to include others.

Let us now consider this hypothesis within the broader Niger-Congo verbal suffixation system. Hyman (2007) observes that in what he calls "Central Bantu" (as opposed to "NW Bantu and other Niger-Congo languages"), **-ɪd* introduces a multitude of semantic roles (locative, allative, benefactive, instrumental, etc.), but that in Atlantic languages such as Temne and Fula different functions (different semantic roles) are covered by more than one suffix (e.g. in Temne *-r* is used for allative, locative, and recipient meanings, *-ạ* for benefactive, circumstance, and manner, and *-ạ/-nɛ* for instrumental). According to Hyman, there are two possible logical scenarios for the development of the polysemy of Bantu **-ɪd*:

1. PB **-ɪd* introduced only one semantic role and then acquired additional meanings or functions, for example through the semantic pathway I described above: Spatial Goal > Human Goal (Recipient/Beneficiaries) > Purpose, and so on. This scenario presupposes relatively few applicative-like extensions in PNC, perhaps only the one reconstructed for PB.

2. PNC had formally distinct verbal suffixes/extensions. Each of these had one function (e.g. one introduced an Instrument, another a Location, another a Beneficiary, etc.). This scenario presupposes a wider inventory of applicative-like extensions in PNC, similar to what is observed in Atlantic languages where there are formally distinct applicatives for different semantic roles (Beneficiary, Instrument, etc.). Some of these merged into a single extension in PB, which, for example, lacks the itive (i.e. allative)/ventive contrast present in the verbal suffix system of several putative Niger-Congo subgroups such as Atlantic (Hyman 2014: 108) and the Nuba Mountain languages (Hyman 2020: 32–33).[17]

Hyman (2007: 158) has a preference for this latter scenario, where "Bantu has merged a richer system of applicative-like extensions, but until Atlantic is understood better, the possibility always remains open that some of the extension properties found in that group are actual innovations". Following Hyman's (2007) second scenario, a third possibility is that PB **-ɪd* might have been originally an itive marker which merged phonologically with a functionally distinct verbal suffix whose main function was that of introducing General Location or place narrow focus on such constituents (see discussion in §5.2).

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[17]Koen Bostoen (p.c.) suggests that PB **-ɪd* 'applicative' and **-ʊd* 'separative' could possibly be an itive/ventive pair. While **-ɪd* can imply movement towards or into, **-ʊd* implies separation or movement away from. It would be worth investigating how many reconstructed verb forms in BLR3 support this hypothesis. The argument orientation function illustrated in (4) could be seen as a relic of an erstwhile productive deictic/motion affix which specified direction and/or the spatial deixis of the speaker.

5 Which functions of *-ɪd* are reconstructable to PB?

In Table 2, I summarise the synchronic presence of Type A, C and D applicative constructions as discussed in §2. This reflects our current state of knowledge. A blank in Table 2 does not necessarily imply absence of a type. It could rather mean absence of data, which are particularly limited for the discourse-oriented Type C. Probably due to the templatic structure of Bantu grammars, where the applicative suffix is virtually always placed under the rubric of (valence-increasing) verbal derivational suffixes (with examples of an added Beneficiary argument as a default), one finds only sporadic mentions of other functions, especially those related to discourse (see also Creissels 2004). In Table 2, the rows represent the major clades in the Bantu phylogeny of Grollemund et al. (2015). The checkmark indicates that a given construction type is present in at least one language in the corresponding subgroup based on available literature.

Table 2: Synchronic distribution of constructions involving *-ɪd

	Type A	Type C		Type D
		narrow focus	orientation	
North-Western	✓	✓		✓
Central-Western	✓	✓	✓(?)	✓
West-Western	✓	✓		✓
South-Western	✓	✓		✓
Eastern	✓	✓	✓	✓

Type A, where the applicative is the only grammatical means to introduce an applied phrase with a given semantic role, are very common in Niger-Congo, including Bantu (Creissels 2004; Creissels et al. 2007: 109). Koen Bostoen (p.c.) is of the opinion that most Bantuists, certainly those working in the east, would take Type A as the "standard" type. Nevertheless, grammars and other scholarly works on Bantu languages seldom state whether applicative derivation is the *only* morphological means in a given language to introduce a particular semantic role with certain verb roots. For example, Trithart (1983: 148) reports the use of applicative derivation to introduce Beneficiary, Human Goal, or Spatial Goal in all the languages she surveys (from zone A to S), but does not explicitly state if it is obligatory. See in a similar vein Hyman (2003: 275) for Basaa A43a, Mous (2003: 290) for Nen A44, Grégoire (2003: 365) for the languages of the Forest, i.e. zones B and C, Rekanga (2000: 316) for Himba B302, and Bolekia

Boleká (1991: 123) for Bubi A31. Pacchiarotti (2020: 118–134) shows that Type A constructions are the only means to express minimally some semantic roles in Central-Western, South-Western and Eastern Bantu. I assume that the same is true in North-Western and West-Western Bantu (see Table 2). In fact, the historical debate around the original function of *-ɪd in PB (see §3) would seem to assume that Type A constructions date back at least to PB.

For Type C, I ticked North-Western and West-Western based on the fact that Trithart (1983: 148) reports the use of applicative morphology in *why* questions in Nen A44 (North-Western) and some variety of Kongo H10 (West-Western). Additionally, Bostoen & Mundeke (2011: 192) report the use of the applicative in Mbuun B87 (West-Western) in *why* questions and answers.[18] The tick for Central-Western is based on Rapold (1997) who reports the use of the applicative in *wh*-questions (e.g. *where*), but not answers, in Lingala C30B. In doing so, I assume that the occurrence of the applicative in typical focus-related discourse environments such as *wh*-questions is related to the focus function on locative phrases described in other languages. South-Western and Eastern were ticked based on the recent survey in Pacchiarotti (2020: 144–157) where multiple languages within these two subgroups are reported as having applicative morphology expressing several distinct types of narrow focus, always on an applied phrase with a Location-related semantic role. The ticks for Type C "orientation" are based on Pacchiarotti (2020: 141–144). The question mark in parenthesis after the checkmark means that Trithart (1983) reports the orientation function of Type C in Mongo C61, but I was unable to find a mention of this function in Hulstaert's (1966) grammar of this language.

For Type D, where the applicative morpheme conveys repetitiveness, completeness, thoroughness, excess, persistence, intensity, or intentionality, among other concepts, to the action described by the verb root, I ticked all branches based on the survey in Trithart (1983: 153) and Pacchiarotti (2020: 159–166).

If one applies the same principles used in the reconstruction of phonology, morphology and lexicon to the construction types in Table 2 (see for instance Campbell 2004), one would reconstruct in all likelihood Type A, Type C "narrow focus" and Type D to PB, based on majority rule and economy. Type C "orientation" occurs in few branches, but this might simply be the result of lack of data. The synchronic distribution of construction types involving *-ɪd in Table 2 makes it unlikely that they would all be parallel independent innovations across the

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[18]In the answer to the *why* question, the applicative in Mbuun B87 appears on the main verb and co-occurs with a prepositional phrase expressing Reason which is placed under narrow focus according to the authors.

Bantu domain. In the following subsections I argue, based on attested directions of change within and outside of Africa, that Types A, C, and D are diachronically related and that *-ɪd* had one or more functions from which others had already evolved at the PB stage or further back. However, the possibility that only some of these functions are related and that they might have been two or more morphemes which ended up looking like *-ɪd* in PB or further back (see Hyman 2007) can by no means be excluded.

5.1 Diachronic link between Types A and D

The diachronic relatedness of Type A, where the applicative obligatorily introduces an applied phrase for which there is no alternative means of expression, and Type D, where the applicative nuances the lexical meaning of the verb root (by adding iterativity, completeness, excess, etc.), is relatively well attested in the literature. Hyman (2014; 2018) argues that over time valence-related extensions develop aspectual-like functions. Hyman (2018: 191) proposes a three-stage process for this shift, reproduced in (9).

(9) | *Stage I* | *Stage II* | *Stage III* |
|---|---|---|
| valence ⊃ aspect | aspect ⊃ valence | aspect |

In Stage I, valence suffixes develop aspectual meanings. In Stage II, the aspectual functions take over the valence-related functions which are pushed to residual, lexicalised areas of the grammar; and they are eventually entirely lost in Stage III. Within Benue-Congo, this direction of change is observable in the following subgroups: Bantoid, where most verb extensions are aspectual-like (i.e. Type D) but were formerly more like PB (i.e. more like Type A or perhaps Type B; see Hyman 2014; 2018); Platoid (Gerhardt 1988; 1989), where several languages show mostly aspectual-like extensions cognate with PB valence-like extensions; and Ring (a subgroup of Grassfields Bantu), where two distinct causative suffixes reconstructable to Proto-Grassfields developed intensive and frequentative meanings (Kießling 2004: 171). Reflexes of PB causative *-ic* (and not *-ici* as proposed by Bastin (1986), see Bostoen & Guérois (2022 [this volume])) are also used with an intensifying function in many Bantu languages outside the northwestern area (Larry M. Hyman, p.c.). Beyond Africa, applicative morphology with aspectual functions such as perfectivity, iterativity, and intensification is reported minimally in several branches of Indo-European (see Kozhanov 2016 and references therein) and Austronesian (Bowden 2001). Additionally, applicative morphology can develop not only aspectual but also modal functions. Epps

(2010) reports applicative morphology developing into a modal marker in Hup, a Nadahup language of Amazonia.

5.2 Diachronic link between Types A and C

Type C are constructions where applicative morphology is used for several discourse-related functions having to do with locative phrases usually expressing General Location: expansion in the orientation of the locative applied phrase, narrow focus on the locative phrase, and habituality of the action at a certain location. More research is needed to fully understand these discourse functions. It is striking, however, that all of them are available only for locative phrases which most usually have a General Location semantic role, even if this could be an artefact of the few examples used across sources to describe these functions. For convenience, the following discussion is centered around the narrow focus function, which at present is the most described discourse function of es of *-ɪd*.

Creissels (2004) observes that knowing how extensive the use of the applicative is as a focalising device within Bantu is crucial to determining whether this use is an innovation or the relic of a usage already present in the proto-language. He suggests that the latter is more probable under the hypothesis that syntactic structures are the result of the fossilisation of discursive devices. His argument builds on Givón's (1979) grammar ontogenesis, whereby pragmatics develops into syntax; for example, topics evolve into subjects and topicalisation gives rise to passivisation. De Kind & Bostoen (2012) have a different take on this issue and posit that the focus function might have developed out of the applicative's syntactic function of introducing an applied phrase. According to De Kind & Bostoen (2012), the focalising function of the applicative in Bantu can only be accounted for by positing that the applicative originally added a Goal meaning in PB. The fact that Goals are usually spatial/locational would explain the extension of the applicative effect of introducing applied phrases in (usually) immediately postverbal focus position to focalising locative phrases, which usually do not occur in this focus position. Apart from the very general tendency whereby discourse develops into syntax, I have no strong arguments at present to claim that De Kind & Bostoen's (2012) hypothesis is less appealing than that of Creissels (2004).

As we saw in §5, the focalising function of applicative morphology with scope over mostly General Location locative phrases is attested at least in Central-Western, South-Western, and Eastern branches. If we assume that there is an intimate relationship between this usage of the applicative in main clause affirmative contexts and its use in some *wh*-questions (why, where, and how), then

the use of PB **-ɪd* in *wh*-questions in North-Western (see Trithart 1983), West-Western (Trithart 1983; Bostoen & Mundeke 2011), and Central-Western (Rapold 1997) languages can be seen as a relic of the focus function (see Table 2). Given that this focus function is present in some way or another in all branches, it is probably most economical to reconstruct it to PB. The argument that the narrow focus function should be reconstructed to PB is further supported by the fact that applicative morphology in distantly related language families is also associated with focalising functions; cf. e.g. Hernández-Green (2016) for Mesoamerican languages, Rose (2019) for Mojeño Trinitario (Arawak), and Nouguier Voisin (2002) for Wolof (Atlantic). For instance, Mora-Marín (2003) reconstructs both a valence-increasing and a focalising function for **b'e* in Proto-Mayan.

In an unpublished manuscript titled *Applicative* written at Leiden University in the late 1970s, Schadeberg (1978–79) also entertains the possibility that at the PB stage **-ɪd* was already used to express assertive focus on a non-object constituent.[19] He thinks along the lines of Creissels (2004) in considering that the focus function is earlier than the function of tying a non-complement closer to its verb root. The fact that this original focus function was specifically dedicated to non-objects would explain why synchronically all pragmatic functions of Type C applicative constructions have to do with locative phrases. Perhaps the original non-object NPs to which this focus function was applied had a Location-related semantic role. Conceivably, once the applicative developed its syntax-related function, the focus function originally available only with locative phrases was extended to full lexical NPs with other semantic roles (e.g. Beneficiary, Recipient, etc.), which gained the focus-sensitive immediately after the verb position thanks to the applicative.

Schadeberg (1978–79) argues that reconstructions of verb forms seemingly containing **-ɪd* at some node of PB are pivotal in tracing back the history of this suffix. He takes reconstructions where verb stems with **-ɪd* and corresponding verb roots without **-ɪd* have the same meaning as evidence for an original assertive focus function of **-ɪd*. In his words: "The frequency of PB verbs in which the presence versus absence of **-il-* does not appear to mark [in the reconstructed glosses] any clear functional or syntactic difference is interpreted as attesting an earlier role of assigning assertive focus to a non-object […] I interpret this, in conjunction with the observation that many instances of petrified **-il-* occur in

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[19]Thilo C. Schadeberg informs me that this unpublished manuscript was finalised after the death of Meeussen in 1978 and before 1980 when Schadeberg started to work in Angola. Meeussen encouraged him to work on the applicative and he read and commented on preliminary drafts of this unpublished manuscript.

verbs of motion which are likely to be used with locative complements, as attesting the chronological priority of *-il- referring to locatives" (Schadeberg 1978–79: 35).

I reproduce in Table 3 some cases cited by Schadeberg (1978–79) where protoforms with *-ɪd and their corresponding roots appear to have very similar or identical meanings. I have updated the forms found in Schadeberg (1978–79) against BLR3 and added the last two entries in Table 3. The question mark next to BLR3 1122 means that BLR3 does not report distribution zones for this entry.

In terms of distribution, no generalisations can be drawn on proto-roots and proto-applicative stems in Table 3. In some cases, the proto-root and the proto-applicative stem have almost identical geographical spreads, and both are largely present in the same zones (*dìnd/*dìndɪd, *tú/*túɪd, *pòk/*pòkɪd). In others, the proto-applicative stem has a slightly more restricted distribution (*díng/*díngɪdɪd, *dèm/*dèmɪd) but still covers almost the entire Bantu area (especially *gàb and *gàbɪd, where the latter covers zone B down to zone S). In yet other instances, root and applicative stem seems to be in complementary distribution (*támb/*támbɪd). There are cases where the proto-applicative stem is more widespread than the root (*jóng/*jóngɪd) and vice versa (*jímb/*jímbɪd).

One of the major problems with BLR3 reconstructions is that the glosses of the forms are synchronic attestations of meanings across Bantu zones and not real etymologies (see Bostoen & Bastin 2016 for a detailed discussion). For example, by looking at synchronic meanings of *cèk and *cèkɪd, one wonders whether these two are a case of synonymy or meaning specialisation (either of the root or of the applicative). As Schadeberg (1978–79) observes, there are multiple instances in Table 3 where the reconstructed root and applicative stem seem have exactly the same meaning, see *dìnd/*dìndɪd, *jèp/*jèpɪd, *támb/*támbɪd, *pòk/*pòkɪd, *dòng/*dòngɪd, and *jòng/*jòngɪd. However, there are also cases where the reconstructed applicative stem is reported in BLR3 as having only one of the meanings attributed to its corresponding root: see *díng/*díngɪdɪd, *dèm/*dèmɪd, *gàb/*gàbɪd, *tú/*túɪd, and *jímb/*jímbɪd. There are at least three possible ways to interpret this second trend: (i) the applicative stem has undergone meaning narrowing or specialisation; (ii) the reported synchronic meanings in BLR3 are not always accurate, and it might turn out that these applicative stems have as many meanings as those attributed to their corresponding roots; and (iii) the roots have undergone meaning expansion or broadening with respect to their applicative stems. Given the present state of knowledge in Bantu etymology, it is essentially a matter of subjective interpretation whether one decides to go with option (i), (ii), or (iii).

Schadeberg (1978–79) takes identity or near-identity in meaning as a relic of an original focus function of *-ɪd on locative phrases. That is, he considers that

Table 3: Proto-roots and putative proto-applicative stems with similar/identical meanings

BLR3 Index	Root	Distribution	BLR3 Index	Applicative stem	Distribution
1062	*díng 'turn round, wind round, wrap up'	A B C G H J K L N R	1064	*díngɪdɪd 'wind round'	E G J M R S
987	*dìnd 'wait, watch, desire'	B C G H J M N P S	988	*dìndɪd 'wait, watch, desire'	C D F J M N P S
907	*dèm 'be heavy, be honoured'	A B C E G H J K L M N R S	908	*dèmɪd 'be heavy'	G J M N P S
3320	*jèp 'avoid, get out of the way'	G L M R	3321	*jèpɪd 'avoid, get out of the way'	C E L
2751	*támb 'take, receive'	B C H	2752	*támbɪd 'take, receive'	A N S
1274	*gàb 'divide, give away'	A B C D E F G H J K L M N R S	1277	*gàbɪd 'give away'	B E G J M S
2597	*pòk 'take, receive'	E F G L M N	2598	*pòkɪd 'take, receive'	E G L M P
1122	*dòng 'pack carefully'	?	1123	*dòngɪd 'pack carefully'	H M R S
3096	*tú 'spit, fix the price'	A C D E F G J M S	3097	*túɪd 'spit'	A B C D E J L M S
3361	*jímb 'sing, dance'	A B C D E F G H J K L M N P R S	3363	*jímbɪd 'sing'	A C H
3563	*jòng 'add to'	A M	3564	*jòngɪd 'add to'	A E F G J M R S
522	*cèk 'laugh, joke'	B C D E F G J K L M N P R S	523	*cèkɪd 'be pleased, mock, make fun of'	E G L M N

because the function was discourse-oriented there is no semantic difference in meaning between the two proto-forms. One way to (dis)prove this statement is to look more broadly at all reconstructed verb forms in BLR3 seemingly carrying one (or two) applicative suffixes at some PB stage. However, this step does not provide conclusive evidence in favour of or against Schadeberg's tempting argument. I identified 190 reconstructed verb forms including **-ɪd* in BLR3, including those listed in Table 3. Of these: 96 (51%) have no corresponding reconstructed root; 59 (31%) have a meaning which is identical to the meaning of their root; while the remaining 35 forms (18%) have a different meaning compared to that of the corresponding root. Obviously, BLR3 is work-in-progress and as such these percentages (as well as reported "meanings") would likely change if we had access to additional data. Nevertheless, it is noteworthy that in 30% of total cases, the verb form carrying applicative morphology and its corresponding root have the same meaning.

Unfortunately, an argument against Schadeberg's hypothesis (supported by the 30% above) is that one finds reconstructed verb stems with other PB verbal suffixes which also have (nearly) identical meanings to those of their root and/or applicative counterparts. Thus, alongside **jèp* and **jèpɪd* 'avoid, get out of the way' in Table 3, there is BLR3 3322 **jèpʊk* (E G H K L S) 'avoid, get out of the way'. Similarly, there is **támb*, **támbɪd* 'take, receive', but also BLR3 2753 **támbʊd* (D H J K L M R) 'take, receive'. Likewise, alongside **gàb* 'divide, give away, make present' and **gàbɪd* 'give away', there is BLR3 1275 **gàbʊd* (C H J S) 'divide'.

5.3 Diachronic permutation: Are Types A, C, and D all related?

In §5.1 of this chapter we saw that syntactically oriented verbal affixes (Type A) can develop aspectual meanings (Type D). In §5.2, we saw that syntax-oriented verbal affixes might have a focus function (Type C) and that, if so, several scholars believe that the syntactic function might have developed out of the pragmatic function. Drawing an analogy with logic, if A is related to C and A is related to D, are C and D also related? An evolutionary pathway that would link these three construction types is schematically represented in (10).

(10)   *DISCOURSE*   *SYNTAX*   *SEMANTICS*
       Type C   >   Type A   >   Type D
       Focus function   Introduction of AP   Aspectual nuances

It goes without saying that given the time depth of **-ɪd* and other PB verbal extensions, the evolution laid out in (10) is extremely over-simplistic. There must have been multiple intermediate steps and cycles of evolution happening over

and over again. Nevertheless, this pathway basically links Givón's (1979) claim that syntax arises from discourse with the claim that syntax-related suffixes can over time develop aspectual functions. At present, apart from the discussion in the preceding paragraphs, I am unable to adduce additional evidence for the evolution in (10). This evolution assumes that there was a single suffix *-ɪd* in PB or before which had one original main function related to discourse and that other functions developed diachronically out of this original one. In this scenario, all three functions would have developed at the PB stage (i.e. node 1 in Grollemund et al. (2015), if not before.

However, as observed in §4, it is entirely possible that there were two or more functionally distinct suffixes that ended up being formally identical in PB due to phonological mergers. The hypothesis, originally suggested to me by Koen Bostoen, is that PB might have had an itive/ventive distinction where *-ɪd* was the ventive, i.e. a *come*-type directional towards a deictic centre, while so-called "separative" *-ʊd* was the itive, i.e. a *go*-type directional out of a deictic centre (see Schadeberg & Bostoen 2019: 186). Given the presence of multiple derivational suffixes expressing directional notions in several Bantoid languages (see Blench (2022 [this volume])), this scenario looks all the more plausible. However, it is hard to find synchronic evidence in support of this hypothesis. The poorly understood function of PB *-ɪd* variously called "implicit contrast" (Trithart 1983), "event localiser" (Kimenyi 1995), "event locative" (Rugemalira 1993; 2004), or argument orientation (Pacchiarotti 2020), see (4) in §2, could perhaps be considered as a fossilised remnant of an erstwhile *-ɪd* suffix which was functionally distinct from applicative *-ɪd* and was perhaps part of a directional system within PB verbal derivation. At the same time, it is not clear how an original ventive morpheme might have developed the function of localising subjects of transitive clauses with respect to the position of the objects in the event described by the verb root. More data on the poorly understood function of argument orientation might provide evidence for this hypothesis.

6 Conclusions

Historical linguistics is an exercise in speculation when there are no written records of the older structures or functions that one is attempting to reconstruct. In the case of *-ɪd* this exercise in speculation is complicated by the myriads of functions associated with its es. As initially observed by Dammann (1961) and Kähler-Meyer (1966), multiplicity of meanings is a typical feature of PB verb extensions (see also Voeltz 1977: 12). However, *-ɪd* stands out among other PB ver-

bal derivational suffixes for the number of functions it can perform synchronically. Although other extensions can add semantic nuances to the meaning of their roots, there is to my knowledge no other PB verbal suffix which has dedicated discourse functions such as those described for **-ɪd*. Another remarkable feature of **-ɪd* is its resistance to renewal. The PB causative suffix **-i* has a long history of renewals, possibly due to its exceptional vocalic shape, but also due to the fact that it often develops aspectual-like functions (see Bostoen & Guérois (2022 [this volume])). Even though the applicative is famous for conveying aspectual meanings (see §2 and §5.2), no applicative morphology has been innovated since PB.

In this chapter I have argued that the traditional view of PB applicative **-ɪd* as a purely valence-increasing syntactic device should be revised against new evidence. Reflexes of **-ɪd* minimally perform three main clause functions which are reconstructable to the PB stage: (i) introducing in a main clause a semantic role which could not otherwise be expressed in that main clause with an underived verb root; (ii) narrow-focusing a constituent which usually has a Location-related semantic role; and (iii) adding semantic nuances such as completeness, iterativity or thoroughness to the meaning of the verb root combining with the applicative. The reconstructability of these functions to the PB stage was supported by their synchronic distribution across the Bantu domain, by attested directions of change within and outside of Africa, and by similar functions of applicative morphology in geographically distant and genetically unrelated language families. As for function (i), I provided evidence contra Trithart (1983) and in favour of Schadeberg (2003) that PB applicative **-ɪd* originally added a Spatial Goal into a main clause and extended its usage to Human Goals at some point in PB before Bantu languages started to drift away from the homeland.

I also presented some evidence that functions (i), (ii), and (iii) might be diachronically related and might have developed out of a single **-ɪd* form. At the same time, I entertained the possibility of there being at least two functionally distinct **-ɪd* morphemes at some point in PB which might have gained the same form due to phonological mergers. One of these two **-ɪd* forms was an applicative suffix semantically specified to introduce Spatial Goals/Locations. The other **-ɪd* was a ventive directional and possibly came in a pair with an itive suffix **-ʊd*, usually called separative in Bantu studies (see Schadeberg & Bostoen 2019). This hypothesis, for which there is currently little to no synchronic evidence, is nevertheless appealing in that it could explain the complexities and idiosyncrasies observed in the es of **-ɪd* employed in Location-related functions, i.e. they would be fossilised uses of two suffixes with distinct spatial-related functions.

Future research in this domain is hindered by the difficulty in saying anything reliable about the forms and functions of NC verbal suffixes (for a detailed discussion, see Hyman 2007), and by the huge time depth of these eroded morphemes. Nevertheless, promising directions for future research aimed at understanding whether the evolutionary pathway in (10) is possible include: gathering more data on the less described functions of es of *-ɪd* in Jarawan Bantu and Bantu zone A (if any); determining whether other Benue-Congo or Niger-Congo languages require dedicated derivational morphology in order for a verb root to combine with a General Location or a Spatial Goal element in the clause; finding etymologies either in Bantu or elsewhere in Niger-Congo for *-ɪd* that would support or disprove the pathway in (10); and gaining a deeper understanding of the exact relationship between focus and valence-increasing morphology within and outside of Africa.

Acknowledgements

Abbreviations

1 (followed by PL)	first person	LOC	locative affix or preposition
APPL	applicative affix		
CAUS	causative affix	PA	pronominal affix
CLX	noun class prefix of class x (where x is a number)	PFV	perfective
		PL	plural
		PROG	progressive
CONN	connective	PRS	present
FUT	future	PST	past
FV	final vowel	S	subject
IMP	imperative	S3:x	third person subject of class x
INS	instrumental preposition		

Appendix A Bantu applicative construction types

	Structural and functional features			
	(i)	**(ii)**	**(iii)**	**(iv)**
Type A (syntax)	yes	no	yes	yes
Root cxn: NP V (NP) (NP) (PPθ_Y)				
Appl cxn: NP V$_{APPL}$ **APθ_X** (NP) (NP) (PPθ_Y)				
Type B (syntax, discourse, semantics?)	yes	yes?	yes	no
Root cxn: NP V (NP) (NP) (PPθ_X)				
Appl cxn: NP V$_{APPL}$ **APθ_X + F?** (NP) (NP) (PPθ_Y)				
Type C (syntax, discourse, semantics limited to LOCP)	yes	yes	yes	no
Root cxn: NP V (NP) (NP) (LOCP) (PPθ_Y)				
Appl cxn: NP V$_{APPL}$ (NP) (NP) **AP**(=LOCP) + **Fα** (PPθ_Y)				
Type D (semantics/aspect)	no	yes	restricted	yes
Root cxn: NP V (NP) (NP) (PP)				
Appl cxn: NP V$_{APPL(APPL)(APPL)}$ + **Fβ** (NP) (NP) (PP)				
Type E pseudo-applicatives (frozen forms)	no	no	no	yes
Root cxn: NP V (NP) (NP) (PP)				
Appl cxn: NP [V$_{APPL(APPL)}$]**LEXICALISED** (NP) (NP) (PP)				

(Adapted from Pacchiarotti 2020: 111)

Column headings are:

(i) introduces an obligatorily present applied phrase; **(ii)** semantic or pragmatic functions of the applicative construction; **(iii)** productive; **(iv)** subject to lexicalisation. A question mark indicates uncertainty/lack of data.

Abbreviations used in this table:

AP = applied phrase
F = function(s) (Fα is different from Fβ)
LOCP = locative phrase
NP = noun phrase
PP = prepositional phrase (for convenience)

θ = theta-role/semantic role (θ_X indicates a semantic role different from θ_Y)
V = verb
APPL = applicative suffix.

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