A cognitive grammatical approach to the semantics of Nambya[1] extended verbs

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Abstract
This article is an analysis of the meanings of extended verbs in Nambya. Put simply, an extended verb is a complex verb that is a consequence of combining a verb base and a verbal extension. Using the principles adopted in the theory of Cognitive Grammar (CG), it will be argued that the addition of different kinds of verbal extensions to verb bases often result in constructions with multiple meanings that are related. Unlike earlier scholarship on the meanings of extended verbs in Nambya that treats them as a result of a simple mathematical addition of the individual meanings of the verb base and the verbal extension, this article aims to show that the addition of derivational morphemes such as verbal extensions onto verb bases significantly modifies the meanings of the respective base forms. It is argued that the addition of the verbal extensions often results in two kinds of related meanings, that is, those that are mathematically derivable from the verb base by composition and those that are not easily traceable owing to the fact that they are generally idiosyncratic - hence the reason why extended verbs should sometimes be treated as new verbs that are different from their bases. In this regard, therefore, the proposal being made is that verbal extensions should be treated as highly productive morphemes in lexeme formation.

1. Introduction

The meanings of extended verbs in Bantu languages have been studied for many years. The traditional approach to these complex verbs and their meanings has been to treat them as compositional - they have been described as resulting from 'summing up' the forms and meanings of the verb base and the verbal extension. The traditional approach is built on the belief that the meanings of complex expressions are fully determined by the meanings of their component parts in conjunction with the way the parts are put together (Taylor, 2002, p.98). Whilst we consider this approach to be plausible, as is also confirmed with data from Nambya, the same data has shown that in addition to compositional meanings, these verbs, more often than not, have other meanings that cannot easily be traced from the meanings of their respective base forms using the analytical or compositional method. In other words, such meanings cannot be accounted for by only looking at the semantic input from the verb base and the verbal extension that constitute the extended form since they generally have properties above and beyond those of the form's components. As will be shown later, the non-compositional meanings are figurative or specialised in some way, and we will analyse them as having developed from the compositional meanings through semantic extension. Because they have acquired a figurative or specialised value, our view is that such meanings should be treated as separate or distinct from the compositional

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meanings. For the reason that the Nambya extended verbs that we analysed showed that they are associated with compositional meanings on the one hand and non-compositional meanings on the other, in this article we will treat them as polysemous.

In line with what the Nambya data has shown, we define our main objectives in this article as, (a) to examine the different kinds of figurative or specialised meanings that are associated with Nambya extended verbs. In other words, we attempt to give a principled and systematic account of the multiplicity of meanings typically associated with these verbs, and (b) to try to establish the ways in which the non-compositional meanings are related to those that are compositional. In trying to achieve these goals, we will rely on principles adopted in CG. Thus, it is also one of our aims to show that CG is a more revealing approach in the study of meanings of complex structures such as extended verbs, especially when compared to the traditional approach to these forms. In accounting for the relatedness of sets of meanings, we will use the Prototype Model, a sub-part of CG. This model, which was developed by Rosch (1978) has been described by Tsohatzidis (1990, p.1) as;

> (…) a principle whereby elements are assigned to a category not because they exemplify properties that are absolutely required of each one of its members, but because they exhibit to a greater or lesser extent certain types of similarity with a particular category member that has been naturally or culturally established as the 'best example' (or prototype) of its kind.

and also by Taylor (1990, p.529) as "a mental representation (possibly one quite rich in specific detail) of a typical instance of a category, such that entities get assimilated to the category on the basis of perceived similarity to the prototype." From these descriptions, we observe that the Prototype Model is a way of explaining relationships that obtain between phenomena that have some kind of relationship or similarity. One important point that is implicit in these descriptions is the fact that within this model, categories are understood as having a 'core' and a 'periphery'. In this case, the 'best example' or the prototype becomes the core of a category, and it is against it that other members of the category (peripheral members) can best be described or understood. In this article, we will adopt this model in accounting for the relationship between sets of meanings of extended verbs by proposing that in each set there is a core meaning and one or more that are peripheral. However, to background our analysis of these verbs using CG, we will, in section 2 discuss, albeit briefly, some of the approaches that have been adopted in the study of word meaning.

2. Some approaches to the study of meaning

A variety of approaches have been used in trying to understand the meaning of linguistic units of various kinds, with each approach putting emphasis on specific aspect(s) of meaning This section discusses the Saussurean and componential approaches that we think will help in shedding more light to the CG approach that we have already identified as the framework according to which we will analyse the meanings of extended verbs in Nambya.

2.1 The Saussurean approach

Saussure (1922) conceives a 'linguistic sign'[2] or unit as a two-sided entity, that is, as constituted by the association of a form with a meaning. Expatiating on Saussure's concept of linguistic sign, Jakobson (1971, p.103) argues for the inseparability of form and meaning when he notes that these two aspects necessarily presuppose and require each other. He thus proposes that in linguistic analysis of any kind, a linguistic sign should be understood

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2   Saussure uses this term to refer to a linguistic unit of any kind that has a form and meaning, including a morpheme, word, clause, sentence, etc.

in terms of its form and meaning; that is, form should be understood in light of its meaning and meaning in light of its form. He (Jakobson, 1971, p. 103-4) says,

> Sound and meaning – both these fields have to be thoroughly incorporated into the science of language: speech sounds must be consistently analysed in regard to meaning, and meaning, in its turn, must be analysed with reference to the sound form.

Conceived this way, form and meaning appear as having a simple one-to-one relationship, implying that a linguistic form can only have one kind of interpretation and also that one kind of interpretation can only be expressed by a single form (Taylor 1990:522). However, extensive studies on polysemy (see, for example, Austin 1940, Wittgenstein 1953, Bolinger 1968, Rosch 1973, Fillmore 1982, Lakoff 1987, Langacker 1987, Brugman 1988, Sweetser 1990 and Goldberg 1995), for example, show that it is rather uncommon to find a given phonetic form being associated with only one, invariant meaning. In other words, linguistic units such as lexical items are typically associated with a range of meanings, some of which are related. In a similar fashion, a particular meaning can be expressed by some diverse forms associated with a linguistic sign, which according to Taylor (1990, p. 522), may be conditioned by regular morphophonemic alternation or by arbitrary suppletion, or may be a function of prosody of an utterance, of stylistic variation and of speaker specific idiosyncrasies. Basing our arguments on what the Nambya data exhibits, we will argue against a one-to-one relationship between form and meaning for, as already intimated above, it is possible to have a one-many, a many-to-one or even a many-to-many relationship between these two. In our treatment of Nambya extended verbs, we will adopt a one-to-many approach for we will treat these verbs as polysemous; that is, each extended verb is treated as being associated with a range of distinct but related meanings.

2.2 The componential approach

As observed in Cruse (2000, p.98), this is one of the earliest and still most persistent and widespread ways of approaching the meaning of complex structures. Central to this approach is the assumption that the meaning of complex structures such as composite lexical units is constructed out of smaller, more elementary units of meaning. In other words, the assumption is that when one wants to understand the meaning of a complex structure, he/she simply has to 'sum-up' or 'add-up' the meanings of its constituent or sub-parts. This approach to meaning has also been referred to as the analytical approach (see, for example, Lyons 1977), the building block model (see, for example, Langacker 1987, Gundersen 2000), or the compositionality approach (see, for example, Taylor 2002, Langacker 1987).

This approach is based on the belief that every sub-part of a lexical item has one fixed and determinate meaning each; that these meanings can be added up mathematically, thus resulting in a meaning that is constant and fixed, thus also implying that the semantic properties of the constituent parts are fully maintained in the composite structure. Viewed this way, the semantics of composite units becomes a matter of objective composition, that is, it becomes predictable from the meanings of its immediate constituents and the derivational rule used to combine them. Also given its mathematical orientation, we can argue that in such an approach: (a) complex structures cannot be viewed as polysemous; instead, they can only have a single and fixed sense each, that is, that which results from the 'addition' of the meanings of its constituent parts, and (b) socio-cultural context is not important in understanding the meanings of complex structures. From the central assumption on which this approach is based, one could be persuaded to believe that anyone who knows the meaning of a particular verb and of a particular verbal extension,

for example, can easily 'construct' the meaning of the extended verb by way of fusing or combining these two. Conversely, if anyone wanted to know the meanings of an extended verb, he/she would simply 'break it up' into a set of all the primitives that are found in it and then sum-up their respective meanings. This way of looking at the forms and meanings of extended verbs is illustrated with Nambya extended verbs in Table 1 below.

Table 1: Componential Analysis of Nambya Extended Verbs

-ly- 'eat'	-is-	-lyis-	cause to eat; feed
-chen- 'be clean'	-es-	-chenes-	Make something clean
-fugam- 'kneel down'	-il-	-fugamil-	kneel for someone
-gal- 'sit'	-j-	-gaj-	cause to sit
-lal- 'lie down'	-j-	-laj-	cause to lie down
-fh- 'vomit'	-is-	-fhis-	cause to vomit
-muk- 'wake up'	-il-	-mukil-	Wake up for someone
-bhat- 'touch/hold'	-an-	-bhatan-	touch/hold each other
-nw- 'drink'	-is-	-nwis-	cause to drink
-lebelek- 'speak'	-j-	-lebelej-	cause to speak
-sung- 'tie'	-w-	-sungw-	be tied
-tizh- 'run away'	-is-	-tizhis-	cause to run away
-sham- 'open mouth'	-is-	-shamis-	cause to open one's mouth

From the data presented in Table 1 above, we can note that this rule-based concatenation of the meanings of constituent parts (non-extended verb and verbal extension) of a composite structure (the extended verb) results in literal and predictable meanings of the composite structures involved. This state of affairs has also been observed in Hoffman and Honeck (1980, p.9) who argue that such an approach to meaning deals primarily and exclusively with the literal level of meaning and does not capture the relationship between literal and figurative meaning, for example.

Despite a certain level of plausibility, this approach seems too narrow and therefore inadequate to account for the totality of the meanings of complex structures. Taking Nambya extended verbs as examples of such complex structures; we will try to show that by only accounting for literal and predictable meanings of these verbs, the componential approach fails to account for other kinds of meanings that are a result of 'secondary' semantic developments from the compositional meanings by such general processes as metaphor, metonymy and specialisation. However, of importance to note is the fact that the meanings of Nambya extended verbs exemplified in Table 1 above capture the basic senses of the respective verbs. This aspect is of interest to us in our CG-based analysis of the polysemous nature of these verbs that we have already hinted at. As will be shown later, the importance of these compositional meanings is that they will be treated as the bases on which related figurative or specialised meanings are developed.

3. The cognitive grammatical approach to Nambya extended verbs

This is the approach that will be used in the analysis of Nambya extended verbs. The CG approach to meaning is conceptualist. Central to the conceptualist approach to meaning is the assumption that meaning is a cognitive phenomenon. Following this assumption, the description of lexical meaning should be understood with reference to a structured background of experience, beliefs or practices constituting a kind of a conceptual pre-requisite for understanding meaning (Fillmore and Atkins, 1992, p. 76). Thus, speakers can be said to know the meaning of a word only by first understanding the background knowledge that motivates the concept that the word encodes. Linked to this is also the hypothesis that knowledge of language emerges from language use, that is, that semantic structure is built up from our cognition of specific utterances on specific occasions of use.

Viewed this way, the assumption is that word concepts may not be understood apart from the social and cultural institutions in which the action, state or thing is situated. Meaning is thus conceived as language and culture specific to a considerable degree. That is, for one to fully understand the meanings of lexical items he/she has to understand both the language and the socio-cultural context in which they are used; that is, it is not enough to only know the language structure without understanding the culture in which the language is steeped and whose knowledge systems it reflects.

The CG approach to complex structures such as extended verbs is that although the constituent parts of an expression contribute to the composite meaning, the composite meaning often has properties that go beyond, and is partially at variance with what can be worked out solely on the basis of the meanings of the component parts. Langacker (1987, p.75) argues that this is so for two basic reasons. Firstly, he argues that composite structures originate as targets in specific usage events. As such, they are often characterised relative to particular contexts with properties not predictable from the specifications of their components as manifested in other environments. Secondly, he argues that one component may need to be adjusted in certain details when integrated with another to form a composite structure, a concept that he refers to as 'accommodation'. He (1987, p. 59) further notes that when a composite structure coalesces into a unit, its subparts do not thereby cease to exist or be identifiable as sub-structures; but its components become less salient, precisely because the speaker no longer has to attend to them individually. In the same spirit, Taylor (2002, p. 116) argues that when semantic units are combined in complex expressions and are in the process of trying to accommodate each other, their values shift, hence the variance that usually results between the meaning of the composite expression and those of its component parts 'added' together. It is on these grounds that in the cognitive grammatical approach, the 'digital' nature of the compositionality approach to the meaning of complex structures is viewed as inadequate. This means that although a complex expression is built up of more elementary units, its semantic representations may not be taken to be a simple lining up of the concepts of the respective component units.

In analysing Nambya extended verbs, we will be guided by Langacker's (1987, p. 87) observation that the fact that components can be recognised within a complex structure does not necessarily entail that these components exhaust the characterisation of the complex structure. We will try to show that more often than not, a complex unit has properties above and beyond those of its components; that its meaning is 'richer' than what can be predicted from summing up the meanings of its constituent parts. We will, for example, show that whilst we acknowledge that an extended verb like -mukil- (literally, wake up for someone) consists of -muk- (wake up) and -il- (applicative) as its constituent parts, and that literally this verb means 'wake up for someone', this complex lexical unit has semantic properties more specific, and in some way, also at variance with those that can be composed from those sub-parts. In other words, we will argue that whilst a verb like -mukil- co-exists with its -muk- and -il- components in the verbal morphology and semantics of Nambya as well as being consistent with the verb base + verbal extension derivational formula, it is nonetheless a distinct unit not algorithmically deducible from the parts that constitute it. We will thus opt for an approach that accommodates or recognises the fact that such verbs are compositional to some extent, but one that is also broad enough to cater for non-compositional meanings that typically characterise most of these extended verbs. For example, we opt for a broader approach that can account for the fact that -mukil- has another non-compositional sense, that is, 'rise against', which cannot be accounted for by the componential approach to the meanings of complex structures. We are, therefore,

persuaded to use an approach that gives an extended verb the status of a separate entity, which should be understood in its own right regardless of its componentiality. It is basically for this reason that we have chosen to adopt the conceptualist approach to the analysis of Nambya extended verbs as it is articulated by cognitive grammarians such as Langacker (1987, 2000), Taylor (1990, 2002, 2003), among others. In our view, the conceptualist approach is broad enough to more exhaustively account for the meanings of these complex verbs.

An analysis of a set of Nambya extended verbs has shown that these verbs are generally polysemous. In addition to the meanings that are listed in Table 1 above, they also tend to carry meanings that diverge from these compositional ones in specific ways. Table 2 below is a summary of a CG-based analysis of the meanings of these verbs.

Table 2: A List of some Nambya Extended Verbs and their Meanings

Extended Verb	Meanings of Extended Verb
-lyis-	1. cause to eat; feed 2. brainwash, greatly influence 3. cause to eat poison
-chenes-	1. make something clean 2. sanctify
-fugamil-	1. kneel for someone 2. worship/pray
-gaj-	1. cause to sit 2. put something (pot) on fire 3. install (a chief)
-laj-	1. cause to lie down 2. bury a dead person
-fhis-	1. cause to vomit 2. exorcise
-mukil-	1. wake up for someone 2. rise against
-bhatan-	1. touch/hold each other 2. be united
-tizhis-	1. cause to run away 2. cause to elope
-lebelej-	1. cause to speak 2. cause to shout at someone
-sungw-	1. be tied 2. be stopped from conceiving
-nwis-	1. cause to drink 2. score a goal 3. breastfeed
-shamis-	1. cause to open one's mouth 2. surprise

As can be observed from the examples presented in Table 2 above, each extended verb has at least two senses; one that can be deduced from the combination of the meanings of the verb base and the verbal extension, and another that is either figurative or specialised in some way and, therefore, distinct from the predictable meaning. A closer analysis of data

presented in this table has shown that in each set of meanings the figurative or specialised meanings are a result of semantic extension from the more basic, componential meanings through such general processes as metaphor, metonymy and specialisation. Below we discuss and exemplify each of these processes with data from Table 2.

3.1 Semantic extension through metaphor

Metaphor is a way of understanding one conceptual domain in terms of another conceptual domain courtesy of mapping or correspondence links between elements of concepts in the two domains. The basic assumption here is that although metaphor is a conceptual phenomenon, we have access to the metaphors that structure our way of thinking through the language that we use (Ungerer and Schmid, 1996, p. 18). In other words, the mapping of elements between the domains is facilitated or recognised through the linguistic resources at the disposal of the speakers of the language. Using conceptual metaphors, abstract concepts are typically understood through more concrete, physical or tangible concepts. A linguistic understanding of this is that through metaphor, a linguistic unit that denotes a concept in the more familiar physical world will be used to denote another 'similar' concept in the less familiar abstract world. Assuming that this idea is plausible, we suggest that this naturally results in the polysemy of the formal expressions or linguistic units used. This is so because a single linguistic unit would now be standing for or denoting at least two concepts.

As noted in Goldberg (1995, p. 33), the assumption is that in such a polysemous situation there is a central or basic sense of a lexical unit, and that it is from this basic sense that figurative or specialised senses of the unit are developed. Lakoff and Johnson (1980) argue that basic meanings are usually those that are more concrete rather than those that are abstract. Following arguments by Goldberg (1995) and Lakoff and Johnson (1980), the treatment of the polysemous nature of Nambya extended verbs will be based on the premise that the componential meanings identified in Table 1 are the central senses of these verbs. When compared to meanings that were added in Table 2, these meanings are more concrete, they encode event types that are basic to human experience. We, thus, argue that the other meanings that we identified as figurative are developments or extensions from these that are more basic, concrete and central to what the verbs denote literally. In this case, these central senses become the source domain upon which the figurative meanings, which are usually abstract (that is, the target domain) are supposed to be understood. To illustrate this, let us take -lyis- (literal, cause to eat) as an example.

-lyis- 'cause to eat; brainwash'

As we can see from Table 2, this causative verb is associated with three kinds of distinct senses. For the purposes of our discussion here, we will focus on the first two meanings. The first meaning, that is, 'cause to eat; feed' is predictable from the sum of the meanings of its parts. This sense appears more concrete since the understanding is that one is made to eat something that is physical and edible, most typically, food. A further point to note is also that the reason for eating is nourishment; the result of causation should be to fill the causee's stomach so that he/she can survive. However, this same extended verb can also be used to refer to another interpretation (sense 2 in Table 2) where it means 'brainwash'. Sinclair et al. (1991) define brainwashing as follows:

> *If you brainwash someone, you force them to believe something, usually something false, by continually telling them or showing them evidence that it is true, and preventing them from thinking about it properly or considering other evidence (...).*

From this description by Sinclair and others, we note that a person is told something in a manner that will change his/her way of looking or thinking about something. More often than not, the person will end up believing everything that comes from the person who has influenced or brainwashed him/her. Brainwashing is, therefore, a form of control over somebody. Viewed this way, a sentence like; Joice akalyisa undume wake 'Joice brainwashed her husband', for example, can be interpreted in two different ways that can be paraphrased as (a) 'Joice fed or assisted her husband to eat something', probably because he could not manage to eat on his own, and (b) 'Joice brainwashed her husband'. In Nambya culture, the brainwashing exercise, which is usually thought to be initiated by a wife on her husband so that she can gain control over him[3], is believed to be accomplished through mysterious powers that come via love portions that a wife prepares for her husband, and that are believed to have the effect of making the husband religiously follow the interests of his wife. In other words, the second interpretation of the example sentence would mean that Joice did something mysterious to her husband such that he now believes in everything that she says and now takes opinions from her without questioning.

It is important to note that the two interpretations of this sentence are related in some way. For example, in both interpretations, someone is made to 'take in' something. However, whilst interpretation (a) refers to taking in something physical and more concrete, interpretation (b) refers to something more abstract. We want to propose that the relationship between these two interpretations is metaphorical, that is, interpretation (b) is understood in terms of interpretation (a). In other words, we suggest that the more abstract meaning, 'brainwash' or literally, 'cause to eat ideas', should be understood by analysing the more concrete meaning, 'cause to eat food'. Following the principles that guide the metaphorical explanation between related concepts, we will take interpretation (a) as the source domain and interpretation (b) as the target domain. Viewed this way, the comprehension or understanding of meaning (b) is based on a set of correspondences or mappings between it and meaning (a). We can thus draw a list of correspondences between the two domains in Figure 1 as follows:

Figure 1

Source Domain: EAT	Target Domain: INTERNALISE
cause to eat food	brainwash; cause to eat ideas
cause	cause
food	ideas
stomach	brain/mind
nourishment	influence

Comparing the two lists in Figure 1, we observe that the elements to the right-hand column are rather abstract in nature whilst those in the left-hand side are more concrete. The two lists demonstrate that we rely on elements of the concrete world to conceptualise abstract phenomena. In doing this, the speakers use a limited inventory of conventional linguistic units originally used to denote concepts in the more concrete world to denote more abstract and less familiar concepts, thus changing the relationship between the lexical and semantic resources of a language. In this particular case, by relying on linguistic forms already in use in the concrete world to refer to concepts in the abstract world, new senses are developed for these forms. Thus, the forms will become polysemous since they will now refer to more than one concept. A similar treatment can be extended to the following verbs; -sungw-, -fhis- and -chenes-, which are also presented in Table 2 above. Below are brief discussions of these verbs in turn.

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3   It is important to note that in the Nambya cultural set up, men are usually in control over women. However, some women, especially those that are married, are believed to resent their domination by their husbands. This is why some would opt to 'brainwash' their husbands as a way of gaining control.

-sungw- 'be tied around; be stopped from conceiving'
The verb -sungw- (literal, be tied around) literally denotes a situation where someone physically uses a rope to tie around someone or something. However, as we can see from Table 2, -sungw- is also associated with another more abstract meaning, that of stopping someone from conceiving. This second sense refers to a situation where some mysterious medicine is used to stop a woman from getting pregnant, thus also from giving birth. This kind of stopping is not physical; some bad spirits are believed to be used in interefering with the woman's reproduction system to effect the act of stopping the woman from conceiving. In other words, the Nambya people believe that there are some mysterious medicines that are used to invoke the evil spirits that can inhibit a fertile woman from bearing children. As we can note from the two interpretations of this verb, its meanings are related. Although one is more physical and more concrete when compared to the other, they both carry a connotation of 'restricting' someone from doing something. The end result is the same; whether one is physically or mysteriously 'tied around', he/she fails to do what other people do under the same circumstances. In Figure 2 below, we draw a list of correspondences between the two senses.

Figure 2

Source Domain: TIE	Target Domain: STOP CONCEIVING
physically tie someone	mysteriously stop a woman from conceiving
done by someone	done by someone
be tied around	be childless
physical restriction	mysterious restriction
physical body	reproductive system

We, thus, propose to understand the second sense of this verb as a semantic extension (through metaphor) of the first sense which is a more basic sense of -sungw-. Because the second sense has a semantic value that goes beyond that which results from combining the meanings of -sung- and -w-, we argue that the compositional approach cannot capture this meaning. In other words, knowing the meanings of the verb -sung- and the passive suffix, -w-, cannot help one to understand this sense of the passive verb. Instead, one needs Nambya cultural knowledge, which helps in identifying the contexts in which the extended verb is used to express this meaning.

-fhis- 'cause to vomit; exorcise'
The verb -fhis- literally means 'cause to vomit'. Reference to vomiting in this literal sense is made to a situation where someone is made to regurgitate something he/she had eaten earlier. It is important to note that in this case the person is made to do physical movements so that he/she 'takes out of the stomach' something physical like food, water, poison, etc that he/she could have swallowed. The reason for this is usually to take out something that could harm the stomach. However, -fhis- has another meaning, 'exorcise', which neither refers to any physical movements of the tract between the mouth and the stomach nor to the extraction of anything physical from a person's stomach. Instead, this second sense implies that someone had mysteriously internalised bad ideas or feelings about something, and this is believed to be caused by evil spirits. As a result, there is need to use mysterious powers to force out of this person the bad ideas or feelings that are believed to cause him/her to misbehave or not to think properly. In Nambya culture, the act of exorcising someone is usually done with the help of a traditional healer, who is also believed to possess spiritual powers to deal with the spiritual world. As we can note from the respective descriptions of the two senses for this verb, they seem to have a metaphorical relationship between them. We want to propose that the abstract act of forcing out evil spirits from a person is here

understood through the physical act of causing someone to vomit. To show this kind of relationship, in Figure 3 below we draw a list of correspondences between the two senses.

Figure 3

Source Domain: VOMIT	Target Domain: CHANGE MIND
cause to vomit food, etc	exorcise; cause to vomit bad ideas
cause	ause
vomit	externalise
food, water, poison, etc	ideas, feelings
stomach	brain/mind
harm	influence

-chenes- 'make something clean; sanctify'

Another verb whose meanings help illustrate semantic extension through metaphor is -chenes-, which literally means 'make something clean'. In its literal sense, the verb refers to an act of someone making somebody use their body parts to clean something and involves the act of squeezing the item to be cleaned. The washing or cleaning is usually done with water or other substance that has the capacity to take dirty out of something. However, this verb has another meaning of 'making someone holy'. Reference to holiness is here made to the 'washing' or 'cleaning' of a person's spirit. In this case, no water or other substance is used; the belief is that someone is made holy by the Holy Spirit, which is believed to come through some other person who is already holy. Thus, there is an element of cleaning in both meanings. A closer analysis of the two meanings shows that the first and more concrete one is componential whilst the second and more abstract one is metaphorical. We, thus, propose to treat the second meaning as an extension of the first one; that is, the sense of cleaning entailed in the physical washing in the first meaning has been extended in the second meaning to refer to a process of appealing to a person's mind in order to change his/her perspective. Because of the metaphorical relatedness between these two senses of -chenes-, we can list correspondences between them in Figure 4 as follows:

Figure 4

Source Domain: CLEAN	Target Domain: MAKE HOLY
cause to be physically clean	make holy; cause to be spiritually clean
cause	cause
wash	appeal
person	Holy Spirit
body, clothes, etc	mind, conscience
smartness	holiness

Following the kinds of correspondences listed for -lyis-, -sungw-, -fhis- and -chenes- above, we can conclude that metaphor, as a kind of semantic extension, is employed by language speakers as a means for interpreting the new or less familiar abstract concepts by referring to what is more concrete, well-established and common. In this case, the more abstract interpretations of these verbs are understood through those that are more concrete and basic in their respective sets.

From the above discussion, we have also noted that the more abstract interpretations of these verbs cannot be understood by the analytical or componential approach since they do not equal the sum-total of the meanings of their respective forms' sub-parts. Such kinds of interpretations appeal for use of encyclopaedic knowledge by the speaker

rather than relying on purely semantic knowledge of the language. In this case, cultural context plays a very important role in understanding the figurative use of the extended verbs. For example, one has to know these interpretations through acquiring them as they are used in specific contexts. Another reason for this lies in the process that gives rise to such meanings. Although metaphorical meanings such as those provided for -lyis-, -sungw-, -fhis- and -chenes- are originally created as novel usages by individuals or small groups of speakers, with time they tend to be conventionalised. The assumption is that a particular novel usage can spread to other speakers and even become conventional for the entire speech community. In this case, a particular usage gets unit status through continued and widespread use. We can, thus, argue that through conventionalisation, metaphorical uses of certain linguistic units cease to be recognised as being metaphorical by language users; hence they become lexicalised and are, therefore, acquired or learnt as part of the basic uses of the respective linguistic units. Conceived this way, the senses can also become the bases for the development or extension of newer uses or senses of respective verbs. As noted in Ungerer and Schmid (1996, p. 117), the logic behind this is that through its frequent association with a certain linguistic form, the figurative meaning of a word (in this case, extended verb) becomes so established in the speech community that it is not thought of as an extension from some other meaning, hence it should be entered in the lexicon as another sense of the word (extended verb) in its own right. The argument by Ungerer and Schmid is applicable to what has happened to the figurative meanings of the extended verbs that we have identified above as metaphorically extended. The meanings 'brainwash' for -lyis-, 'exorcise' for -fhis- and 'sanctify' for -chenes-, for example, have become so conventionalised in the Nambya speaking communities that when the extended verbs are used to convey these meanings the speakers do not think of them as having any relationship with the literal senses of the respective verbs.

3.2 Semantic extension through metonymy

Metonymy has been defined in Kövecses (2002, p. 145) as "a cognitive process in which one conceptual entity, the vehicle, provides mental access to another conceptual entity, the target, within the same domain … ." Observing the close relationship between metonymy and metaphor, Kövecses (2002, p. 145) goes further and notes that like metaphor, metonymies are conceptual in nature; and just like conceptual metaphors are revealed by metaphorical linguistic expressions, metonymies are also revealed by metonymic linguistic expressions. Basing our arguments on what Kövecses (2002) and other scholars who have written extensively on metaphor and metonymy (for example, Ungerer and Schmid 1996; Lakoff and Turner 1989; among others) have said on these two processes, we can conclude that most of what we have said about metaphor above can also apply to metonymy. For example, both concepts are conceptual in nature, both are means of extending the resources of a language, both can be conceptualised, they both rely on mappings or correspondences between elements from different concepts, etc.

However, besides this close relationship the processes differ in a significant way. Whilst in metaphor we have an entity in one domain being understood through reference to another entity in another domain, in metonymy we have two concepts or entities that are closely related to each other in conceptual space. As noted in Kövecses (2002, p. 147), the elements belong to one and the same domain. The assumption is that a single domain involves several elements that can stand metonymically for each other. The thesis is that if the entities belong to the same domain, they tend to form a coherent whole in our experience of the world as they co-occur repeatedly. Because they are tightly linked in experience, some of the entities can be used to indicate or to provide mental access to other entities within the same domain (Kövecses, 2002, p. 145). For example, because of

their repeated co-occurrence, the tongue can stand for speech whilst the hand can stand for writing (Ungerer and Schmid, 1996, p. 31).

As a form of semantic extension, metonymy has been described as involving a relation of contiguity or nearness between what is denoted by the literal meaning of a word and its figurative counterpart (see, for example, Ungerer and Schmid 1996, p. 115). To illustrate this contiguity with Nambya causatively extended verbs, we can take -shamis- (literal: cause to open one's mouth) as an example.

-shamis- 'cause to open one's mouth; surprise'
As shown in Table 2 above, this verb can have two kinds of interpretation or meaning. The first is the literal, 'cause someone or something to open mouth', and the second is figurative, 'surprise'. We would like to propose that the two meanings are related to each other metonymically, with the figurative meaning being a metonymical extension of the literal one. Analysed as such, the literal meaning 'cause someone to open his/her mouth' could be regarded as the vehicle entity whilst the figurative meaning is the target entity. In other words, the concept of 'surprising someone' is understood from the correspondence in the physical posture assumed by the mouth of someone who is surprised and that assumed by one whose mouth has been deliberately opened. In this case, we would like to argue that the element of an open mouth assumed by someone or something in more common or familiar life experiences is used to understand the posture assumed by one's mouth when he/she is surprised.

However, it is important to note that unlike in metaphor where we argued that the tendency is for abstract entities to be understood through more concrete entities, in the case of metonymy the mapping of elements is between elements in the same domain. In the mapping that we have established between the senses of -shamis- (that is, the physical posture assumed in both interpretations), for example, both the literal and the figurative uses of this verb refer to concepts or entities that are concrete. The same arguments can also be extended to the different meanings of a number of verbs provided in Table 2. Below are brief discussions on a few of these.

-bhatan- 'hold each other; be united'
Another extended verb whose meanings show semantic extension through metonymy is -bhatan-. Literally, this verb means 'hold each other'. In this case, two or more people use their hands to reciprocate in holding each other. This literal sense is metonymically related to the verb's other, figurative sense, that is, 'be united'. In this sense, the people involved concur or agree in whatever they are doing, implying that they act in unison. It is important to note that the posture presented by people holding other resembles the actions shown by people who are united. We would like to propose here that the idea expressed in the sense of 'being united' is understood from the correspondence in the closeness of the physical posture of hands assumed by people holding each other on the one hand and those assumed by those that are performed by people that are united. As such, it is quite logical to extend the act of 'holding each other' to closely related actions involved when two or more people are united.

-gaj- 'cause to sit; put (pot) on fire; install (a chief)'
This is another verb whose meanings illustrate a metonymic relationship. Although -gaj- has 'cause to sit' as its literal and compositional sense, it has other related senses that are not as componential as its literal one. These are (a) 'put something (pot) on fire' and

(b) 'install (a chief)'. The relationship between the three meanings of this verb could be seen in the similarity that obtains between the processes of making someone sit, putting something on fire and installing a chief; in all the three instances, someone or something is made to sit on or take a specific position. In this case, we want to argue that the non-componential and figurative senses of 'putting something on fire' and of 'installing a chief' should be understood as metonymic semantic extensions of the literal sense of 'causing to sit'. Our argument is based on the assumption that the posture that one assumes when sitting is the one that provides us with mental access that enables us to understand the other two senses.

-fugamil- 'kneel down for someone; worship/pray'
Another verb whose meanings exhibit a metonymic relationship is -fugamil-. This verb has a literal sense, 'kneel down for someone' and a figurative one, 'worship/pray'. Although the two meanings refer to different things, the similarity between them is the physical posture assumed by one who is ordinarily kneeling for someone and one who is praying. It is important to note that when praying to God in Nambya culture, one has to kneel down. We are persuaded to believe that it is the similarity between the two postures that explains the nearness between one who is kneeling down for someone, for example when giving food to the elders, and a person who is praying that relates the two meanings.

As noted in Taylor (2003, p. 125), a subcategory of metonymy is synecdoche. Taylor describes synecdoche as a case in which reference to the whole is made by reference to a salient part. In other words, a speaker refers to the whole by naming only a part. To illustrate this, we can take -laj- (literal: cause to lie down) as an example. As shown in Table 2 above, this verb can have two kinds of interpretation or meaning. The first is the literal, 'cause someone or something to lie down', and the second is figurative, 'bury someone'. We would like to propose that the concept of 'burying someone' is understood from the correspondence in the physical posture assumed by someone who is lying down and that assumed by one who has been laid to rest in a grave. In this case, the element of the horizontal posture assumed by someone or something lying down in more common or familiar life experiences is used to understand the posture assumed by someone who has been buried. The difference is that in the figurative use, the meaning has become so specialised that it is only associated with humans that are dead, and not with anything that can be made to take the horizontal posture as is the case with the literal sense. As will be evidenced in our treatment of semantic extension through specialisation in the following sub-section, synecdoche seems closely related to specialisation.

Just as we noted for metaphorical meaning extensions, one needs more than the linguistic knowledge of Nambya to understand figurative meanings that result from metonymical extension. For example, for one to understand that -laj- means 'bury someone in a grave' he/she has to have cultural knowledge that when the dead are being buried among the Nambya people, they are made to assume the horizontal posture (one that a person lying down would assume), which could, for example, be different from other cultures where people are buried in an upright or vertical posture, or are not even buried but are cremated. The same can be said about the non-compositional meanings of -shamis- 'surprise', -bhatan- 'be united', -fugamil- 'worhip/pray' and -gaj- 'put something on fire' or 'install a chief' discussed in this section. These non-compositional senses of the respective verbs have been conventionalised and are, to some extent, lexicalised. They have acquired unit status and when people use them they do not think of them as extensions from the literal senses of (a) opening one's mouth, (b) holding each other, (c) kneeling down for someone or (d) causing someone to sit, respectively.

3.3 Semantic extension through specialisation
Specialisation as a process leading to semantic change has been described in Ullmann (1964, p. 228) as follows:

> *The net result of the change is that the word is now applicable to fewer things, but tells us more about them; its scope has been restricted, but its meaning has been enriched with an additional feature.*

Kastovsky (1990, p. 78) argues that derivational morphology (for example, the formation of extended verbs) is usually associated with the process of specialisation of meaning. He notes that this may be due either to the derivational addition of certain semantic components, or to some change in the meaning of the constituents which results from the combination, or both. He also notes that, as a result of specialisation, the overall meaning of the derived form can no longer be deduced from the meanings of its constituents plus the knowledge of the word-formation patterns; rather, additional information is required. To show how this process works in Nambya, let us look at the following examples.

-lyis- 'cause to eat; feed someone with poisoned food'
In its non-specialised sense, -lyis- refers to the act of causing someone or something to eat something in general. There is no specification as to the things that are eaten; it refers to anything that is edible. However, the specialised sense refers to feeding someone with poisoned food only. Although the element of eating is still there, that is, that of taking in something into one's stomach, the extended verb has acquired a specialised use. Its reference only to feeding someone with poisoned food is evidence that it has developed special properties that go beyond those of eating in general. As we can see in this example, the shift in meaning results in the verb's derived meaning applying to fewer situations than those of the non-specialised one, but it yields more information about those situations. As further evidence to that, whilst in the non-specialised sense anything that has the capacity to eat can be made to eat something, in the specialised sense it can only be used with reference to humans.

-sungw- 'be tied around; be stopped from conceiving'
We have already discussed the two meanings of this verb under the section on semantic extension through metaphor. We have also included it under this section so that we can highlight the fact that the process of extending this verb also tends to specialise its meaning. In the literal sense, this verb seems to be general in the sense of referring to the act of tying anyone or anything around. However, the figurative sense is specialised in the sense that it specifically refers to fertile women who can be stopped from bearing children. For example, it does not refer to anything or to any humans. It refers to women but not all women, hence our proposal to also take the figurative sense as specialised.

-nwis- 'cause to drink; breastfeed'
This is another verb that helps illustrate semantic extension through specialisation of meaning. In its non-specialised sense, -nwis- refers to drinking in general, that is, a person or some other thing is made to drink any kind of liquid that is 'drinkable'. However, the extended sense of breastfeeding is specialised since it only refers to causing a child or other young animal to feed on milk from a mother's breast. Whilst the non-specialised meaning is predictable from 'summing up' the meanings of -nw- (drink) and -is- (cause to), the specialised sense is not. To understand the specialised sense, one needs Nambya socio-cultural knowledge.

-lebelej- 'cause to speak; cause to shout at someone'
The non-specialised sense of this verb refers to causing someone to speak in general; there is no reference to the way a person should speak or what he/she speaks about. However, this verb is also used to refer to another, specialised sense, which, although it still has the element of speaking; it has acquired some new features. For example, the use of this verb in its specialised sense does not make reference to making someone utter any nice words. Instead, one is made to utter words of anger. In other words, the specialised sense has acquired an element of provocation to the extent that when one speaks he/she does so in anger. The element of provocation cannot be understood by the componential approach to meaning.

-tizhis- 'cause to run away; cause to elope'
This is yet another verb that can be used to show semantic extension through specialisation. In its non-specialised sense, -tizhis- generally refers to the act of causing someone or something to run away. There is no specific reason for running away; it refers to any act of causing a person or something to leave some place with speed. However, the specialised sense refers to causing a girl to leave her family to join her future husband's family. Although the element of running away is still there in the specialised sense, that is, that of leaving with speed and unannounced, the extended verb has acquired a specialised use. Its reference only to a girl and not to any other category of humans is evidence that it has developed special properties that go beyond those of running away in general. When used in this sense, there is also specification of the reason for 'running away'. Just like in the case of -lyis-, -sungw-, -nwis-, and -lebelej-, the shift in meaning results in the verb's specialised meaning applying to fewer situations than those of the non-specialised one, but it yields more information about those situations.

It is important to note that the morpheme-by-morpheme analysis of the extended verbs discussed in this section would give us only the easily predictable and non-specialised senses, that is, 'cause someone to eat; feed (someone)' for -lyis-, 'be tied around' for -sungw-, 'cause to drink' for -nwis-, 'cause to speak' for -lebelej-, and 'cause to run away' for -tizhis-. However, because of the shift in meanings that occurred during the derivational process, it is rather difficult to discern the specialised semantic values of these verbs using this approach. As noted in sections that deal with other methods of semantic extension, the linguistic knowledge of Nambya alone cannot help us understand the specialised uses of these verbs. Like in the case of metaphorical and metonymical senses, the specialised senses can only be deduced by appealing to the speaker's socio-cultural knowledge.

In summing up this section, we have noted that the Nambya extended verbs discussed in this section are polysemous in that they have a range of distinct but related senses. We have noted that these verbs have compositional or predictable meanings that are a result of a sum of the meanings of their parts. In addition to these, they are also associated with other non-compositional meanings that develop or diverge from the compositional meanings through general processes such as metaphor, metonymy and specialisation. In the next section, we will go a step further and account for the relationship between these two categories of meaning. In doing this, we will use the Prototype Model of categorisation, which has been adopted in CG as a tool for categorising elements that belong to the same set or group.

4. The prototype model and polysemous senses of Nambya extended verbs
As we have already indicated above, we propose to approach the polysemous nature exhibited by Nambya extended verbs by assuming that in each set of meanings for

respective extended verbs, there is a fairly specific central sense, which should be regarded as the prototypical or core sense of the verb. The other separate but related senses become less-typical senses of the verb. Following our distinction between compositional and non-compositional meanings in the previous sections, we suggest that the compositional meanings of extended verbs be treated as the prototypical meanings of these verbs, and that non-compositional meanings that we described above either as metaphorical, metonymical or specialised be treated as less-typical or peripheral. Our basis for treating compositional senses as central derives from the fact that the compositional senses, at least those that we discussed in this article, designate scenes that are basic to human experience, hence they are typical of the way we use language to express our conceptualisation of the physical world. On the other hand, our understanding of non-compositional senses, as we have shown above, depends on similar or related elements of these more basic, compositional senses. To illustrate our hypothesis, we can take the verbs, -lyis-, -laj- and -nwis- that we have discussed above as examples of metaphorical extension, metonymical extension and specialisation, respectively. These verbs have been provided with the following meanings in Table 2:

-lyis-	(compositional: cause to eat/ feed; non-compositional: brainwash; greatly influence).
-laj-	(compositional: cause to lie down; non-compositional: bury a dead person).
-nwis-	(compositional: cause to drink; non-compositional: breastfeed).

From these examples, we can note that each of these verbs has a compositional sense which is always concrete and which encodes event types that are basic to human experience, that is, 'someone causes or makes someone do something'. However, in addition to these, we have also noted that the extended verbs have other meanings that diverge in different ways from these central senses. This divergence from the 'core' meaning is the basis for our treating them as belonging to the periphery of the category of senses co-existing with them in their respective meaning sets.

5 Conclusion

In this article, we tried to show that Nambya extended verbs are generally polysemous; each extended form is paired with different but related senses. We have generally classified the different senses as either being compositional or non-compositional and in our discussion of this general distinction, we noted that the compositional meanings are those that are predictable in that they can easily be deduced from the verb base + verbal extension derivational pattern. We have also treated these as the central and basic meanings against which other meanings can be developed or understood. On the other hand, we noted that non-compositional meanings are, in principle, unpredictable from the constructional pattern of the extended verbs. Instead, we tried to show that these meanings cannot be understood by only appealing to linguistic knowledge of Nambya since they are a result of semantic extension from the compositional senses through socio-culturally sensitive processes such as metaphor, metonymy and specialisation. From our analysis of the verb -lyis-, we also observed that these different processes can act together on a single verb resulting in more than one meaning divergence from the basic sense. For example, we noted that the two non-compositional senses of -lyis- (brainwash/greatly influence; cause to eat poison) are a result of metaphorical extension and specialisation, respectively. Such developments happen when the processes select different elements

of the verb as the basis for semantic extension. In the case of -lyis-, we can note that whilst with metaphorical extension all the attributes of the verb were taken as the basis for extension, with specialisation emphasis was only put on the thing that can be eaten. We also suggested that non-compositional meanings be treated as separate senses of respective verbs and that they should be given unit status in the lexicon of a language. We also argued for the use of the prototype model as a means of categorising sets of meanings of each extended form. With regard to this, we treated compositional senses as prototypical of the meanings of the extended verbs whilst the non-compositional senses were treated as peripheral. In the whole argument, our maintained view was that other approaches to semantics such as the Saussurean and the componential approaches cannot account for the polysemous nature of extended verbs. This is precisely the reason why we preferred to approach the semantics of extended verbs using CG, which in our view is broad enough, hence more adequate than other approaches in accounting for meaning as a socially and culturally conditioned phenomenon, of course in addition to being linguistic.

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