

# Akan verb-noun compounds

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This paper attempts to demarcate the class of Akan verb-noun compounds like *bɔ̀-àdée* [create-thing] ‘creator’, to discuss their properties and to present a Construction Morphology account of the properties. Working with the view that Akan verbs are invariably consonant-initial and that the verb constituent of verb-noun compounds are invariably simplex, it is shown that many exemplars cited in the Akan literature do not belong to the class because they bear affixes that betray them as either nominalized verb phrases or noun-noun compounds with deverbal left-hand constituents. It is shown that the noun constituent may be the internal argument of the verb mostly, but may also be the external argument or an adjunct, usually naming the location of the action. The noun constituent may bear the semantic role of undergoer, affected object, patient, instrument, location, result or goal of the action/event designated by the verb, while the denotatum of the compound may be agent, theme, instrument, location or condition. Finally, it is shown that Akan verb-noun compounds have endocentric and exocentric subtypes whose properties are adequately accounted for in Construction Morphology.\*

KEY WORDS: Akan, Construction Morphology, constructional schema, holistic properties, verb-noun endocentric/exocentric compounds.

## 1. Introduction

This paper deals with the class of Akan (Kwa, Niger-Congo) compounds that are made up of verbs and nouns which share various grammatical and semantic relations. See (1).

- |  |  |
|--|--|
| (1) a. <i>kùm-kóm</i><br>kill-hunger<br>‘hunger killer (a species of maize)’ | b. <i>dá-àmóná</i><br>sleep-hole<br>‘an animal which dwells in a hole’ |
|--|--|

These verb-noun (hereafter, V-N) compounds are theoretically interesting for various reasons. Crucially, they differ from other verb-

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involved compounds (e.g., N-V compounds like *ndwóm-tó* [song-sing] ‘singing’, and V-V compounds like *gyé-dí* [take-eat] ‘faith’) because they have the same constituent order as Akan VPs and some of them actually meet the structural description for VPs, where the noun is the internal argument of the verb. Thus, in dealing with V-N compounds, a number of issues come to the fore whose discussion is informed by both linguistic facts and the theoretical orientation of the analyst. Before I present them, I briefly introduce the issue of headedness in compounds.

The head of a construction characterises the dominant and privileged member in an asymmetrical relation which determines the properties of the whole (Croft 2001). Work on headedness in compounds (Williams 1981; Scalise 1984; Di Sciullo & Williams 1987; Scalise et al. 2005; Scalise & Fábregas 2010) stress the view that a compound may have different kinds of heads, potentially represented by different constituents of the compound but may also coincide. A principal distinction is made between a formal head and a semantic head. The formal head is characterised as the constituent that shares its subcategorization frame and lexical category with the entire compound so that the compound has the same distribution as the formal head. The semantic head, on the other hand, is the constituent which shares its lexical conceptual information with the whole; thus, the compound is a hyponym of the semantic head (Scalise & Guevara 2006: 190).

Other studies present other kinds of distinctions. For example, Dressler (2006: 32-33), distinguishes between a semantic head, a syntactic head and a morphological head. He observes that in the compound *pickpocket*, there is no semantic head since the referent of the compound is not in the compound. *Pick* is the syntactic head because it is that which selects *pocket* as its internal argument. *Pocket* is the morphological head because, on pluralizing the compound, the plural marker attaches to *pocket*, as in *pickpocket-s* and not *\*pick-s-pocket*. Thus, for Dressler, although the compound *pickpocket* is syntactically headed, it is semantically exocentric.

Some other studies posit even a categorial head whose absence in a compound results in what is referred to as categorial exocentricity, as seen in compounds like *kill joy* and *pickpocket* in which the nominal syntactic category does not come from the noun constituent (Fábregas & Scalise 2012: 127).

We deduce from the foregoing that the formal head may be a cover term for any combination of the various types of heads apart from the semantic head. However, it may coincide with the semantic head. In this paper, I use “formal head”, to refer to the syntactic head and select-

ing element in the construction, as described above (cf. Scalise et al. 2005; Dressler 2006). Thus, I will maintain throughout the paper that the V constituents formally head the V-N compounds at issue. However not all of them are semantically headed since, although they are all nouns, they are not all hyponyms of the N constituents.

Three important issues are noted from the literature on V-N compounds. The first issue concerns the form and syntactic category of the left-hand constituents and, by extension, the syntactic category of the whole compound. This is an important issue because most analysts adopt a source-oriented perspective (cf. Zager 1981), where properties of a complex unit must come from the constituents. By this, we would expect the formal head of the nominal V-N compound to be a noun since it is expected to share its syntactic category with the compound. Yet, the first constituent, which is the formal head of the compound, is a verb. Thus, it is important to know whether the left-hand constituent is nominalized prior to becoming part of the compound, making it an N-N compound, or whether there is a post-compounding nominalization process (cf. Bauer 1980; Di Sciullo & Williams 1987; Corbin 1992; Lieber 1992). For Akan, this is particularly interesting because Akan compounds are invariably nominal (Christaller 1875; Dolphyne 1988; Anyidoho 1990; Anderson 2013; Appah 2015).

The second issue is whether the formation of V-N compounds is a matter of syntax or morphology. This has engendered interesting theoretical debates (Di Sciullo & Williams 1987; Corbin 1992; Lieber 1992; Scalise 1992; Fradin 2009; Kornfeld 2009). I do not comment on it, although I believe that the formation of Akan V-N compounds is a matter of morphology because the V-N constructs at issue are without verbal inflection, which is obligatory in syntactic constructions.

The third issue, which is closely related to the second one, has to do with how to distinguish V-N compounds from VPs, given the fact that the syntactic category and order of constituents in V-N compounds pattern after the verb-object word order in many languages that have V-N compounds (Fradin 2009; Kornfeld 2009; Basciano et al. 2011). For Akan, it can be shown that, for three reasons, we have to treat the Akan V-N compounds as compounds and not phrases. One, they tend to be semantically non-compositional, whilst phrases are usually compositional.<sup>1</sup> Two, we do not find verbal inflection on the verb of V-N constructs, whereas inflectional marking is obligatory in syntactic constructions. Three, a subclass of V-N compounds bears a particular tonal melody that analogous VPs lack. I do not comment in detail on these issues in this paper because they constitute the subject of a separate paper (Appah *forthcoming*,a).

In section 2, I show how the class of Akan V-N compounds may be delineated. This is important because no current study clearly delineates the membership of the class. Neither does any discuss their properties in any detail, beyond noting their existence and citing exemplars. I also present the dataset for the present study.

In section 3, I discuss the properties of Akan V-N compounds, showing that the noun constituent may be an internal or external argument or even an adjunct referring to the location of the action of the verb. The semantic role of the noun constituent may be undergoer, affected object, patient, instrument, location, result or goal of the event designated by the verb. I also show that the overall interpretation of the compound may be agent, theme, instrument, location or condition. Finally, I show (section 3.2.2) that V-N compounds have endocentric and exocentric subtypes whose properties are accounted for adequately, in section 4, using formalism from Construction Morphology (Booij 2010a, 2010b). Section 5 concludes the paper.

## *2. V-N Compounds in the Akan literature*

V-N compounds are described in various ways in the literature on Akan compounding, with many exemplars presented and some important features pointed out (cf. Christaller 1875; Dolphyne 1988; Abakah 2006). However, in this section, I show that some of the exemplars mentioned do not belong to the class.

An important feature of Akan V-N compounds is that typically the left-hand constituents are morphologically simplex. Indeed, it seems to me that only nominal bases in Akan compounds may be complex. The others occur in compounds as simplex consonant-initial bases, much in agreement with the observation that “[a]djectives and adverbs in Akan are consonant initial” (Dolphyne 1988: 78). Here verbs are not mentioned but my own observation is that Akan verbs are invariably consonant-initial (see also Obeng 2009). Hence, if the verb constituent of a V-N construct bears an obligatory prefix, we assume that either the affix is nominalizing the verb that it is attached to, making the word a noun-noun compound, or nominalizing the entire verb-noun construct (or VP), making the final process affixation and not compounding.

Thus, the principal criterion for membership of the class of Akan V-N compounds is the presence of a simplex consonant-initial verb and a noun, which is also mostly simplex. By this criterion, the twelve constructs in Table 1 qualify as V-N compounds, out of the many list-

**Table 1.** V-N compounds in the Akan literature (Christaller 1875; Dolphyne 1988; Abakah 2006).

COMPOUND	CONSTITUENTS	GLOSS	TRANSLATION
1 <i>kyéàdée'</i>	<i>kyé-àdée'</i>	to share-thing	'generous person'
2 <i>bɔ̀àdée'</i>	<i>bɔ̀-àdée'</i>	to make-thing	'creator'
3 <i>kɔ̀àyié</i>	<i>kɔ̀-àyié</i>	to attend-funeral	'one who attends funerals regularly'
4 <i>dìàbóró</i>	<i>dì-àbóró</i>	to use-malice	'malicious person'
5 <i>sùmá!sém</i>	<i>sùmá-àsém</i>	to hide-matter	'secret'
6 <i>gyinà béá</i>	<i>gyinà-èbèá</i>	to stand-place	'standing place'/'status'/'position'
7 <i>dàbéré/ dàbéw'</i>	<i>dá-béré</i>	to sleep-place	'a place to lie on'/'sleeping place'
8 <i>tèbèá</i>	<i>té-bèá</i>	to live-manner	'condition'
9 <i>twá!bó</i>	<i>twá-bó</i>	to cut-stone	'a stone by which gold is tried'
10 <i>yébéá</i>	<i>yé-béá</i>	to do-manner	'manner of doing'
11 <i>trà!béá</i>	<i>trà-béá</i>	to sit-place	'a place to sit'
12 <i>sùsù!dúá</i>	<i>sùsù-dúá</i>	to measure-thing	'a measure'/'a stick which they take and measure things'

ed in the literature. Note that I retain the orthographies of the three main dialects of Akan, as used in the data sources. Therefore, slightly different forms may represent the same meaning (e.g. location/place represented by *bèá/béw/béré*), without impeding comprehension.

The claims made in this paper hold true for all the three major dialects of Akan – Akuapem, Asante and Fante. However, if any particular example is specific to one dialect, I will indicate it as follows: Akuapem (Ak), Asante (As) and Fante (Fa).

**Table 2.** Christaller's (1875) examples of Akan V-N compounds.

COMPOUND	CONSTITUENTS	GLOSS	TRANSLATION
1 <i>akyede</i>	<i>a-kye-de</i>	NMLZ-dash-thing	'a gift'
2 <i>atuboa</i>	<i>a-tu-boa</i>	NMLZ-fly-animal	'an animal which flies, a bird, a bat, flies'
3 <i>atesem</i>	<i>a-te-sem</i>	NMLZ-hear-matter	'a word heard, hearsay'
4 <i>ahenne(ε)</i>	<i>a-hen-ne(ε)</i>	NMLZ-king-thing	'the royal insigniae'
5 <i>ahensem</i>	<i>a-hen-sem</i>	NMLZ-king-matter	'a king's doings'
6 <i>atetede</i>	<i>a-tete-de</i>	NMLZ-ancient-thing	'a thing of the old time'
7 <i>atetesem</i>	<i>a-tete-sem</i>	NMLZ-ancient-matter	'a story of ancient times'

**Table 3.** Akan V-N compounds (Dolphyne 1988: 123).

COMPOUND	CONSTITUENTS	GLOSS	TRANSLATION
1 <i>àyédé</i>	<i>à-yé-àdé</i>	NMLZ-do-thing	‘object’
2 <i>àtúbóá</i>	<i>à-tú-àbóá</i>	NMLZ-fly-animal	‘a fly’
3 <i>àsén!núá</i>	<i>à-sén-núá</i>	NMLZ-hang-tree/wood	‘crucifix’
4 <i>àbódín</i>	<i>à-bó-dín</i>	NMLZ-call-name	‘title’

**Table 4.** Akan V-N compounds (Abakah 2006: 20).

COMPOUND	CONSTITUENTS	GLOSS	TRANSLATION
1 <i>nìndèé</i>	<i>nímú-àdé-(é)</i>	know-a thing-NMLZ	‘knowledge’
2 <i>àpàgyá</i>	<i>à-pá-ògyá</i>	NMLZ-strike-fire	‘a thing for striking fire/matches’
3 <i>èbisádzé</i>	<i>è-bisa-àdzé</i>	NMLZ-ask-thing	‘a request’
4 <i>̀̀kàsà̀̀nimú</i>	<i>̀̀kà̀̀sa-̀̀nimú</i>	NMLZ-speak-face	‘rebuke/chiding’

By the criterion of two simplex constituents, the constructs in Table 2 (Christaller 1875: 26-27), Table 3 (Dolphyne 1988: 123) and Table 4 (Abakah 2006: 20) do not qualify as V-N compounds, for various reasons. The first is that they all bear affixes on the left-hand constituent, which is otherwise simplex and consonant-initial. Importantly, if we take away the affix from any of the excluded constructs, the remainder does not constitute a well-formed compound. For example, *àyédé* and indeed each construct in Table 2 and Table 3, without the prefix, becomes ill-formed (e.g., *\*yédé*), making them clearly distinguishable from the V-N compounds in Table 1 which do not need affixes to be well-formed. Likewise, each construct in Table 4 has either a suffix (Table 4, 1) or a prefix (Table 4, 2-4), which seems to nominalize an underlying VP.

Another reason why some exemplars have to be excluded from the list of Akan V-N compounds is that sometimes the constructions simply do not match the descriptions they are supposed to instantiate. For examples, the constructs in Table 2, 4-7 do not contain verbs at all. Christaller (1875: 26-27) describes the parent group of these compounds as “[c]ompounds of a noun with an attributive noun in the possessive case before it”, meaning that the left-hand constituent is “a noun in the possessive case”, making them N-N compounds. Indeed some of Christaller’s examples (Table 2, 1-3) bear nominalizing prefixes that show that the left-hand constituents are not verbs, but nouns as he describes them. However, he also notes that “[t]he qualifying component is a verb” that “must be rendered by an adjective sentence”

(Christaller 1875: 26). That is to say that the verbs may correspond to adjectives in English.<sup>2</sup>

Dolphyne (1988: 123) refers to the compounds at issue as “verb plus object compounds”, but that is not wholly accurate since in some examples (e.g., *àtúbóá* ‘a fly’ and *àsén'núá* ‘crucifix’, in Table 3) the noun constituents are not objects of the verbs. Rather, they are heads of relative clauses, as shown in (2a-b).

- (2) a. *àbóá*                                 *á*                 *ó-tú*  
       animal                                 REL             3SG-fly  
       ‘an animal that flies’
- b. *dùá*                                 *á*                 *yé-dé*             *séh*             *nípá*  
       wood                                 REL             3PL-use           hang             human beings  
       ‘wood for hanging human beings’

Regarding tone, Dolphyne (1988) and Abakah (2006) give conflicting accounts. Dolphyne observes that the tonal pattern of the verb constituent is invariably high, notwithstanding the tonal pattern of the form in isolation. This is consistent with Dolphyne’s position, also echoed in Marfo (2004, 2005), that where tonal changes occur in compounds, they are usually related to the tonal pattern of the first constituent. Abakah contradicts this position, observing that irrespective of the tonal pattern of the first constituent in isolation, it is realized on low tone in the compound. The data do not support either claim, not even their own examples. It is a fact that tone may be used to distinguish some members of this class of compounds from phrases, but the tonal pattern of the first constituents of V-N compounds is a bit more diverse than presented in the literature. See examples (6) and (7).

The foregoing shows that previous analyses haven’t adequately described the character of Akan V-N compounds. Thus, of the 27 putative V-N compounds posited in the three sources (Christaller 1875; Dolphyne 1988; Abakah 2006), only 12 (44.4%) of them (Table 1) are actual V-N compounds. This suggests that the class of Akan V-N compounds might be small, much in agreement with the fact that V-N compounding is cross-linguistically somewhat rare and not productive, except in the Romance languages where it is the most productive pattern of compounding (cf. Scalise 1992; Bauer 2008; Kornfeld 2009; Fradin 2009; Basciano et al. 2011).

In Table 5, I present the 12 examples found in the relevant literature together with additional ones collected from other sources, including the Akan translation of the Universal Declaration on Human Rights, a children’s reader on fishing, and an Akan translation of Plato’s apology of Socrates.

**Table 5.** Akan V-N Compounds.

COMPOUND	V	N's	SEMANTIC	GRAMMATICAL	COMPOUND'S
		DENOTATUM	RELATION	RELATION	DENOTATUM
1 <i>dá-àmóná</i> to sleep-hole 'an animal which dwells in a hole'	INTR	Locative	Event - Location	Verb- Adjunct <sub>[Loc]</sub>	Theme
2 <i>ká-àkyíré</i> to remain-behind 'lastborn/youngest family member'	INTR	Locative	Event-Location	Verb- Adjunct <sub>[Loc]</sub>	Theme
3 <i>kúm-kóm'</i> to kill-hunger 'hunger killer/a species of maize'	TR	Patient	Action-Patient	Verb- Object <sub>[pat]</sub>	Agent
4 <i>sùsú-dùá</i> to measure-stick 'standard/yardstick/measuring rod'	TR	Instrument	Action- Instrument	Verb-Subject	Instrument
5 <i>tò-béw'</i> to put-place 'location (where something is put)'	TR	Locative	Action-Location	Verb- Adjunct <sub>[Loc]</sub>	Location
6 <i>dà-dùá</i> to lie-wood 'imprisonment/incarceration'	INTR	Locative	Event-Location	Verb-Object	condition
7 <i>dà-béré/dà-béw'</i> to lie-place 'position/sleeping place'	INTR	Locative	Event-Location	Verb- Adjunct <sub>[Loc]</sub>	Location
8 <i>kyé-péni'</i> to share-portion 'portion/lot/allotment'	TR	Theme	Action-Theme	Verb-Object	Theme
9 <i>kyé-àdéé'</i> to share-thing 'generous person'	TR	Theme	Action-Theme	Verb-Object	Agent
10 <i>dì-bèá</i> to assume-location/place 'position/rank'	INTR	Locative	Event-Location	Verb- Adjunct <sub>[Loc]</sub>	condition / location
11 <i>tè-bèá</i> to be-place/(nature) 'state/(living) condition'	INTR	Locative	State-Manner	Verb- Adjunct <sub>[Loc]</sub>	condition / location
12 <i>gyiná-béw'</i> to stand-place 'position'	INTR	Locative	Event-Location	Verb- Adjunct <sub>[Loc]</sub>	condition / Location
13 <i>tèná-'bèá</i> to sit-place/(nature) 'siting place'	INTR	Locative	Event-Location	Verb- Adjunct <sub>[Loc]</sub>	Location
14 <i>bɔ̀-nsúó</i> to hit-water 'professional car wash(er)'	TR	Instrument	Action- Instrument	Verb-Object	Agent



COMPOUND	V	N's DENOTATUM	SEMANTIC RELATION	GRAMMATICAL RELATION	COMPOUND'S DENOTATUM
15 <i>kɔ-nsúó</i> to fetch-water 'one fetches water'	TR	Theme	Action-Theme	Verb-Object	Agent
16 <i>bɔ-ɔ́tíré</i> to hit/plait-hair 'one who plaits hair'	TR	Theme	Action-Theme	Verb-Object	Agent
17 <i>kɔ-àyié</i> to attend-funeral 'one who attends funerals'	TR	Goal	Action-Goal	Verb-Object	Agent
18 <i>dí-àbóró</i> to use-malice 'malicious person'	TR	Theme	Action-Theme	Verb-Object	Agent
19 <i>bɔ-àdée</i> to create-thing 'creator'	TR	Effect/ result	Action-Effect/ Result	Verb-Object	Agent
20 <i>sùná-<sup>1</sup>séń</i> to hide-matter 'secret/a matter which is hidden'	INTR	Theme	Action-Theme	Verb-Subject	Theme
21 <i>twá-<sup>1</sup>bó</i> to cut-stone 'a stone by which gold is tried'	TR	Theme	Action-Theme	Verb-Object	Instrument

### 3. Akan V-N Compounds and their properties

A number of useful facts and information about the form as well as the grammatical and semantic relations obtaining between the constituents of Akan V-N compounds may be read off the data in Table 5. I present the interesting formal properties in section 3.1 and explore the semantic properties in section 3.2, including the thematic role of the N constituent, relative to the V constituent, the semantic relations between the constituents of V-N compounds as well as the denotatum of the whole compound. I also show that we can posit endocentric and exocentric subtypes of Akan V-N compounds.

#### 3.1. Formal properties of Akan V-N compounds

From Table 5, we see that each V-N construct is a combination of a simplex verb and a simplex noun, as noted in the previous section. It is possible, however, that we may find examples in which the noun constituents are complex. I can immediately think about *díàsèmpá* 'a benevolent person' (lit. one who does what is good) in (3). In this construction, the nominal is itself a compound which is made up of a noun, *àséń* 'matter', and an adjective, *pá(pá)* 'good'.

- (3) *dí-àsèmpá* (As)  
engage.in-benevolence  
'benevolent person'

The noun constituents of the V-N compound may be either the subject or the object of the verb constituents, depending on the transitivity of the verb. For transitive verbs, the nouns tend to saturate the internal argument position of the verb, bearing various thematic roles, discussed below. With intransitive verbs or those that are optionally intransitive, the noun constituent may be the external argument.

However, not every noun in a V-N compound is a core argument of the verb, because some of them are adjuncts, as mentioned above. Nevertheless, because every activity takes place within time and space, we can almost always establish a head-dependent relation of some sort between the constituents of such compounds. For example, the event of sleeping (4) has to occur somewhere, and so although *da* 'sleep' doesn't take an object, we can still establish a relation between it and the noun which names the place where the sleeping occurs.

- (4) *dá-àmóná* (Fa)  
sleep-hole  
'an animal which dwells in a hole'

There is an interesting fact about the compound in (4) which supports the view that the formation of Akan V-N compounds is morphological and not syntactic. That is, although there is a verb and its adjunct in the compound which is a well-formed morphological construction, it would not be well-formed as a syntactic construction. This is because as a syntactic construction, the adjunct would be a phrase, as shown in (5), where the noun *àmóná* 'hole' is modified by the relator noun *mú* 'inside' (cf. Osam et al. 2011).

- (5) *dà*      *àmóná*      *mú*  
sleep      hole      inside  
'sleep inside a hole'

### 3.2. The semantics of Akan V-N compounds

Akan V-N compounds have very interesting semantic properties. I noted above that whether the noun is interpreted as external argument or internal argument depends on the transitivity of the verb. Transitive verbs may occur with their internal arguments, bearing one of the thematic roles associated with the verb – manner, instrument, location, etc., as discussed below. For intransitive verbs, the nouns may refer to the location of the activity/event designated by the verb.

3.2.1. *The semantic patterns in Akan V-N compounds*

The semantic relation between the constituents of the compound is nuanced. In *kúm-kóm* ‘hunger-killer’ (Table 5, row 3), for example, the noun constituent names the undergoer or patient of the action designated by the verb *kúm* ‘to kill’.

In a number of these compounds, the nouns that occur in them mainly refer to the location of the activity designated by the verb (e.g. rows 1 and 7) or a place where, as a result of the activity designated by the verb, the referent comes to be located (e.g. rows 2 and 5).

There is a sub-type of the second group where the idea of “being located” has to be interpreted metaphorically. For example, the compound in rows 10, 11 and 12 refer to the location in life (social status) of the referent. However, being compounds and for that matter, words, we cannot rule out the possibility of the noun being ambiguous between an actual and a metaphorical reading. For instance, the compounds in rows 10 and 12 could refer to actual positions in a queue in, for example, a banking hall. Likewise, the compound in row 11 could refer to an actual sitting place at a meeting. In my view, though, this particular interpretation might be blocked by the presence of *tèná-béá* ‘sit place’ (row 13) with the same meaning.

The high number of V-N compounds referring to locations does not seem to be specific to Akan. Fradin (2009: 426) reports a similar pattern for French where “[t]he locative type is widely illustrated by place names ... and also by functional objects whose functionality crucially involves location”. We find that, in Akan, except *dà-dùà* ‘imprisonment’, in which the noun *dùà* ‘wood’ does not name a location *sensu stricto*, any noun in a compound whose denotatum is location refers to an actual location, although some may be amenable to metaphorical interpretation, as noted above. The semantic patterns found in the Akan data are summarised in (6).

(6) Semantic patterns in Akan V-N compounds

- |       |  |                      |                                     |
|-------|--|----------------------|-------------------------------------|
| a.    | V-N compounds, where N is location of action/event V           |                      |                                     |
| i.    | <i>dá-àmóná</i>  | to sleep-hole        | ‘an animal which dwells in a hole’  |
| ii.   | <i>ká-àkyiré</i>   | to remain-behind     | ‘lastborn/youngest family member’   |
| iii.  | <i>tò-béw</i>  | to put-place         | ‘location (where something is put)’ |
| iv.   | <i>dà-dùà</i>  | to lie-wood          | ‘imprisonment/incarceration’        |
| v.    | <i>dà-béré</i>   | to lie-place         | ‘position/sleeping place’           |
| vi.   | <i>dì-béá</i>  | to assume-place      | ‘position/rank’                     |
| vii.  | <i>tè-béá</i>  | to live-place/nature | ‘state/(living) condition’          |
| viii. | <i>gyinà-béw</i>   | to stand-place       | ‘position’                          |
| ix.   | <i>tèná-béá</i>  | to sit-place         | ‘sitting place’                     |
| b.    | V-N compounds, where N undergoes/is affected by action/event V |                      |                                     |
| i.    | <i>kúm-kóm</i>   | to kill-hunger       | ‘hunger killer/a species of maize’  |

- |      |                    |                   |                       |
|------|--------------------|-------------------|-----------------------|
| ii.  | <i>kyɛ-àdɛɛ́</i>   | share-thing       | ‘generous person’     |
| iii. | <i>kɔ̀-ɲsúó</i>    | to fetch-water    | ‘one fetches water’   |
| iv.  | <i>bɔ̀-ɔ̀tírɛ́</i> | to hit/plait-hair | ‘one who plaits hair’ |
| v.   | <i>sùmá-sém̄</i>   | to hide-matter    | ‘secret’              |
- c. V-N compounds, where N is used for/in action V
- |      |                 |                  |                                    |
|------|-----------------|------------------|------------------------------------|
| i.   | <i>sùsu-dùá</i> | to measure-stick | ‘standard/yardstick/measuring rod’ |
| ii.  | <i>dí-àbóró</i> | to use-malice    | ‘malicious person’                 |
| iii. | <i>bɔ̀-ɲsúó</i> | to hit-water     | ‘professional car wash(er)’        |
| iv.  | <i>twá-!bó</i>  | to cut-stone     | ‘a stone by which gold is tried’   |
- d. V-N compounds, where N is created by/results from action/event V
- |     |                  |                  |                         |
|-----|------------------|------------------|-------------------------|
| i.  | <i>kyɛ-pɛ́ɲ</i>  | to share-portion | ‘portion/lot/allotment’ |
| ii. | <i>bɔ̀-àdɛɛ́</i> | to create-thing  | ‘creator’               |
- e. V-N compounds, where N is the goal of action V
- |    |                 |                   |                            |
|----|-----------------|-------------------|----------------------------|
| i. | <i>kɔ̀-àyié</i> | to attend-funeral | ‘one who attends funerals’ |
|----|-----------------|-------------------|----------------------------|

### 3.2.2. The endocentric / exocentric dimension

V-N compounds are said to be mostly exocentric (cf. Bauer 1980; Scalise 1984; Di Sciullo & Williams 1987; Scalise 1992; Scalise & Guevara 2006; Fradin 2009; Kornfeld 2009; Basciano et al. 2011). For example, discussing V-N compounds in Spanish, Kornfeld (2009: 439) observed that “none of the constituents may apparently function as the head” and that this exocentricity is a problem for the analysis of such compounds. However, as the data in (8) show, for Akan only a slim majority, 11 out of 21 (52.4%), is semantically exocentric. The endocentric group (7) constitutes an appreciable size of the inventory, 10 out of 21 (47.6%). The endocentric compounds are also semantically right-headed because each is a hyponym of the right-hand constituent, much in agreement with the observation that Akan endocentric compounds are predominantly right-headed (Appah 2013a, 2013b; Marfo 2004).

- (7) Endocentric V-N compounds in Akan
- |    |                   |                      |                                     |
|----|-------------------|----------------------|-------------------------------------|
| a. | <i>sùsú-dùá</i>   | to measure-stick     | ‘standard/yardstick/measuring rod’  |
| b. | <i>tò-béw̄</i>    | to put-place         | ‘location (where something is put)’ |
| c. | <i>dà-béré</i>    | to lie-place         | ‘position/sleeping place’           |
| d. | <i>kyɛ-pɛ́ɲ</i>   | to share-portion     | ‘portion/lot/allotment’             |
| e. | <i>dí-béá</i>     | to assume-place/rank | ‘position/rank’                     |
| f. | <i>tè-béá</i>     | to be-manner/nature  | ‘state/(living) condition’          |
| g. | <i>gyiná-béw̄</i> | to stand-place       | ‘position’                          |
| h. | <i>sùmá!sém̄</i>  | to hide-matter       | ‘secret’                            |
| i. | <i>twá-!bó</i>    | to cut-stone         | ‘a stone by which gold is tried’    |
| j. | <i>tèná-béá</i>   | to sit-place         | ‘sitting place’                     |

The endocentric subtype of Akan V-N compounds illustrate the view that a compound may have a formal head and a semantic head which may not be co-extensive (Di Sciullo & Williams 1987; Dressler 2006; Selkirk 1982; Lieber 1989; Scalise & Fábregas 2010; Scalise &

Guevara 2006; Appah *forthcoming*,b). This is because, in all of them, the formal heads (cf. Scalise et al. 2005) are the left-hand verbal constituents, whilst the semantic heads are the right-hand noun constituents because they are hyponyms of their right-hand constituents.

In characterising the compounds in (8) as exocentric, I am working with the view of exocentricity as the situation where a construction lacks a semantic head element or a crucial feature needed for the interpretation of the construction is external to the construction (Bauer 2008, 2010; Appah *forthcoming*,b).

- (8) Exocentric V-N compounds in Akan
- |                     |                   |                                    |
|---------------------|-------------------|------------------------------------|
| a. <i>dà-àmóná</i>  | to sleep-hole     | 'an animal which dwells in a hole' |
| b. <i>dà-dùà</i>    | to lie-wood       | 'imprisonment/incarceration'       |
| c. <i>ká-àkyiré</i> | to remain-behind  | 'lastborn/youngest family member'  |
| d. <i>kɔ-àyié</i>   | to attend-funeral | 'one who attends funerals'         |
| e. <i>kum-kóm</i>   | to kill-hunger    | 'hunger killer/a species of maize' |
| f. <i>kyé-àdédé</i> | to share-thing    | 'generous person'                  |
| g. <i>bɔ-nsúó</i>   | to hit-water      | 'professional car wash(er)'        |
| h. <i>kɔ-nsúó</i>   | to fetch-water    | 'one fetches water'                |
| i. <i>bɔ-ɔtiré</i>  | to hit/plat-hair  | 'one who plaits hair'              |
| j. <i>dí-àbóró</i>  | to use-malice     | 'malicious person'                 |
| k. <i>bɔ-àdédé</i>  | to create-thing   | 'creator/one who creates things'   |

The class of Akan exocentric V-N compounds fall under what Appah (*forthcoming*,b) calls participant exocentric synthetic compounds. A participant exocentric synthetic compound is one whose referent is a participant in an event designated by the denotatum of the compound. We identify two subtypes. They are the patient exocentric synthetic type in which the referent of the compound suffers the effect of the denotatum of the compound (e.g., 8a-b) and the agentive exocentric synthetic compound in which the referent is the agent of the denotatum of the compound (e.g., 8e-k).

These Akan exocentric V-N compounds are not like English *red-skin* which Booi (2002: 143) regards as not being exocentric but as belonging to a specific class whose interpretation is based on metonymy, where a part of an entity is used to represent the whole. What we have seen in this section is a case of characteristic activity used to refer to the entity involved in the activity. Thus, we acknowledge that this class of compounds may be metonymic. That notwithstanding, we note that these compounds are exocentric because some crucial semantic properties needed for the interpretation of the compounds tend not to be formally anchored in the compound (Appah *forthcoming*,b). Thus, the compounds are exocentric, much like Italian *lavapiatti* 'dishwasher' which is regarded as exocentric because the agentive semantics is not morphotactically anchored (cf. Scalise 1984, 1992; Bauer 2008, 2010).

Finally, it has to be noted that Akan is similar to Sranan (cf. Braun 2009) because a significant portion of the inventory of V-N compounds is endocentric.

#### *4. Construction Morphology account of V-N compounds*

In view of the inventory of properties of Akan V-N compounds, we are confronted with the question of how to provide a consistent account of the semantic properties of both the endocentric and the exocentric subtypes, since some of them have semantic properties that are not present in their constituents. Also interesting is how to account for the form-class of the exocentric subtype, given the fact that we cannot ascribe the form-class to the formal head, which is a verb and they are not hyponyms of the noun constituents either.

The question of the semantics of the class of Akan V-N compounds had not previously engaged the attention of Akanist researchers; thus, the fact that they can be classified into endocentric and exocentric subtypes had not been discussed. With regard to the syntactic category of the compounds, again, we cannot point to any study that specifically engages the issue, except Appah (2013b, 2015). However, given the current trend where every verbal head of an Akan compound is assumed to be nominalized prior to becoming part of the compound (Christaller 1875; Anyidoho 1990; Anderson 2013), we can surmise that the approach to accounting for the head of Akan V-N compounds would not be any different. That is, analysts would assume that the verb is nominalized prior to becoming part of the compound.

An alternative view would be that the nominalization occurs post-compounding, much in agreement with the practice elsewhere (e.g., Lieber (1992) for French V-N compounds and Scalise (1992) for Italian) where scholars posit an abstract nominalizer which nominalizes either an underlying VP or a V-N construction post-compounding. Accounting for the agentive semantics of the exocentric subtype would follow this alternative approach, in that the agentive semantics would be assigned to an abstract nominalizer (cf. Obeng 2009; Anderson 2013).

The two alternative approaches suggested above are mainly informed by the source-oriented theoretical perspective adopted, which requires that every property of the whole must come from the parts. I believe, however, that we can account for the form-class of the exocentric compounds and their semantic properties without needing to posit a zero morph to anchor the agentive meaning. The

way to do this is to assume that the relevant extra-compositional formal and semantic properties are holistic properties of the compound constructions, much in agreement with the view that “systematic properties of compounds need not be derived from the head, but can be seen as holistic properties of the compound construction” (Booij 2012: 345).

Thus, I assume that the nominal syntactic category is a holistic property of the Akan compound which does not necessarily come from the constituents, because it is obvious that, for most of the compounds, the nominal form-class cannot be deemed to emanate from either constituent. This approach is strongly supported by the fact that Akan compounding is basically a noun-forming strategy; thus, regardless of the syntactic category of the constituents, the Akan compound would be a noun (Appah 2013b, 2015). I also assume that meaning components that are not directly motivated by the constituents are holistic properties of the compound, as well.

This view of the properties of V-N compounds can be accounted for easily in a framework that can be product-oriented (Zager 1981), accepting that complex forms can have properties that do not emanate from their constituents. Construction Morphology (CxM) is this kind of framework (Booij 2010b, 2012).

Appah (2013b, 2015) argued that given the fact that Akan compounds are invariably nominal, we can regard the nominal categorial label of Akan compounds as being inherited from a constructional meta-schema for Akan compounding which bears an output syntactic category (N) and which every Akan compound inherits. The schema is in (9).

- (9) Meta-schema for Akan Compounds (Appah 2015: 374)

$$\langle [[a]_{x_i} [b]_{y_j}]_{Nk} \leftrightarrow [SEM]_{i|j|k} \text{ realizing a relation } R \text{ between } [a] \text{ and } [b] \rangle_k$$

The upper-case variables X and Y stand for the major lexical categories (X = N and V | Y = N, V and A). The lower-case variable *a* and *b* stand for arbitrary phonological strings, whilst *i*, *j* and *k* are indexes for the matching properties of the constituents and the compound as a whole.

The schema shows that a compound may be formed out of two lexical items, N or V on the left and N, V or A on the right.<sup>3</sup> However, notwithstanding the form-class(es) of the constituents, the compound will invariably be a noun. This is shown by the N label on the outer bracket to the left of the double arrow. The schema again shows, through co-indexation, that the semantic properties of the



Akan compound could be related to either constituent, both of them or neither.

To account for the varying properties of Akan compounds, including the presence and position of a head constituent, Appah (2015: 376) defined four subschemas of , as shown in , all of which inherit the nominal syntactic category from the meta-schema.

(10) Akan Compounding sub-schemas a, b, c and d

- < [[a]<sub>Xi</sub> [b]<sub>Yj</sub>]<sub>Nk</sub> ↔ [SEM<sub>i|j|k</sub> realizing a relation R between [a]<sub>i</sub> & [b]<sub>j</sub>]<sub>k</sub> >
- a. < [[a]<sub>Xi</sub> [b]<sub>Yj</sub>]<sub>Nk</sub> ↔ [SEM<sub>j</sub> with a relation R to SEM<sub>i</sub>]<sub>k</sub> >
- b. < [[a]<sub>Xi</sub> [b]<sub>Yj</sub>]<sub>Nk</sub> ↔ [SEM<sub>i</sub> with a relation R to SEM<sub>j</sub>]<sub>k</sub> >
- c. < [[a]<sub>Xi</sub> [b]<sub>Yj</sub>]<sub>Nk</sub> ↔ [SEM ([SEM<sub>i</sub> | SEM<sub>j</sub>)]<sub>k</sub> >
- d. < [[a]<sub>Xi</sub> [b]<sub>Xj</sub>]<sub>Nk</sub> ↔ [SEM<sub>ij</sub>]<sub>k</sub> >

Subschema (10a) generalizes over right-headed compounds. Subschema (10b) abstracts over left-headed compounds whilst subschema (10c) abstracts over exocentric compounds in which some crucial semantic feature of the compound is missing or the meaning of the whole is not at all related to the meanings of the constituents. Subschema (10d), which collects the indexes of the constituents, captures the properties of coordinative-compounds, whose meaning is a compositional function of the meanings of the parts (cf. Appah 2015).

As indicated above, the semantically endocentric V-N compounds are right-headed, because at a more general level the compounds are hyponyms of their right-hand constituents. For example, *sùma' sé'm* [hide-matter] 'secret' is right-headed because it is a hyponym of the right-hand constituent *àsém* 'matter'. A schematic representation of the formal and semantic properties of the endocentric V-N compound *sùma' sé'm* is in (11).

- (11) < [[a]<sub>Xi</sub> [b]<sub>Yj</sub>]<sub>Nk</sub> ↔ [SEM<sub>j</sub> with a relation R to SEM<sub>i</sub>]<sub>k</sub> >
- < [[sùma']<sub>Vj</sub> [àsém']<sub>Nj</sub>]<sub>Nk</sub> ↔ [matter<sub>j</sub> which is to hide<sub>i</sub>]<sub>k</sub> >

Recall that it was noted above that sometimes the relation between the denotatum and the idiomatic meaning of the compound is metaphorical. For example, at a literal level, *dì-bèá* 'position' is a type of *bèá* 'place/position'. However, when it refers to the rank of the referent, *bèá* has to be interpreted metaphorically. Alternatively, we can think of positioning on two levels – a vertical axis and a hori-



zontal axis. This alternative view rules out any idea of metaphorical reading of “social position” as referred to in the compound.

Before schematizing the properties of the exocentric V-N compound, I will explain the structure of the constructional schema in (12), which captures the properties of such compounds, showing that there is a meaning component that is not part of the meanings of the constituents. If the meaning of the compound is related to the meaning of either constituent or their combined meaning, but the meanings of the constituents do not exhaust the meaning of the compound, that extra-compositional meaning component could be expressed as a semantic operator (the unindexed SEM) over the meaning of the compound, or the meaning of the relevant constituent. This is expressed through disjunction (|), within the parenthesized portion of the semantic pole.

$$(12) \quad < [[a]_{Xi} [b]_{Yj}]_{Nk} \leftrightarrow [SEM ((SEM_i | SEM_j))]_k >$$

The structure and meaning of the exocentric V-N compound *kúm-kóm* (Table 5, row 3) may be represented as (13). Here, there is no agentive marker, although the compound refers to the agent of the denotatum of the compound. Therefore, the compound is exocentric, and the agentive meaning substitutes for the unindexed SEM in .

$$(13) \quad < [[V]_i [N]_j]_{Nk} \leftrightarrow [AGENT \text{ of ACTION}_i \text{ affecting SEM}_j]_k >$$

[[kúm] <sub>vi</sub>   [kóm] <sub>Nj</sub> ] <sub>Nk</sub>	↔	[AGENT of ACTION <sub>i</sub> affecting SEM <sub>j</sub> ] <sub>k</sub>	>
		‘killer of hunger’	

The compound *dá-àmòná* (Table 5, row 1) may be represented as (14). This is also exocentric because the compound refers to an animal, which is not specifically named in the compound. Thus, ‘animal’ substitutes for the unindexed SEM, although here I replace it with a placeholder represented as ENTITY.

$$(14) \quad < [[V]_i [N]_j]_{Nk} \leftrightarrow [ENTITY \text{ which habitually engages in SEM}_i \text{ at SEM}_j]_k >$$

[[dá] <sub>vi</sub>   [àmòná] <sub>Nj</sub> ] <sub>Nk</sub>	↔	[ENTITY which habitually engages in SEM <sub>i</sub> at SEM <sub>j</sub> ] <sub>k</sub>	>
		‘an animal that sleeps [in] holes’	

Also, there are cases of extreme exocentricity, where the meaning of the whole may not be related to the meanings of the constituents at all. This observation that the meaning of the compound may only be optionally related to the meanings of the parts is captured by the parenthesized portion of the semantic pole of the schema, on the right of the double arrow. In (15) is an example of a compound in which the meaning of the whole is not related to the meanings of the constituents at all. Here, ‘a lost course’ is rendered literally as ‘animal feet’. However, ‘lost



We found 21 instances of V-N compounds from various sources, which are quite diverse in their formal and semantic properties and their constituents share varying grammatical and semantic relations. I have shown that the noun constituents of the V-N compounds may name the location of the event designated by the verb, the instrument for performing the action, the object affected by the action, the result of the action, etc. designated by the verb.

I indicated that the left-hand constituents of Akan V-N compounds are indeed verbs and that the formation of the Akan V-N compound is a matter of morphology because the verb constituent carries no verbal inflection.

Again, some of the properties of the whole compound cannot be accounted for in the constituents. This makes the compounds difficult to account for in a framework that requires that every property of the whole must come from the constituents. They can, however, be accounted for easily in a constructionist framework like CxM which accepts that constructions can have holistic properties that do not come from their constituents.

Finally, I showed that Akan V-N compounds have both endocentric and exocentric subtypes. This makes them somewhat similar to compounds in Sranan (Braun 2009). The exocentric subtypes have extracompositional meaning components, including agent, instrument and animal, which are not formally anchored in the compound. But, even this feature can be accommodated straightforwardly in CxM. Thus the approach adopted in this paper rightly construes the problem of exocentricity in V-N compound as a semantic and not a formal one.

### Notes

<sup>1</sup> Obviously, the existence of idiomatic phrases like the verb phrase *kick the bucket* makes semantic transparency a tricky criterion for distinguishing between compounds and phrases.

<sup>2</sup> In fact, the issue of the form and categorial status of the left-hand constituents of V-N compounds have been discussed extensively in the literature. Some scholars working mainly on Romance languages hold the view that the left-hand constituents are nominalized, effectively making them N-N compounds (cf. Scalise et al. 2005: 140). Others hold the view that the left-hand constituent is a verb and the head of a VP which acquires morphological structure through a reanalysis rule that turns VPs into nouns, giving  $[[V\ N]_{VP}]_N$  (Di Sciullo & Williams 1987: 79-83). The question of the categorial status of the left-hand constituent of Akan V-N compounds has not been discussed directly, beyond Christaller (1875). However, as noted above, Christaller's view on the matter lacks clarity. It is unclear whether Christaller regards the left-hand constituent as a verb, which is interpreted as an adjective, or as a deverbal noun with attributive function. Akan indeed has (stative)

verbs which are rendered as adjectives in English, but the verbs that occur in these compounds (e.g. *dá* ‘to sleep’, *ká* ‘to remain’, *kó* ‘to go’) do not belong to that class and there is no formal or semantic basis for accepting that the left-hand constituents of Akan V-N compounds are deverbal. For example, nominalized *dá* ‘to sleep’, in (1) below, is *n-dá* ‘sleep(ing)’. We do not find the nasal nominalizer in the compound, although it is not optional. So to assume a nominal left-hand constituent is to claim that it is formed through conversion. However, conversion has a doubtful status in Akan (Appah 2013b), given that all posited instances of conversion or functional change (Obeng 2009: 107-108) are accompanied by tonal changes which may be deemed to be responsible for the categorial change.

*dá-àmóná* (Fa)  
sleep-hole  
‘an animal which dwells in a hole’

The left-hand constituents of those constructs that we excluded from the class of V-N compounds bear affixes that show that they are not verbs and so the constructions they occur in cannot be V-N compounds.

<sup>3</sup> Note that uppercase X in can be either V or N only, as indicated by the symbol (|), because in Appah (2013a; 2013b: 191-203) it is established that Akan does not have A-N compounds and, most likely, A-V compounds.

<sup>4</sup> A reviewer wants to know why the paper effectively rules out the possibility of the nominal syntactic category coming from the head constituents in the case of endocentric compounds. The reviewer argues that “if the compounds are right-headed and the rightmost element is a noun, then the head can determine the category in the usual way”. That makes perfect sense. However, in Appah (2015) it is argued that, because compounding in Akan is fundamentally a nominalization strategy, so that regardless of the syntactic category of the constituents the compound will be a noun, the nominal syntactic category of the Akan compound has to be regarded as a holistic property of the compound construction. Thus, we assume that, for both endocentric and exocentric compounds, the syntactic category is inherited from a compounding meta-schema. The real import of this is felt where the constituents do not have the output syntactic category. Where the head is a noun, we assume that it also inherits the nominal syntactic category, which just happens to unify seamlessly with the syntactic category of the head. In other words, the relevant compound would be a noun, even if the head were not a noun. Thus, whereas it would be accurate to separate noun-headed compounds from non-noun-headed ones and to say that only the latter inherit their nominal syntactic category from the construction, I believe that we would be missing an important generalization about Akan compound formation.

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