SERIAL VERB NOMINALIZATION IN AKAN

BY

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DECLARATION

I do hereby declare that this thesis is the result of my own original research under close supervision of Prof. E. Kweku Osam, Prof. Nana Aba Amfo and Prof. Kofi K. Saah. References to other sources of information used in this work have been duly cited. This thesis has not been presented either in whole or in part for another degree elsewhere.

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DEDICATION

For Ama, the late Prof. Olabode, the late Nsumankwaahene Nana Baffour and the Beautiful Ones Not Yet Born

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ABSTRACT

This thesis focuses on nominalization of serial verb constructions (SVCs) in the Akan language. The study develops a relevant typology of serial verb nominalization on the basis of semantic integration and lexicalization using a prototype theory (PT) framework. The three degrees of semantic integration for serial verbs in Akan are Full Lexicalized-Integrated Serial Verb Constructions (FL-ISVCs), Partial Lexicalized-Integrated Serial Verb Constructions (PL-ISVCs) and Clause Chaining Serial Constructions (CCs or CSCs). Each type of SVC is analyzed on the basis of how it is nominalized, the degree to which nominalization occurs and whether nominalization can occur at all. Various corpuses were consulted in three major literary dialects of Akan: Asante Twi, Fante and Akuapem Twi. Further, native speakers of each of these dialects were consulted to ascertain the goodness of various attested serial verb nominals (SVNs) in Akan.

Because Full Lexicalized-Integrated Serial Verb Constructions behave as lexicalized idioms, four criteria of idiomaticity are applied to them including collocability, familiarity, flexibility and compositionality (Barkema 1996). The results from the study show that over 98% of all FL-ISVCs identified have nominal counterparts while less than 3% of all PL-ISVCs identified have nominal counterparts. CSCs seem to nominalize haphazardly as frozen sentences, proverbs, idioms and figures of speech which primarily function as *denotata* and *designata.* While there was some degree of interdialectal variability with regard to individual SVNs, the pattern of nominalization behavior on the basis of degrees of semantic integration and lexicalization remained consistent across dialects.

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ABBREVIATIONS

1PL	First Person Plural
1SG	First Person Singular
2PL	Second Person Plural
2SG	Second Person Singular
3PL	Third Person Plural
3SG	Third Person Singular
AFF	Affix
C	Consonant
CAUSE	Causative
CC	Clause Chaining
CIT	Conjunction Insertion Test
COMPL	Completive Aspect
CONS	Consecutive
CSC	Chaining Serial Construction
DEF	Definite Article
DEF	Definite Article
DISJ	Disjunction
FL-ISVC	Full Lexicalized-Integrated Serial Verb Construction
FOC	Focus
FUT	Future
ICM	Idealized Cognitive Model
IMPER	Imperative
IMM.FUT	Immediate Future

INAN	Inanimate
INTERJ	Interjection
NA	Nominal Adjective
+NASAL	Nasal feature
+NEG	Negative feature
NEG	Negative
+NOM	Nominalizer
NP	Noun Phrase
OBJ	Object
P1	Phase one
P2	Phase two
PERF	Perfective
PL-ISVC	Partial Lexicalized-Integrated Serial Verb Construction
PROG	Progressive
PT	Prototype Theory
SUB	Subject
SVN	Serial Verb Nominalization
TAM	Tense-Aspect-Mood
V	Verb
αPLACE	Alpha place of articulation

CHAPTER ONE

SERIAL VERB NOMINALIZATION IN AKAN: INTRODUCTION AND LITERATURE REVIEW

1.1 AIM/OBJECT OF STUDY

To date, much work has been done on serial verb constructions (SVCs) (Christaller 1875; Balmer and Grant 1929; Stewart 1963; Li and Thompson 1973; Foley and Olson 1985; Baker 1989; Osam 1994; Collins 1997; Durie 1997; Stewart 1998; Osam 2004; Aikhenvald and Dixon 2006) just as much work has been done on nominalization (Chomsky 1970; Newmeyer 1971; Schachter 1976; Koptjevskaja-Tamm 1993; Alexiadou 2001; Nordlinger and Sadler 2004; Appah 2005; Rathert and Alexiadou 2010). However, comparatively little work has been done and little data has been brought to the fore addressing the nexus of the two: serial verb nominalization (SVN) (Bodomo and Oostendorp 1994; Bodomo 2004,2006; Hiraiwa and Bodomo 2008).

Taking an exhaustive look at the behavior of serial verb constructions in specific contexts such as within the context of nominalization may lead to a greater understanding of how serial verbs work and should be categorized as well as how nominalization works in Akan. The aim of this thesis is to provide a survey of the phenomenon of Serial Verb Nominalization in Akan. This survey is undertaken in the interest of moving the discourse closer towards the development of a relevant typology for SVNs in the language. The research for this survey is done by scouring various written corpuses in the three major dialects of Akan

(Asante Twi, Fante and Akuapem Twi) as well as carrying out two phases of field work; phase one (P1) focused on young literates and phase two (P2) focused on non-literate elders amongst the three aforementioned major dialects of Akan.

This thesis is the first of its kind for three reasons:

1) It documents the phenomenon of Serial Verb Nominalization in Akan.
2) It follows a functional-typological framework in doing so.
3) It incorporates in-depth qualitative and quantitative measures to reach generalizations on the three major types of SVN identified in Akan: Full-Lexicalized Integrated Serial Verb Nominalization (FL-ISVN), Partial Lexicalized Serial Verb Nominalization (PL-ISVN), Clause Chaining Serial Nominalization (CSN).

In documenting Serial Verb Nominalization (SVN), several aspects are addressed explicitly: Semantic integration of verbal elements within the SVC as expressed consequentially in SVN and the ordering of verbal elements within the SVC as expressed consequentially in SVN. Also addressed are issues of idiomaticity, collocationality and degrees of lexicalization.

1.1.1 Expectations

It is expected that the ordering of verbal elements within the SVC as expressed subsequently in SVN will be either largely or wholly determined by iconicity. The ordering of verbal elements within the SVC (and therefore the SVN) is expected to mirror the ordering of events in the real world. It is further expected that degrees of semantic integration, idiomaticity and collocationality that will be employed in the thesis will serve as organizing principles and evaluative criteria

for understanding Serial Verb Nominalization in Akan. In short, the more semantically integrated an SVC is, the more idiomatic it will be. These highly idiomatic SVCs will behave in a particular way when nominalized. It is also expected that those that are less idiomatic (only collocational) will behave in a different manner while those that are not idiomatic at all at the level of SVC will behave in another manner while taking into account the fuzzy boundaries between these categories. If these differences can be shown to be regular and consistent, they will provide us with linguistically significant generalizations about the relevance of semantic integration with regard to Akan Serial Verb Nominalization.

Idiomaticity can be judged based on native-speaker intuitions based on criteria outlined by Barkema (1996) including collocability, compositionality, familiarity and flexibility which will be employed in this thesis. There are also emerging studies in fields of lexicography whereby collocationality may be measured scientifically within the corpus of a language's lexicon using methods of entropy to empirically measure the frequency with which elements of the collocation appear together (see Kilgarriff 2006). While such measurements are beyond the scope of this thesis, they do point to promising directions for understanding SVCs and SVNs for future research. Discussions of SVCs as idioms and collocations also provide a fresh perspective for dealing with verbal elements of SVCs which have been dealt with formally as adverbial structures (Stahlke 1974), complementizers (Lord 1973), *etc*. In this idiomaticity-based analysis, SVCs are viewed as complementary parts of an idiomatic whole that is culturally mitigated. The view of SVCs as idioms and collocations may also explain why SVNs that are expected to be grammatical morphosyntactically are rejected as

ungrammatical and/or unacceptable by native speakers. It also opens up new inquiries into how and why collocations nominalize similarly across word categories including V-V, V-N, *etc.* for future research.

1.1.2 Primary Aims and Significance of this Thesis

This thesis is intended to fill a gap in the literature by focusing on serial verb nominalization (SVN) in general and SVN in Akan in particular. In addition, it also addresses subjects such as:

- Developing a typology of SVNs based upon empirical evidence of semantic integration.
- The relationship between idiomaticity, collocationality and semantic integration.
- The role of iconicity in lexeme ordering in SVCs and its relationship to morpheme ordering of SVNs (Durie 1997).
- Basing a typology of SVNs upon a typology of SVCs[1].

1.2 LITERATURE REVIEW

1.2.1 Serial Verb Constructions

This thesis does not deal with Serial Verb Constructions *per se*, but rather with the nominalization of SVCs. However, to deal with the nominalization of SVCs, we must formulate some basis of understanding of what SVCs are in the first place. This section attempts to do so by surveying various definitions of SVCs

throughout the decades over which they have been studied. Further, this thesis adopts several evaluative criteria and organizing principles for understanding SVCs. These evaluative criteria and organizing principles serve as the foundation for understanding SVNs in terms of how they are derived, which SVCs have SVN counterparts, their distribution and more.

A few authors have dealt with the topic of SVNs as an adjunct of larger treatments of SVCs (Aikhenvald and Dixon 2006; Ameka 2006; Lin and Wu 2008; Adeniyi 2010). Several studies that have incorporated an analysis of serial verb nominalization have done so couched in more comprehensive studies of SVCs to broach subjects such as whether or not serial verbs count as a single phonological or grammatical word, serial verb nominalization as a strategy of complementation (Lin and Wu 2008) or on the nature of argument sharing (Bodomo and Oostendorp 1994; Hiraiwa and Bodomo 2008).

Past and recent work that has been done primarily focusing on serial verb nominalization has tended to focus on a few specific languages, most prominently Bodomo (Bodomo and Oostendorp 1994; Bodomo 1997; Bodomo *et al.* 2003; Bodomo 2004,2006) working on Dàgáárè, a Gur language primarily spoken in Northwestern Ghana and Southwestern Burkina Faso with some comparative data from Akan and English. In analyzing data, this thesis, therefore, tackles conclusions reached based on primarily Dàgáárè data such as:

1) Whether or not nominalized serial verbs must be contiguous.
2) Word order in SVNs. This thesis also deals with iconicity and the temporal sequencing effect (see Durie 1997) in SVCs as transferred to SVNs.

In order to effectively deal with the topic of Serial Verb Nominalization (SVN), we must have an adequate set of evaluative criteria with which to define the underlying Serial Verb Constructions from which they are derived. To this end, we look at three main areas. 1) Existing definitions/descriptions of Serial Verb Constructions and features/characteristics of SVCs in general and also those specific to Akan. 2) Existing typologies of Serial Verb Constructions.

1.2.2 Definitions and Features of Serial Verb Constructions

1.2.2.1 Distribution of Serializing Languages

Serial verb constructions are attested in three geographically well-defined areas: Benue-Congo languages of West Africa, Atlantic Creoles (Caribbean, West Coast of Africa and offshore islands), New Guinea and South-East Asian languages (Chinese, Korean and possibly Vietnamese and Japanese if you include verbal compounds) (Sebba 1987:209; Aikhenvald and Dixon 2006; Li 2009)

1.2.2.2 Origins of the Term "Serial Verb"

Voorhoeve (1975), Sebba (1987:2) and Zwicky (1990:2) credit Stewart (1963) with coinage of the term "serial verb." However, according to Osam (1994:190) and Aikhenvald (2006:59) the term goes back to Balmer and Grant's (1929) *Grammar of the Fante-Akan Language*. The way in which the term serial verb has been used and defined in linguistic literature since its inception has been varied.

1.2.2.3 Defining Serial Verb Constructions

According to Osam (1994:190)

> One of the problems associated with the study of serialization cross-linguistically is that hardly do any two writers agree on exactly what the phenomenon of serialization is. This is borne out by the variability in the definitions of serialization offered by various writers (Osam 1994:190)

Since these words were written, they have become almost axiomatic for linguists who have worked in Serial Verb Constructions (SVCs). Similar comments were made by Lord (1993:1), referring to SVCs in particular, stating that "Generalizations about a set of verb phrase sequences in one language do not necessarily apply to superficially similar constructions in another language" (1993:1). For this reason, although we are hopeful that the current analysis of SVCs and SVNs in Akan based on semantic integration would be relevant cross-linguistically, we would be cautious about declaring universality at this seminal stage of research into the area of SVN. Thus our generalizations reached and conclusions drawn within this thesis are overtly language-specific with reference to Akan.

The area of serial verbs is one of the liveliest and most highly-researched areas in generative and functional linguistics, making it, at times, a hotly contested battleground. This is due to the fact that the ideas of many linguists, concerning syntax, morphology, word-hood, argument-sharing, the lexicon and more have used various theories, definitions and hypotheses to account for SVCs. This has, in turn, influenced the definitions of serial verbs whereby some such constructions are included while excluding others.

An early observation and explanation of the phenomenon of serialization comes from Christaller (1875) in his description of “Accidental Combinations” and “Essential Combinations”. He explains the two types quoted in full as follows:

> Accidental combinations. Two or more predicates (verbs with or without, complements or adjuncts), expressing different successive actions, or a state simultaneous with another state or action, but having the same subject, are merely joined together without conjunction and without repeating the subject. In this case two (or more) sentences are thrown or contracted into one, and the verbs are co-ordinate in sense as well as form.
>
> Essential combinations. One verb is the principal, and another is an auxiliary verb supplying, as it were, an adverb of time or manner. .. or forming or introducing a complement... or adjunct... or the second verb is supplemental, forming part of a verbal phrase ... The actions expressed by both verbs are simultaneous and in an internal or inseparable relation or connection. In this case, the auxiliary or supplemental verb is co-ordinate only in form, but subordinate in sense, whether it be preceding or succeeding the principal verb. (1875:144)

This description is very much in keeping with the classification of types of SVCs that are adopted for the purposes of this thesis as accidental combinations are akin to CSCs while essential combinations are like ISVCs.

According to Schachter, “A sentence that contains a serial verb construction consists, on the surface at least, of a subject noun phrase followed by a series of two or more verb phrases, each containing a finite verb plus, possibly the complement(s) of that verb” (Schachter 1974:254). Foley and Olson’s (1985) definition appeals more to aspects of subject and argument-sharing as well as a lack of conjunctions as defining properties, arguing that SVCs are “constructions in which verbs sharing a common actor or object are merely juxtaposed, with no intervening conjunctions […] Serial verb constructions always contain two or more predicates, each verb in the series may have an argument not shared by other verbs” (Foley and Olson 1985:18).

However, whereas Foley and Olson (1985) assert that SVCs always contain two or more predicates, Durie (1997) contends that within the SVC there are not two or more predicates, but rather, two or more verbs acting as a single predicate "taking a unitary complex of direct arguments." While Foley and Olson (1985) do not necessarily contradict Durie's analysis, the difference in number of predicates does make for a nuanced difference in their perspectives. Durie goes on to say that:

> The verbs are bound together syntactically and/or morphologically on the basis of sharing one or more core arguments and neither verb is subordinate to the other. Typically, in a serial verb construction, there is no marker of subordination or co-ordination, no dividing intonational or morphological marker of a clause boundary, and the verbs cannot have separate scope for tense, mode, aspect, illocutionary force and negation. (Durie 1988:3)

This latter point of scope has been challenged by Ameka (2006:138) citing examples from Ewe wherein verbal elements of the Ewe SVC can have separate pragmatic scope even when they have singular structural scope. Ameka (2006) also contends that individual verbs of the SVC can be questioned or focused. This analysis could potentially cause a major problem for various definitions of SVCs in that, according to Ameka, Ewe SVCs "exhibit characteristics which are sometimes said to be impossible either in SVCs or in languages that possess them" (Ameka 2006:141). Such cases may lend themselves to the utility of empirical description over theoretical definition.

In the case of this thesis, an approach is adopted wherein SVCs exist on a continuum with certain SVC types understood as being more or less prototypical than others.

1.2.2.4 Definitions based on Necessary and Sufficient Conditions

Many definitions of SVCs harken back to a theoretical (and philosophical) approach to categorization and definition whereby an element, in this case a putative SVC, is defined as belonging to a category on the basis of necessary and sufficient conditions. For example, in the literature, some authors have used argument sharing as the basis for defining and categorizing a possible SVC as a "true" SVC. In other words argument sharing is advanced as the necessary and sufficient condition for inclusion in or exclusion from the category of SVC. An early notion of argument sharing as fundamental to SVCs is found in Baker's (1989) Argument Sharing Hypothesis (ASH). Drawing from evidence of object pied piping and predicate clefting constructions in Dàgáárè, Hiraiwa and Bodomo (2008) argue that object-sharing SVCs in Dàgáárè "must have a syntactic *Symmetric Sharing* structure and add to firm empirical support for Baker's original intuition of 'double-headedness' and object-sharing" (Hiraiwa and Bodomo 2008: 243). The criterion of sharing at least one argument may be characteristic of *prototypical* SVCs however, according to Aikhenvald, although rare, SVCs with no shared arguments are not non-existent (contrary to Baker's 1989 assumptions) (Aikhenvald 2006:12). This notion is reinforced by Aboh (2009) who takes the Argument Sharing Hypothesis (ASH) to task using empirical data from Gungbe. The ASH states that "in a serial verb construction, V_1 and V_2 must share an internal argument'' (Baker 1988,1989; Collins 1997:463; Ogie 2009). However, according to Aboh, "the ASH and its theoretical correlates (e.g., double-headed VPs and object control) cannot be maintained for all the relevant cases. Therefore,

the ASH cannot be a defining condition on serialization, nor can it be related to a serializing parameter" (Aboh 2009:2). In other words, argument sharing cannot be *the* necessary and sufficient condition for SVC definition.

.

1.2.2.5 Pitfalls of Definitions based on Necessary and Sufficient Conditions

One of the requisite pitfalls of positing overarching and sweeping universals about SVCs based on characteristics found in a single language lies in the fact that even "within a single language, one group of serial verb constructions may show a certain property, while another group may not" (Lord 1993:1). This may be due to the idea that, within a given language, there may be different diachronic sources from which the same language arrives at the "clause union" of different structures SVCs. Givón posits different groups of SVCs within a single language showing different properties as a result of various diachronic sources from which serializing languages arrive at what he terms, the clause union exhibited in SVCs. In the case of this thesis, as we discuss SVC prototype, it is language specific (i.e. in relation to the Akan language).

In keeping with Lord's observation, even within a single language, different properties may be shown by different SVCs which may have ultimately derived from different sources. This situation is compounded when looking cross-linguistically because "generalisations about a set of verb phrase sequences in one language do not necessarily apply to superficially similar constructions in another language" (Lord 1993:1). Because of these factors, it may be beneficial to avoid

sweeping definitions of SVCs and rather look at the various features and characteristics of SVCs as exhibited in various specific languages.

1.2.2.6 Features/Characteristics of SVCs

The discourse on serial verbs has changed substantively since such seminal works as Sebba (1987) built upon by Durie (1997) and more recently, Aikhenvald (2006). Because of this fact, a concerted effort has been made to cite significant works of the past while letting more recent works set the agenda for discussion. To this end, this thesis adopts an approach similar to that of Aikhenvald, whereby, instead of taking a definitional approach, SVCs (and their corresponding SVN counterparts) are dealt with on a continuum on the basis of clusters of features or characteristics. Aikhenvald's classification is based on several parameters including:

> A. Composition: symmetrical serial verb constructions consist of two or more verbs each chosen from a semantically and grammatically unrestricted class; asymmetrical serial verb constructions include a verb from a grammatically or semantically restricted class (e.g. a motion, or a posture verb).
>
> B. Contiguity versus non-contiguity of components: verbs which form a serial verb construction may have to be next to each other, or another constituent may be allowed to intervene between them.
>
> C. Wordhood of components: components of a serial verb construction may or may not form independent grammatical or phonological words.
>
> D. Marking of grammatical categories in a serial verb construction: verbal categories—such as, for instance, person of the subject and object(s); tense, aspect, modality; negation; or valency changing—may be marked just once per construction ('single marking'); or can be marked on every component ('concordant marking'). (Aikhenvald 2006:3)

According to Aikhenvald (2006:1) “A serial verb construction (SVC) is a sequence of verbs which act together as a single predicate, without any overt marker of coordination, subordination, or syntactic dependency of any other sort” (2006:1). Additionally, SVCs are defined within the same volume as having all or some of the following features:

a. Monoclausal.
b. Describe what is conceptualized as a single event.
c. Their intonational properties are the same as those of a monoverbal clause.
d. Have just one tense, aspect, and polarity value.
e. May share core or other arguments.
f. Each component of an SVC must be able to occur on its own.
g. Individual verbs may have same, or different, transitivity values.
h. Act together as a syntactic whole.

The crux of Aikhenvald’s categorization is that there is a continuum along which SVCs in a given language may exist. According to Aikhenvald, “In an individual language, SVCs are expected to have most, but not necessarily all, of these properties. This suggests a scalar, or continuum-type, approach to SVC—which can be either more or less like the prototype—which has the maximal properties” (Aikhenvald 2006:3). This is the approach adopted in this thesis for categorizing serial verbs.

Following our scalar definition of SVCs, the majority of these features do not exclusively define SVCs. That is to say, an SVC which has the maximal amount of these features may be seen as closest to a “prototypical” SVC, whereas an SVC which lacks some of these features may still be regarded as an SVC,

simply not the one exhibiting the most prototype effects. For example, Osam's (1994) Chaining Serial Constructions (CSCs) may describe what is conceptualized as multiple sub-events, rather than a single event in the case of an ISVC. However, rather than completely excluding CSCs from the discussion of SVCs, we may simply regard them as not being the most prototypical type of SVC.

Other features, such as the monoclausal feature, may be regarded as a defining feature for particular types of SVCs as opposed to as a defining feature for all. Categorization based on features will prove useful in that from such features we may develop a typology of SVNs in Akan based upon categories of SVCs, namely FL-ISVCs, PL-ISVCs and CSCs. In certain instances, SVNs categorized on the basis of the type of SVC from which they are derived may work exactly as expected with nominalized FL-ISVCs operating in one way, nominalized PL-ISVCs operating in another way and CSCs operating in yet another way. In other instances, there may be some anomalies whereby an identifiable FL-ISVC may nominalize in a manner characteristic of PL-ISVCs or not at all. Prototype theory allows us to deal with such issues of ISVCs which are on the border in the fuzzy boundaries. Thus an FL-ISVC may have clusters of features by which we come to identify it as an FL-ISVC yet it may nominalize in a non-prototypical way. Rather than disqualifying it as an FL-ISVC on the basis of not meeting "necessary and sufficient conditions" as we may have been required to do in the classical theory of categorization, the prototype approach allows us to account for the ambiguous categorial status of a comparatively few SVCs on the fuzzy borderline. At the same time this does not discount the unambiguous status

of the bulk of those which have been categorized in a particular way (Givon 1997:5).

According to Osam (1994), focusing on what he terms, Integrated Serial Verb Constructions (ISVCs) in Akan, "serial verbs are two or more verbs used to describe a single event. These multiple verbs conceptually code a single event because, even though they originally code separate events, these events become integrated as a single event" (Osam 1994:162-4). Here, we find that many prototypical FL-ISVCs are derived from PL-ISVCs and PL-ISVCs are derived from CSCs. In other cases, new FL-ISVCs, for example, can be created on analogy with other existing FL-ISVCs with the same base template form without going through a "unilineal chain of evolution" from CSC to FL-ISVC. Formally, these new FL-ISVCs tend to mimic the morphosyntactic characteristics of those pre-existing prototypical FL-ISVCs which did go through the process from CSC to PL-ISVC to FL-ISVC. This type of semantic integration is at the top of Osam's hierarchy of serial verbs wherein one of the verbs can become grammaticalized or the construction as a whole can become lexicalized. The ISVC is juxtaposed with the Chaining Serial Construction (CSC) type which is at the bottom of the hierarchy wherein each clause in the chain remains compositional and the SVC complex as a whole may be said to be composed of multiple "sub-events." This distinction between ISVCs and CSCs is the primary evaluative criterion in our treatment of serial verb nominalization in this thesis. Additionally, we look at Agyeman's (2002) further sub-classification between productive (which Osam refers to as partial lexicalization) ISVCs and non-productive ISVCs (which corresponds to Osam's full lexicalization) to establish whether there is empirical

evidence to show differences and/or similarities when these two subcategories are nominalized. Hellan *et al.* (2003) also use Osam's (1994) scale of semantic integration as a point of departure in their work on developing a typology of SVCs in Akan.

1.2.2.7 Strings of Verb-like elements as a Characteristic of SVCs

In defining SVCs, some authors such as Sebba (1987) have dealt with serial verbs as strings of one or more "verb-like" elements. Sebba states that the term "'Serial verb' [...] has generally been used to refer to a surface string of verbs or verb-like or verb phrase-like items which occur in what appears to be a single clause'" (1987:1). According to Sebba, at its most basic, the term "serial verb" applies to V1 NP V2 NP or V1 NP V2 where V2 is not obviously an infinitive as it appears, say, in English (1987:1).

1.2.2.8 Iconicity as a Feature of SVCs

Sœtherø's definition of SVCs follows a line similar to Durie's in asserting that they are monoclausal and lack marking of coordination. According to Sœtherø's (1997) thesis, as cited in Agyeman (2002), in an SVC "the verbs in the series have common NP arguments, and also typically share grammatical properties such as tense, aspect and polarity. A fundamental criterion of serial verb construction is that [of] the order of the events described, the first verb describing the initial phase of the event or action (Sœtherø 1997:8)." We find in our preliminary analysis that this statement must be qualified in the case of Integrated

Serial Verb Constructions in that in some cases, due to lexicalization and semantic integration, events may no longer be separable into distinct events or phases.

Li and Thompson (1973) also restrict the term “serial verbs” to cases where the link between the two verbs is temporal rather than one being a grammatical modifier on the other in some sense (also see Sebba 1987:1). In the case of grammaticalized PL-ISVCs, to be discussed in chapter four, the link is non-temporal but the grammaticalized verb is thought to have originally derived from a full non-grammaticalized verb which typically shares the same phonological form in a sequence that may have originally been temporal. For example, in Akan, it may be argued that partially grammaticalized *ma* ‘CAUSE’ may derive from *ma* ‘give’ and has retained the position of *ma* ‘give’ regardless of the fact that it has undergone grammaticalization. This type of temporal relation and how it affects the surface realization in the morphosyntax is addressed later on in this thesis’ treatment of the realization of serial verb ordering as it relates to iconicity.

In this thesis we are assuming that iconicity typically exists in SVCs in the form of the temporal sequencing effect. However, in also assuming degrees of semantic integration, there is an implication that the more semantically integrated an SVC becomes, the less distinguishable the verbal elements are as separate events. In effect, the more semantically integrated the verbal elements become, the more condensed into one single event they become to the point where there is no order of separate events to speak of. Therefore assuming both iconicity and semantic integration coexist entails an assumption of a gradient effect whereby more semantic integration equals less iconicity, at least in terms of temporal sequencing effect (i.e. a single event FL-ISVC is no longer readily broken up into

two constituent parts like a PL-ISVC). At the same time, the surface ordering of verbal elements of the fully semantically integrated SVC, to the degree to which they are distinguishable, is expected to be congruent with the temporal ordering of the formerly separate verbal elements from which the unit is derived. This topic is returned to at length in chapter four.

1.2.2.9 Monoclausality as a Feature of SVCs

The idea of SVCs as being monoclausal is not a new idea. Bendix (1972), in defining the term "serial verb" states that the singularity of the verb phrase in which serial verbs occur is the defining characteristic. Bendix (1972) argues that serial verbs are "strings of verbs and verb phrases run together to form what appears to be a single expanded verb phrase" (Bendix 1972:2). Boadi (1968:84) has a similar criteria in his definition of SVCs as "constructions containing strings of two or more verb phrases which form a single internally coherent structure" wherein this single internally coherent structure is apparently a V^{I} or VP projection of the V head of VP. Thus, it can be seen that "'serial verbs' for some writers are just strings of predicates, while for others, one or more of the VP-like phrases must perform a function such as case-marking, aspect marking or complementation" (Sebba 1987:2).

1.2.2.10 Critiques of Cluster of Features/Characteristics Approach (Prosodic Approach)

While such characteristics as those outlined above lend clarity to our cluster of features approach, such an approach has been critiqued by authors such as Newmeyer due to the vagueness of terms such as “monoclausal” and “conceptualized as a single event,” which, he asserts, add little substantive clarity in defining SVCs (Newmeyer 2004:1). In attempting to add meaning to the feature that SVCs “describe what is conceptualized as a single event,” Newmeyer follows Givón (1991) in using prosody to measure pauses between sub-parts of serial verbs in relation to finite clauses to come to the conclusion that “events coded in English by single-verb clauses are coded in serializing languages by multi-verb clauses” and do not show significant differences in event cognition (Newmeyer 2004:22). This measurement of pauses and intonation may be termed a prosodic approach to defining serial verbs.

1.2.2.11 Formal Definitions of SVCs

Some authors, such as Li and Thompson (1973), have dealt with the issue of definition for SVCs by appealing more to a formal definition based on the syntax wherein serial verb constructions are said to “consist of a subject followed by two predicates, where the first NP is the subject of both predicates” (Li and Thompson 1973:97). This definition, however, lacks definitional precision in failing to account for what Foley and Olson (1985:26-7), Osam (1994) and later Givón (1997) and Agyeman (2002) refer to as switch-subject clause chains.

1.2.2.12 Definitions of SVCs based on Semantic Categories

Other authors maintain less of a focus on syntactic categories and structures with more semantic types of analyses. Jansen and Muysken (1978:7-8) exemplify this approach in their use of the term "serial verb" in reference to semantic types and on the basis of function in terms of marking direction, benefactive, dative, instrumental, perfective theta roles and relations. These are largely what we term in this thesis grammaticalized PL-ISVCs as discussed in chapter four. Li and Thompson's (1973) early work on SVCs in Mandarin Chinese also is primarily semantic. In their work, they use four essential types of "serial verb-like" constructions which include those where the connection between the verbs is much looser, apparently based on a temporal or purpose relationship. They classify them into four types, namely Consecutive, Purpose, Simultaneous and Alternating as illustrated below:

(a) Consecutive:

Zhang-san chuan-shang yifu tiao zai di-shang
Zhang-san put-on clothes jump on floor
"Zhang-san put on his clothes and then jumped on the floor"

(b) Purpose:

Women kai-hui taolun neige wenti
we hold-meeting discuss that problem
"We are holding a meeting to discuss that problem"

(c) Simultaneous:

Zhang-san qui jiaotache zou le
Zhang-san ride bike leave-ASP
"Zhang-san left riding his bike"

(d) Alternating:

Zhang-san tiantian hui-ke xie xin
Zhang-san everyday receive guest write letter
"Every day Zhang-san receives guest and writes letters"

1.2.2.13 Challenges in Describing SVCs

According to Sebba (1987), in describing SVCs a first major challenge is that it is "notoriously difficult to find non-syntactic criteria for determining category status" (Sebba 1987:3). This is an issue because "syntactic tests may not always work" as a means of determining category status (1987:3). Furthermore, in describing SVCs it is necessary to properly identify what is not an SVC. In English and Dutch, for example, more than one verb may occur but one seems to be dependent on the other through morphological marking or position (Sebba 1987:4). This marking is evident in English in the ECM verbs "promise, persuade, remember, begin, learn, and want" which are all followed by a verb which is preceded by *to*. Lack of such dependency in serializing languages has also been regarded as a defining characteristic of SVCs in the literature. It is worth noting, however, that a case has been made for SVCs in English in examples such as "go eat", "I made him laugh," "I saw him laugh" (see Yin 2007).

A second challenge in description, as pointed out by Sebba (1987), is to distinguish SVCs "from constructions containing morphologically non-distinct 'infinitival complements'" (Sebba 1987:4). A third issue which arises regarding SVCs is that 'serializing' languages often show a number of different linear arrangements in multi-verb sentences. Though not exhaustive, a few examples cited include:

V NP V

V NP V NP

V V

V V NP

V NP V NP V

(Sebba 1987:4)

Also, the semantic relationships between the verbs in these linear arrangements are not always of the same type (Sebba 1987:4). While these are not problems in and of themselves, they have presented challenges for various scholars in attempting to describe SVCs as a coherent group. In comparing SVC structures generally found in West African languages, one of the verbs in each structure can be assigned a semantic function with respect to the other verb, while in the Mandarin sentences of above "the relationship seems to be temporal and pragmatic" (1987:4).

As stated by Sebba (1987), a major issue in attempts to understand and characterize SVCs has centered upon whether to analyze

> 'serial verbs' as syntactic, semantic, lexical or morphological phenomena, or whether to provide an analysis at several of these levels at the same time. Many writers have concentrated on an analysis at one level only, usually the syntactic, sometimes the semantic. Others have tried a unified approach which deals with the syntax and semantics while treating serial verbs as a lexical phenomenon. (Sebba 1987:5)

However, quite a bit has changed in the ongoing debate on SVCs both in terms of attempts to deal with SVCs syntactically and functionally. A classic example of attempting to understand serial verbs from strictly syntactic criteria is Baker's (1989) analysis of serialization using coordinated or subordinated clause structures. In his vigorous critique of Baker (1989), Durie (1997) proposes models

of “lexical conceptual structure and event-hood” (1997:349). Durie’s approach is not unlike our own in this thesis. For Durie, the need to strictly account for various aspects of serialization through a universal syntactic solution is a path that is “replete with pot holes” (Durie 1997:349). Durie rather argues for an approach that seeks to find “which properties of serialization are manifestations or projections of semantic structure, culture-specific constructions of event-hood, and tendencies of grammaticization and lexicalization” (Durie 1997:349). This thesis follows a similar line of thinking in developing a typology of SVNs based on varying degrees of lexicalization and semantic integration which takes iconic temporal sequencing phenomena into account.

1.2.3. Typology of Serial Verb Constructions

A typology of SVCs could be based upon a single organizing principle or a combination of several working in concert. One of the primary tasks essential to arriving at a typology of SVNs is adopting a typological framework for understanding the SVCs from which they are derived. According to Osam, “There are a combination of structural and semantic parameters according to which we can classify the serial constructions in Akan. These are the degree of semantic integration of the verbal combination, whether the verbs are transitive or intransitive, and argument sharing” (1994:192). Each of these is explored in turn below for Akan.

In the following section, SVCs are categorized based on 1) Transitivity 2) Argument sharing 3) Semantic integration.

1.2.3.1 Typology of SVCs Based on Transitivity

According to Osam (Osam 1994:196) serial verb constructions in Akan can "be categorised according to the transitivity of verbs that occur in the construction. The following are all possible combinations in Akan: Transitive-Transitive, Intransitive-Transitive, Transitive-Intransitive," and Intransitive-Intransitive (Osam 1994:196).

These combinations as illustrated below are taken from Osam (1994:196-7).

Transitive-Transitive:

1. a. Kofi tóẃ-ẁ ɔ̀són nó kú-ù
   Kofi shoot-COMPL elephant DEF kill-COMPL

   nò
   3SG.OBJ
   'Kofi shot and killed the elephant.'

   b. Kofi bɔ́-ɔ̀ àbòfrá nó pírá-à
   Kofi hit-COMPL child DEF hurt-COMPL

   nò
   3SG.OBJ
   'Kofi hit and hurt the child.' (Osam 1994:196)

Intransitive-Intransitive:

2. a. Ama sɔr-ee gyina-a hɔ
   Ama get up-COMPL stand-COMPL there
   'Ama stood up.'

   b. Ama guan-ee ba-e
   Ama run-COMPL come-COMPL
   'Ama ran and came.' (Osam 1994:196)

It is interesting to note that adjectival stative verbs, inherently intransitive, may appear as both V1 and V2 of SVCs and can also be nominalized as will be shown in chapter four.

3. Kofi so ware
   Kofi big long
   'Kofi is big and tall.'

Transitive-Intransitive:

4. a. Akosua yí-ì àhòmá nó sɛ́ń-ǹ hɔ́
      Akosua take-COMPL rope DEF hang-COMPL there
      'Akosua took the rope and hung it there.'

   b. Kofi píá-à Esi bɔ́-ɔ̀ fámù
      Kofi push-COMPL Esi fall-COMPL ground
      'Kofi pushed Esi down (to the ground).' (Osam 1994:196)

Intransitive-Transitive:

5. a. Kofi gyíná-à hɔ́ frɛ́-ɛ̀ Esi
      Kofi stand-COMPL there call-COMPL Esi
      'Kofi stood there and called Esi.'

   b. Kofi sɔ́r-éè kyíá-à Esi
      Kofi stand-COMPL greet-COMPL Esi
      'Kofi stood (up) and greeted Esi.' (Osam 1994:197)

In the preceding section it is clear that SVCs could be typologized based upon transitivity in such a way as to account for various types of SVCs within a given language or cross-linguistically. However, SVCs can also be categorized based upon other considerations, such as argument sharing as shown immediately below in section 1.2.3.2.

1.2.3.2 Typology of SVCs Based on Argument Sharing

The relationship between each of the verbs and the nominal arguments associated with them provides another parameter that may be useful for subcategorization (see Foley and Olson 1985; Crowley 1987:38; Osam 1994:197; Hiraiwa and Bodomo 2008).

Same-Subject Serialization

The first type is the Same-Subject serialization. The next examples from the Fante dialect of the Akan language come from Osam (1994:198):

6. a. Kofi tɔ́-ɔ̀ èdzìbán má-à àbòfrá nó
   Kofi buy-COMPL food give child DEF
   'Kofi bought food for the child.'

   b. Kofi yí-ì sékan nó bré-è Araba
   Kofi take-COMPL knife DEF bring-COMPL Araba
   'Kofi took the knife and brought it to Araba.' (Osam 1994:198)

Switch-Subject Serialization

The next type is switch-subject serialization (Foley and Olson 1985:25; Crowley 1987:39) which corresponds to causative SVCs wherein "the object of the first verb and the subject of the second verb are coreferential" (Osam 1994:198).

7. a. Esi ma-a Kofi dzi-i edziban no
   Esi make-COMPL Kofi eat-COMPL food DEF
   'Esi made Kofi eat the food.'

   b. Kofi ma-a Esi bɔ-ɔ famu
   Kofi make-COMPL Esi fall-COMPL ground
   'Kofi made Esi fall down.' (Osam 1994:198)

Combined-Subject Serialization

The next type is combined-subject serialization. In this type, "the subject and direct object of the first verb are both subject of the second verb" (Osam 1994:201; 2004:43). This type of associative NP also occurs in Akan as exemplified below:

8. a. Kofi nye Ama ba-a fie
Kofi accompany Ama come-COMPL home
Ama accompanied Kofi home/ Kofi came home with Ama.

b. Kofi nye banyin no twitwa-a ndua no
Kofi accompany man DEF cut-COMPL trees DEF
Kofi cut the trees together with the man.
(Osam 1994:201; 2004:43)

The final type posited by Osam based on argument sharing parameters is the multiple-object type of serial verb construction, which corresponds to the transitive-transitive type of construction outlined above on the basis of transitivity.

Multiple Object Serialization:

9. a. Kofi tow-w ɔson no ku-u
Kofi shoot-COMPL elephant DEF kill-COMPL

no
3SG.OBJ
'Kofi shot and killed the elephant.'

b. Kofi bɔ-ɔ abofra no pira-a no
Kofi hit-COMPL child DEF hurt-COMPL 3SG OBJ
'Kofi hit and hurt the child.' (Osam 1994:196)

Although this appears as multiple-object serialization in Osam (1994), it should be noted that there is a distinction between (6) and (9). In (6) we have a case or real multiple objects in the sense of different NPs. In (9), however, what we actually have is a coreferential NP.[2] Thus, while treated as Multiple Object serialization in Osam (1994:196) this may be better termed as Coreferential Object serialization.

The intent in this section has been to show an alternative criterion for categorizing SVCs; on the basis of argument sharing.

1.2.3.3 Typology of SVCs Based on Semantic Integration

Up to this point we have looked at a few organizing principles upon which a typology of SVCs in Akan may be based including criteria of transitivity and argument sharing. However, the primary typology used in this thesis for categorization is based upon degree of semantic integration (see Osam 1994; Agyeman 2002; Hellan *et al.* 2003). Using this framework, we adopt three types of SVCs, namely the Clause Chaining Serial Construction type (CSC), the Partially Lexicalized-Integrated Serial Verb Construction (PL-ISVC) and the Full Lexicalized-Integrated Serial Verb Construction (FL-ISVC) introduced by Osam (1994). It should be noted that there are different types of SVCs within these three primary categories wherein certain types of FL-ISVCs may be more semantically integrated and lexicalized than other types that may still qualify as FL-ISVCs as is the case with PL-ISVCs and CSCs. We further show that this categorization is relevant for Akan as evinced through SVN behavior across the three disparate categories. This analysis is derived primarily from Osam (1994).

According to Lawal (1989) the issue of the classification of SVC types was that "no one classification can yet be said to account for the full range of SVC types, particularly when one turns to a wider range of data. The problem can be seen in the tendency for the list of classes to grow with each new contribution to the literature" (Lawal 1989:3). This may have been the case at the time of Lawal's

writing. However, Osam's classification schema provides a promising framework that is potentially general enough to cover typologies of SVCs cross-linguistically, while specific enough to be linguistically significant and relevant. The hypothesis being made here is that the concept of semantic integration may have the potential to capture SVCs beyond Akan; that in languages with SVCs, such constructions may exist somewhere along the continuum of lexicalization. This continuum is shown below from least semantically integrated to most semantically integrated and is also illustrated in Figure 1 of chapter two:

Clause Chaining Serial Constructions (CC or CSC)

Partial-Lexicalized Integrated Serial Verb Constructions (PL-ISVC)

Full-Lexicalized Integrated Serial Verb Constructions (FL-ISVC)

Within each of these categories, sub-continua may be found in that some constructions that are Full-Lexicalized may be more lexicalized than another (i.e. lexicalized to the point that the SVC can no longer be decomposed and the separate original individual verbs cannot be ascertained any longer semantically, morphologically or both). Similarly, Partial-Lexicalized may also contain a scale within a scale where SVCs containing grammaticalized verbs or light verbs (see Aboh 2009) are more or less lexicalized or grammaticized than those that do not.

1.2.3.4 Semantic Integration as the Basis of SVC Typology

Within this thesis, we adopt Osam's classification as it is expected to be specific enough to be useful in delineating significant empirical differences

between SVC types for Akan, yet potentially broad enough to have cross-linguistic relevance.

Differentiating between ISVCs and CSCs

Osam explains that the ISVC is marked by the high degree of integration between the verbs in the construction wherein "multi-verbs are used to code a single coherent event. On the other hand, in the Chaining Serial Construction where the level of semantic integration is lower, multiverbs are used to code related multi-events" (Osam 1994:194-5).

The three categories proposed are the Clause Chaining type, the Partial Lexicalized-Integrated SVC and the Full Lexicalized-Integrated SVC. These three categories are not seen as being mutually exclusive, but rather as existing on a continuum of semantic integration. In this categorization, the Clause Chaining Serial Construction (CSC) type of SVC exhibits the least degree of semantic integration while the Partial Lexicalized Integrated (PL-ISVC) shows the next highest level of semantic integration. The Full Lexicalized Integrated SVC (FL-ISVC) exhibits the highest degree of semantic integration.

The degree of integration may be tested by inserting conjunctions in between clauses to evaluate the potential of the sentence to be interrupted by conjunctions. Insertion of conjunctions can be done in the CSC type with little or no change of meaning of the sentence. In the case of Partial Lexicalized ISVCs, when conjunctions are inserted in Akan, it leads to either a slight distortion of the original meaning or a great distortion of the meaning. This is shown below in example (10) dealing with the Conjunction Insertion Test (CIT).

In the case of the Full Lexicalized-ISVC, insertion of conjunctions almost invariably leads to ungrammatical constructions or constructions that mean something totally different from what is meant by the more idiomatic FL-ISVC structure. This is because, unlike in Clause Chaining constructions where each verb encodes a separate event, in FL-ISVCs, the multi-verbs in such constructions are used to describe a single event. The basis of the realized structure is semantic. According to Osam, "The semantic foundation of serialisation has to do with the integration of the subatomic events that are conceived as representing a single event." (1994:193)

An example of the CIT at work is illustrated in the coordinating version of the serial verb construction '*Araba tɔ-ɔ nam kyew-ee tɔn-ee*' is shown in (10a) with the insertion of the conjunction *na* which, in Akan, combines clauses and sentences. This type of insertion is not possible as a coordinating structure in the case of the integrated type of SVC such as '*Akosua yɛ-ɛ asɔr ma-a Yaw*' and results in an ungrammatical sentence as shown in (10b). According to Osam, the difference between the CSC, which has a corresponding coordinating structure, and the ISVC, which does not, "reflects the degree of tightness in the semantic integration of the verbs involved" (Osam 1994:195).

10. a. Araba tɔ-ɔ nam na ɔ-kyew-ee Ø
Araba buy-COMPL fish CONJ 3SG.SUBJ-fry-COMPL 3SG OBJ

na ɔ-tɔn-ee Ø
CONJ 3SG SUBJ-sell-COMPL 3SG OBJ
'Araba bought fish and fried it and sold it.'

b. *Akosua yɛ-ɛ asɔr na ɔ-ma-a Yaw
Akosua do-COMPL prayer CONJ 3SG.SUBJ-give-COMPL Yaw
'Akosua prayed and gave Yaw.' (Osam 1994:195)

1.2.3.5 Integrated SVCs

According to Lord (1974), an SVC is defined as

> a construction in which the verbs all refer to subparts or aspects of a single overall event. The action or state denoted by the second verb is in terms of the real world an outgrowth of the action denoted by the first verb—the second verb represents a further development, consequence, result, goal or culmination of the action by the first verb. (Lord 1974:196)

For the most part, this definition is in line with Osam's (1994) discussion of Partial Lexicalized Integrated SVCs which, over time, may develop into Full Lexicalized Integrated SVCs. Osam (1994) deals with these verbs as originally coding separate events but "these events, through the process of cognitivisation, come to be integrated as a single event" (Osam 1994:193). This cognitivization process is one of semantic integration which is, in turn, reflected in the structural integration of ISVCs. This notion of semantic integration finds its genesis in the notion of event integration argued for by Givón (Givon 1993,2001a,2001b) in his analysis of complementation (Osam 1994:193)

In this analysis, the SVC types with the highest level of semantic integration have become lexicalized in that they now function semantically as a single lexical unit. This phenomenon was observed as early as Balmer and Grant (1929:115) as cited in (Osam 1994:204-5) the discussion of which is worth quoting in full below:

> For example, the concept of believing something cannot really be broken into parts, even though it is possible to argue that such combinations must have started as distinct verbs expressing distinct events which, over the course of the development of the language, have come to express purely abstract unitary concepts. So even though metaphorically a concept like

> 'believe' in the Akan context can be broken into parts, now speakers do not perceive such concepts as involving distinct events. (Osam 1994:204-5)

This former compositionality must have been the original motivation behind the same type of verb combinations as exemplified in Akan, *gye ... di* 'believe'. According to Balmer and Grant (1929) as cited in Osam (1994:205)

> The use of such verb combinations is due partly (a) to the tendency of the language to use vivid figurative expressions and partly (b) to the habit of analysing an action into its component parts. An example of the former is in the verb ... gye ... dzi, which, literally, means to accept and eat. It embodies the thought that, when a thing is accepted and eaten, trust and confidence is implied. (1929:115)

Such lexicalized verb compounds as shown in Akan, although once compositional, have come to be conceptualized as a single event in the language synchronically as in the case of 'believe'. Typically in non-serializing languages, lexicalized verb compounds of the type PL-ISVC and FL-ISVC can be translated into English with a single verb or V + PP. This type of FL-ISVC is referred to as the Non-productive ISVC by Agyeman (2002:6-7) on the basis of its lack of compositionality and the fixedness of verbal combinations. In this sense, this is a "small group of verbal combinations that have [sic] become highly lexicalised in a way that they cannot be said to be productive or compositional any longer" (2002:6-7). Thus, in ISVCs, particularly in case of the Full Lexicalized type, the meaning is no longer compositional synchronically, although in many cases, the etymology of the constituent parts remains transparent to varying degrees. These FL-SVCs are analogous to idioms in the sense that they are now non-compositional and meaning cannot be determined by their constituent parts. They should not, however, be confused with true fossilized idiomatic expressions. Idiomaticity, with particular regard to FL-ISVCs/FL-ISVN, will be discussed in-depth in chapter three.

In the Partial Lexicalized ISVC (PL-ISVC), speakers "productively put certain verbs together which express unitary concepts" (Osam 1994:54). He goes on to state that:

> The difference between this and the first type (the Full Lexicalisation type) [...] is that there is a lesser degree of semantic integration in this type. Even though the two verbs code a unitary event, the integration of the parts of the event is not as tight as when dealing with verb combinations like gye…di 'believe' (1994:54)

In the PL-ISVC, the defining characteristic is that the constituent verbal elements are compositional to the point where "we can almost see the separate parts of the event. For example, if we take *tow…bɔ* 'throw at' we can see the act of 'throwing' and that of 'hitting'" (Osam 1994:206). Thus these types of ISVCs are largely compositional to the point that the meaning of the overall construction can be ascertained from the constituent parts. There are, however, constraints to possible combinations:

> One of these is that some verbs occur in fixed places in the serial construction. For example, one of the most popular verbs used in serial constructions is the verb de 'take, use'. This is a defective verb … which does not inflect for any aspect, and cannot be used in a simple clause. De is used mainly in affirmative sentences. In negative sentences, the suppletive form fa is used; fa is also used in all cases of the imperative. In any serial construction where de/fa is used, it occurs in the initial position only. The same thing applies to the verb nye 'accompany'. On the other hand, a verb like gu 'put, be in' always occurs in medial position. (Osam 1994:207)

To summarize this section, there are several ways in which SVCs can be categorized based on relevant typological criteria. Some that have been outlined in the previous section have been 1) based on transitivity 2) based on argument sharing 3) based on semantic integration. While these are not exhaustive, they do provide a starting point for categorizing SVCs that is potentially useful in categorizing SVNs based on the SVCs from which they are ultimately derived.

1.2.4 Factors Influencing SVC Nominalization

1.2.4.1 Salient Distinct Event Types

Within this thesis, it is posited that there are several interrelated factors that influence whether or not SVCs can be made into SVNs in a given language. One such factor has to do with what is referred to as salient distinct event types (Durie 1997:321). In serializing and non-serializing languages alike, a single lexical verb may be assigned to represent a particular situation or event within that speech community. By the same token, in serializing languages, such events may be represented by serial verbs. Further, such events may be universal to human environment and experience (within the context of cognitive constraints on human experience) [3], while other events may be more culturally specific, requiring richer verbal vocabularies to make more nuanced distinctions in a particular domain of activity unique to a given speech community. According to Durie (1997:321) "the verbal system of language evolves as a categorization of the event-types that are salient, or communicatively in demand for the speech community. Sub-communities develop their own sub-inventories of verbs to distinguish salient event-types of significance to them" (1997:321). In other words, sub-communities within a speech community may develop their own jargon or technical language, unfamiliar or less familiar to the entire speech community proper. This concept can readily be extended to nominalization of SVCs. That is to say, only events, situations and concepts in existence or, 'salient,' within the speech community or

sub-community need nouns to describe them. As illustrated below, examples of SVNs peculiar to specific speech communities in Akan include:

11. ɔ kɔ ba-e
+NOM go come-COMPL
SVN: ɔkɔbae ‘a male child born after a brother or sister who died’

12. ø twa hwɛ
+NOM cut/cross look-COMPL
SVN: twahwɛ ‘test of gold on a touchstone’ (Christaller 1933)

It is important for us to point out here that when we say ‘culture-specific’, in this instance, we do not use it to mean that the concept/event/situation does not or cannot exist in any other culture or speech community in the world, but rather that the concept/event/situation is

- Demonstrably non-universal
- Other speech communities that do have the concept/event/situation may not use an SVC to express it.
- In speech communities that do use an SVC to express the concept/event/situation, such SVCs may not have a nominal counterpart (SVN).

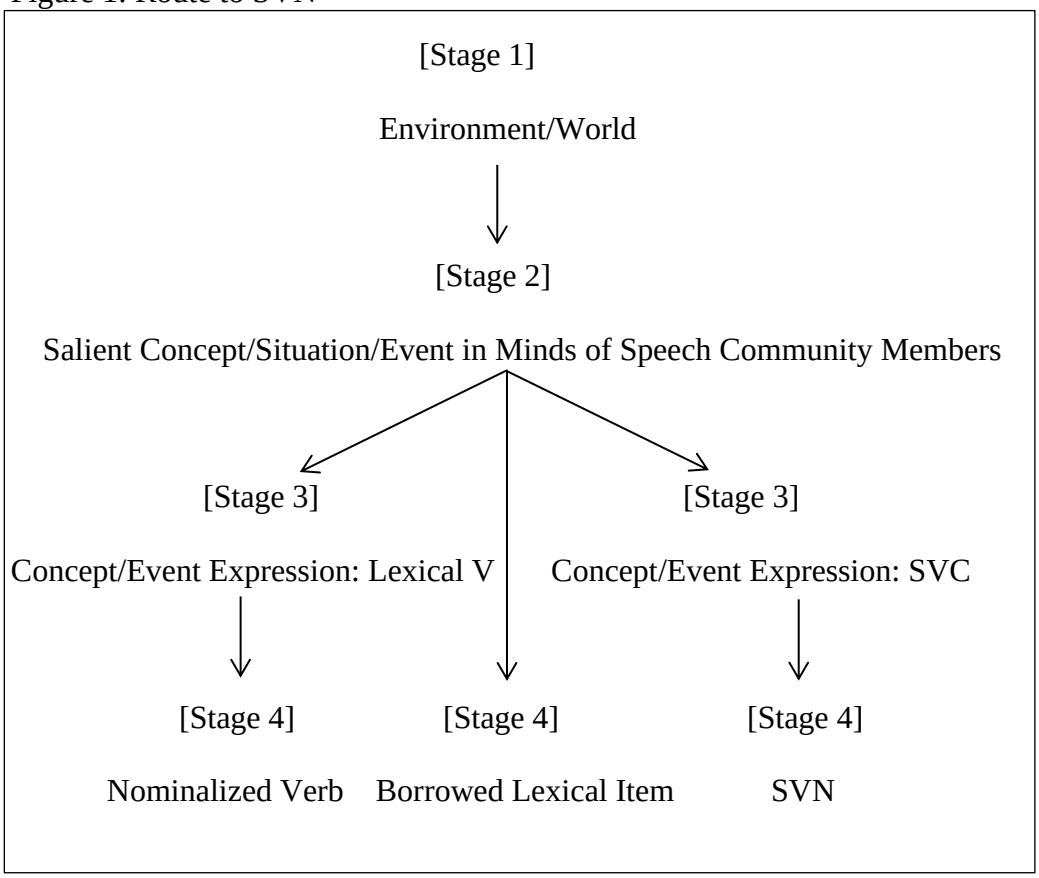
In example (11) above, the concept of reincarnation is expressed in Akan through serialization in the verbs *kɔ* ‘go’ and *ba* ‘come’ with the understanding that when a person dies, he or she goes to *asamando* ‘ancestral realm’ and can come back through reincarnation. Because, historically, reincarnation is a salient event type in the Akan speech community which is expressed through serialization, this notion gives rise to the need for an SVN form that describes one who undergoes this process. Even speakers who may not subscribe to the concept of reincarnation due to changes in personal religious beliefs or scientific reasons

may still readily be able to ascertain the significance of such SVNs as they pertain to the indigenous worldview wherein such thinking pervades.

Similarly, the case of *twahwɛ* 'test of gold on a touchstone' may have been particularly relevant as a salient event in the past amongst Akan-speaking people who used gold dust as their primary form of currency. Such a concept, or an indigenous expression thereof, may not have existed, say, in pre-invasion Australia where gold was not mined or used as a major form of currency. Also, this concept of *twahwɛ* may now be restricted to more limited domains (such as among goldsmiths) even amongst the Akan who formerly had gold as their currency who are now using the *Ghana Cedi* currency. For example, amongst Accra-dwelling Akan youth who are removed from the original event/concept, the SVN, *twahwɛ*, may not have any significance to them; to the point where if the word is mentioned to them out of context, they may come up with their own more literal meanings for what it might entail (such as cutting something or someone as an experiment). In order to ascertain the significance of such SVNs for familiarity or currency in the speech community, an extensive two-phase questionnaire survey was conducted which will be discussed in section 3.1.3.

The SVN, then, is ultimately a by-product of the environment. The process of deriving an SVN can thus be expressed as the following:

Figure 1: Route to SVN



Once an event or situation comes into a serializing speech community and becomes salient, that event or series of events can be conceptualized as simple in the sense of requiring only a single verb to describe it. In that same speech community, the event may also be encoded by means of borrowing a foreign verb in which case stage 3 (expression through lexical verb or serial verb construction) can be skipped. On the other hand, more complex, multi-step events may, indeed, require SVCs to describe them.

This notion of salience helps to explain why some native speakers may find particular instances of nominalization odd or unacceptable. Also, as time changes, some events that were formerly common may become less common or may, indeed, pass from the minds of speakers in the speech community. We will show

examples of this phenomenon below in section 3.1.3 as we survey Akan FL-ISVCs.

Other more universal situations or concepts such as human emotions may also be encapsulated in SVCs and subsequently expressed as abstract notions in SVNs such as:

13. ø fa kyɛ
+NOM take give as gift
SVN: fakyɛ ‘forgiveness’

In short, the crux of salient distinct event types is that only concepts that exist in the speech community require words (or nouns in this case) to describe them. New concepts are introduced to the community and, in serializing languages, these may be expressed as nominalized lexical verbs, borrowed nouns or SVNs. Thus, the cultural salience of events within a given speech community is one factor in the creation and retention of SVNs in any given serializing language.

1.2.4.2 Semantic Integration and Iconicity

In addition to salient distinct event types, it is hypothesized that scalar degrees of semantic integration, idiomaticity and subsequent lexicalization are amongst the primary factors in terms of whether or not various types of SVCs will be able to be nominalized and how nominalization will occur in a given serializing language. Lexicalization is thus thought to be the observable evidence of, and the by-product of, conceptual semantic integration. In other words, lexicalization is a morphosyntactic manifestation of semantic integration.

Even though FL-ISVCs encode unitary events, they are such that one verbal element must necessarily precede the other, as discussed in chapter two, section 2.4. Changing the position of the verbs in the SVC, either in finite form or nominalization, would result in ungrammaticality:

14. a. Megye no di
1SG.SUB-receive 3SG.OBJ eat
'I believe him/her'

b. *Medi no gye
1SG.SUB-eat 3SG.OBJ receive

c. gyedi(e)
'belief'

d. *digye(ɛ)

15. a. Mesu frɛ no
1SG.SUB-cry call 3SG.OBJ
'I cry out to him/her'

b. *Mefrɛ su no
1SG.SUB-call cry 3SG.OBJ

c. sufrɛ
'plea, supplication'

d. *frɛsu

16. a. Ɔyi-i me ma-e
3SG.SUB-remove-COMPL 1SG.OBJ give-COMPL
'He betrayed me'

b. *Ɔma-a me yi-i[4]
3SG.SUB-remove-COMPL 1SG.OBJ give-COMPL

c. oyima
'betrayal'

d. *omayi

Thus, for example, although *gye...di* 'believe' is now a unitary event in the minds of speakers, the placement of the erstwhile separate verbal elements must

reflect the iconic temporal sequencing order of an SVC of a stage prior to Full Lexicalization (either PL-ISVC or CSC). This is illustrated below in Figure 2.

Figure 2: Iconicity from perceived world to nominalization

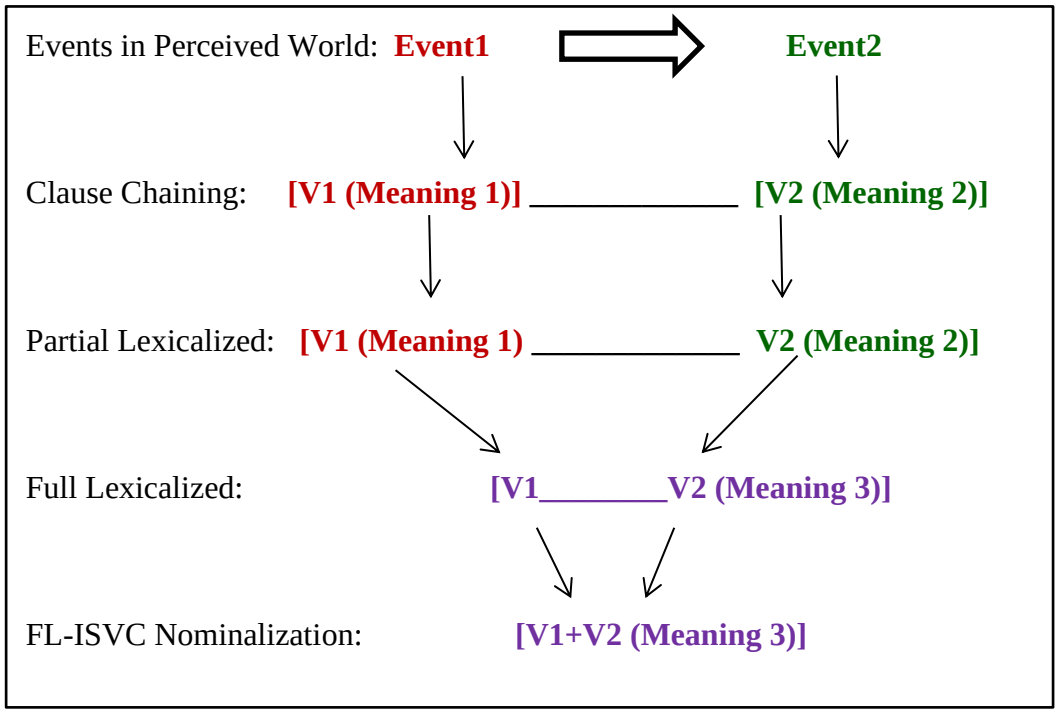


Figure 2 illustrates that at every stage, from the actual sequence of events in the perceived world to nominalization, the iconic order of the actual events in reality are retained. At no point does the order change away from this temporal sequence. At the clause chaining stage, each verb is a constituent with its own meaning marked by square brackets **[ ]** and **[ ]** respectively. At the partially lexicalized stage, each verb retains its own meaning but the constituency is extended beyond the individual verbs to the collocational unit. At the Full-Lexicalized level, not only are V1 and V2 contained within an all-encompassing constituent **[ ]**, they also carry a composite meaning typically different from and greater than the individual meanings from which the FL-ISVC is derived. This

relates to theoretical issues of compositionality and PT which will be addressed in the pet fish debate to be covered in chapter two, section 2.2.1. Finally, in the stage of nominalization, the FL-ISVC constituent is nominalized with verbal elements typically being made contiguous. The iconic ordering is retained and the composite meaning is also retained.

The association of common events in the real world of the speech community lends to greater semantic integration of those events within the minds of speakers. As alluded to briefly above, it follows that the greater the semantic integration (in the mind) and the greater the subsequent lexicalization (in the language), the less iconicity in the form of temporal sequencing effect would be expected. While the iconic ordering is retained in Full Lexicalized-Integrated Serial Verb Nominals (FL-ISVNs), we cannot speak of temporal sequencing to any significant degree at the FL-ISVC or at the nominalization stage as we are stating that the events have become unitary. In the CSC stage temporal sequencing is relevant as, here, we can speak of separate events with one occurring before the other. In the case of PL-ISVCs, we can speak of separate parts of a unitary event.

This begs the question of "What about coinages and novel forms which do not go through successive stages of CSC to PL-ISVC to FL-ISVC?" Novel forms of SVN are usually introduced due to needs of the speech community to describe a new concept, event or situation. Such new forms are patterned after prototypical FL-ISVCs which have actually gone through those stages.[5] In such cases, the morphosyntactic base template is followed in order to produce a new form based on analogy. *Nkasramso* 'harrowing (with words)' was just such a novel form as attested in Christaller (1933) marked with the symbol † indicating that it was a

novel form at the time of the writing of the dictionary. The preface to the dictionary indicates that, “New words derived from words already existing in the language, are marked by a dagger (†); a certain number of modern terms have not been admitted, because not as yet sufficiently approved” (Christaller 1933:V). We will demonstrate that such forms as *nkasramso* pattern after pre-existing SVNs. Similar examples abound in more recent metalanguage works such as Agyekum (2003). SVN formation in metalanguage gives examples, par excellence, of new concepts being married to knowledge of acceptable morphosyntactic base templates. Examples from Agyekum include *anantebɔ* ‘collocation’, *kɔsanba* ‘recursive’ and *ntwefirim* ‘deduction/inference/implication’. While SVN formation for the strictly novel forms in metalanguage is a topic worthy of study in and of itself, it is beyond the scope of this thesis as, here, we are focused on SVNs already accepted, known and used within the speech community.

It is thought that prototypical FL-ISVCs are derived from PL-ISVCs or CSCs as evinced by residual iconic verbal ordering which is transferred from less advanced stages of lexicalization. Verbal ordering in CSCs and PL-ISVCs, in turn, pattern after temporal sequencing of actual events in the real world as shown in Figure 2. On the other hand, other novel FL-ISVCs that do not go from CSC/PL-ISVC to FL-ISVC are constructed on analogy on the basis of SVN forms that do. We will delve deeper into what is meant by base template forms below in our discussion of idiomaticity.

1.2.4.3 Semantic Integration, Nominalization and Idiomaticity

In this section we will present the idea that FL-ISVCs are like lexicalized idioms. Thus, the criteria established for characterizing idioms by Barkema (1996) may be extended to FL-ISVCs. One of the main arguments used to show the extent to which formerly separate lexical items come to function as one in FL-ISVCs is the fact that they typically come to encode one single abstract notion which can also typically be expressed in nominal form. According to Osam,

> The extent of gye ... di as a combination that is used to express abstract notion is further seen in the fact that ***the two words can also be used as a nominal***. So in Akan the noun **gyedi** means 'belief'. Similarly, **fa ... kyɛ** 'forgive' can be used as a noun to mean 'forgiveness', **ko ... gu** 'lose a battle' can be nominalised into nkogu 'defeat', **su ... frɛ** 'call' nominalised becomes **sufrɛ** 'cries'" (Osam 1994:205 emphasis mine)

Givón (2001b:56) posits abstractness as one of several semantic features which characterize nouns. The abstract notion that is nominalized also tends to be non-compositional in that the gestalt meaning is different from either of the verbs from which it is originally derived. Therefore, a literal reading does not result in an understanding of the whole. In this sense, FL-ISVCs in their original conceptualization are thought to largely function as idioms. According to Osam (1994), "Ranking high on the scale of integration are those verbal combinations that have become **fully lexicalised into verb compounds** and which are used as ***lexicalised idioms***." (Osam 1994:238 emphasis mine).

Because FL-ISVCs can be analyzed as lexicalized idioms, we argue that criteria used to characterize idioms may be used to successfully analyze FL-ISVCs. Following Osam (1994), this thesis also assumes the fully lexicalized serial verb constructions are used as lexicalized idioms. In reference to idioms in

general, Barkema (1996) states that “Practically all such expressions are more or less limited in their morpho-syntactic freedom, that generally substitution of lexical items in these expressions is limited to some extent and that there are many with idiosyncratic semantic characteristics” (Barkema 1996:125). There are several distinct characteristics outlined by Barkema (1996) that are useful in analyzing degree of idiomaticity. These are:

- **Flexibility**
- **Collocability**
- **Compositionality**
- **Familiarity**

The first characteristic, **flexibility**, deals with the degree to which the idiom in question, FL-ISVCs in this case, may take on different grammatical forms. Such considerations include changing number, specification, other morphological marking such as reduplication, etc. Because Akan is generally regarded as morphologically depleted in regards to verbal inflection (see Osam 2003:3), flexibility is less of a factor in determining degree of idiomaticity than in languages with richer morphology. According to Obeng (2012), “Akan and many languages exhibit some characteristics of agglutination but they are not termed agglutinative languages since they do not exhibit such features to any considerable degree.” Indeed, as affirmed by Grigorenko in specific reference to the Asante Twi dialect of Akan, “Asante Twi is an isolating language that also employs agglutination” (Grigorenko 2009:200).

As a predominantly isolating language, index of synthesis, a hallmark of rich morphology, is expected to be relatively low. However, the primary aspect of morphological flexibility that is relevant to Akan is the process of reduplication. It is postulated that FL-ISVCs that show the most prototype effects will be those that are most inflexible (i.e. least able to retain their idiomatic meanings when subject to reduplication). For example, as shown in (17) an FL-ISVC like *gye...di* 'to believe' is not subject to reduplication whereas an example of Partial Lexicalized ISVC such as in *to...bɔ* 'throw...strike' is subject to reduplication as shown in (18). Lack of flexibility in idioms is very widespread and the same can be said of FL-ISVCs in Akan as will be shown in chapter three.

17. *Megyegye-e[6] X didi-iɛ
1SG.SUB-receive-receive-COMPL X eat-eat-COMPL
'I repeatedly believed X (on several occasions)'

18. Metoto-o mmoba bobɔ-ɔ
1SG.SUB-throw-throw-COMPL PL-rock strike-COMPL

mmofra no
children DET
'I repeatedly threw and struck Ama with rocks' (Amfo 2012)

A second measure of degree of idiomaticity is **collocability**. The primary consideration in collocability is the degree to which synonym or antonym alternatives can be freely switched in and out of the FL-ISVC. Most prototypical FL-ISVCs will show a high degree of collocability restriction and will be resistant to replacement of internal components. This means that antonyms and/or synonyms cannot be switched in and out for either verb as shown in (19a-c).

19. a. megye X di
1SG.SUB-receive X eat
'I believe X'

b. *megye X we
1SG.SUB-receive X chew

c. *mefa X di
1SG.SUB-take X eat

When V1 and V2 slots are unavailable for the insertion of alternative elements, this is due to restrictedness in terms of collocability. As such, introducing other verbs, regardless of semantic similarity, blocks the idiomatic meaning from being realized.

The next major characteristic of idiomaticity is that of **compositionality**. This is the degree to which the sum total meaning of the entire construction is readily derived from the parts contained therein. According to Osam (1994) for FL-ISVCs, "we cannot derive the meaning of the compound from the meanings of the component parts, though even here, there are degrees" (Osam 1994:205). Prototypically idiomatic FL-ISVCs are expected to be opaque in terms of deriving the total meaning from the sum of the lexical items which comprise its parts without special etymological knowledge. Again *gye…di* provides us with a prototypical example as shown in (20)

20. gye X di
receive X eat
'believe X'

But *gye X di* could mean take X and consume it, as in the case of food or money. In such an instance, it would be a fully compositional PL-ISVC without idiomatic import. Such cases are referred to as literal counterfeit forms which are compositional in meaning. Literal counterfeit forms exist side-by-side in languages along with their idiomatic counterparts which are typically derived from the

former. In the above example, if this was a PL-ISVC rather than an FL-ISVC, it would be expected that *gye...di* would simply mean 'receiving and eating' as PL-ISVCs are expected to be wholly compositional. However, in this case, the meaning of the gestalt whole is different from and more than the composite parts from which it is derived. Thus, an FL-ISVC which displays the most prototype effects is expected to be entirely non-compositional, although we acknowledge that there are scalar degrees in terms of compositionality.

Finally, the last consideration is the degree of **familiarity,** which is a measure of whether an idiom is "current" within a speech community. This means the idiomatic sense which is institutionalized to the point that the idiom is assumed by native speakers rather than its literal "counterfeit form" (see Barkema 1996:139). This is probably the most difficult to measure as, in testing currency judgments among a range of native speakers, results seem to vary from dialect to dialect, region to region and, in certain cases, from speaker to speaker within the same dialect. In the course of this study, it did become apparent that some lexicalized idioms seem to be adjudged as universally familiar or nearly so amongst native speakers across dialects while others fared better in one dialect more than others.

Expressed in another way, familiarity or institutionalization entails the development of a concretized meaning and pragmatic function within the speech community. For prototypical FL-ISVCs it is expected that members of the speech community will assume the institutionalized and familiar idiomatic meaning of the whole rather than the literal meaning of the individual lexical items. In chapter

two, section 2.2.2 this is referred to as a tendency towards "greater text frequency of well-formed idioms relative to their literal counterparts" (Chafe 1968:112).

For example

21.	megye	no	di
	1SG.SUB-receive	3SG.OBJ	eat
	'I believe him/her'		
	*'I receive him/her (and) eat'		

In an instance whereby the institutionalized form is not assumed, the incorrect (non-familiar) interpretation would be assumed whereby, in the above example, the listener would be wondering who was cannibalized or copulated with given just a few of the multifaceted meanings of *di*. In both cases, the familiar institutionalized idiomatic form is assumed to be the default by native speakers and hearers. Two ways to test for familiarity, native speaker intuitions (via questionnaires and focus group interviews) and attestation in comprehensive written corpuses, are both used in this thesis in order to, at the very least, provide a window into familiarity of FL-ISVCs treated within the study.

To summarize, based on the preceding discussion, prototypical FL-ISVCs are understood as having the following characteristics:

- Usually non-compositional
- Usually collocationally closed
- Usually inflexible
- Usually familiar (institutionalized)

In the case of PL-ISVCs, they are expected to have the following characteristics:

- Usually fully compositional
- Usually collocationally limited

- Usually semi-flexible (productive)
- Usually partially familiar (somewhat institutionalized)

Finally, CSCs are sentences of various types some of which can be proverbs which may be institutionalized and inflexible; others may be praise names composed of sentences, *etc.* As these may be random sentences they can run a range as shown below:

- Fully compositional or non-compositional
- Flexible or inflexible
- Collocationally open or closed
- Familiar or non-familiar

For the purposes of this thesis, SVCs are also understood as existing on a continuum whereby some SVCs may be more or less prototypical than others. For example an SVC may display three (3) of the four (4) prototypical idiomaticity characteristics and still be considered as a part of its category.

1.3 Chapter Summary and Thesis Overview

Chapter one has given a broad introduction to various sub-topics to be dealt with in this thesis. Some of the broad overarching themes included providing a survey of definitions of SVCs and challenges with arriving at an agreed upon and universally accepted definition of the term. Some such challenges include basing definitions of the category of SVC on a criterion of Necessary and Sufficient Conditions.

In order to avoid certain baggage and pitfalls of following a Necessary and Sufficient Conditions model, we looked at a featural approach based on characteristics typical of putative SVC forms. Some such characteristics include monoclausality, strings of verb-like elements and iconicity. Acknowledging that an approach focusing on clusters of features/characteristics is not universally accepted, some critiques of the approach were introduced to balance out the discussion. Formal and semantic definitions in the literature were also looked at in the context of diverging views and general challenges that have plagued SVCs as a coherent phenomenon of linguistic inquiry.

Various typologies were also explored based on numerous criteria. Indeed, SVCs can be and actually have been categorized on the basis of transitivity, argument sharing and semantic integration, just to name a few. In the current thesis, we are looking at semantic integration and lexicalization as a basis of categorization and typology of Akan SVCs and their derivative SVN counterparts.

Finally we looked at factors that influence nominalization of SVCs in general with particular import with regard to the Akan case. Such factors include the concept of salient distinct event types, semantic integration and iconicity as well as idiomaticity. The concept of idiomaticity will be treated at length in chapter three because FL-ISVCs function as lexicalized idioms in the Akan language. As such, issues of lexicalization, semantic integration and idiomaticity are at the forefront of the analysis and typology developed within this thesis. A similarly important concept, iconicity, will also play a prominent role in our discussion of PL-ISVCs in chapter four as well as in understanding phenomenon which gives rise to the surface order of verbal elements in FL-ISVCs.

Chapter two will cover the theoretical framework and methodology used in the current study which guides the thesis.

Chapter three of the thesis provides an analysis of FL-ISVNs in Akan, drawing on written sources and data from questionnaires. Typologically organized Akan full lexicalized-integrated serial verb nominalization data gathered through fieldwork and written sources are presented in chapter three, drawing upon the three major dialects of Akan including native speaker judgments of data.

Chapter four provides an analysis of data on PL-ISVNs in Akan. Chapter five provides an analysis of CSNs in Akan. Chapter six presents linguistically significant generalizations, conclusions, as well as future directions for further research into serial verb nominalization in general and for Akan in particular.

ENDNOTES

[1]For example, SVNs may be categorized based upon distinction between how Integrated Serial Verb Construction are nominalized vs. How Chaining Serial Constructions are nominalized (Osam 1994); SVNs could be categorized based upon prefixes that the nominalized forms take which may be related to a pre-existing noun class system (Osam 1993); Alternatively, SVNs could be categorized based upon argument sharing properties (Agyeman 2002; Hellan et al. 2003) and/or based upon semantic categories (George 1975; Lawal 1989; Ameka 2006: 135).

[2] (Osam 2012:Personal Communication)

[3] This has been referred to as "embodied experience" in the cognitive linguistics literature. See Evans and Green (2006).

[4] This can have a meaning of 'He/she caused me to remove it' but would be ungrammatical as anything having to do with the composite meaning of betray.

[5] It is possible that some principles of communication, such as iconicity in morphosyntactic structures, are entrenched and therefore even novel concepts must be modeled after such principles. In other words, a language makes use of the tools available to it morphosyntactically. This idea may be compared to how consonant clusters in borrowed are broken down into CV when they are used in Akan. In such cases, the language makes use of its phonological rules and resources in incorporating novel concepts.

[6] As a matter of fact, in reduplicating *gye* to *gyegye* one encounters the fact that any meaning of *gyegye* as specification for number encounters a separate lexical

meaning of *gyegye* as ‘disturb’ or ‘annoy’. Similarly *didi* as a means of specification for number may also be blocked by the preexisting *didi* as an intransitive version of *di* ‘eat’. Reduplication as a source of lexical items which are completely unrelated to their base forms synchronically is beyond the scope of this thesis, however it is noted that a block to reduplication in certain cases may be the existence of other semantically unrelated lexical items already occupying that space in the lexicon.

CHAPTER TWO

THEORETICAL FRAMEWORK AND METHODOLOGY

2.0 INTRODUCTION

In this chapter, the theoretical framework to be used in this thesis will be discussed. This includes a discussion of the foundations of prototype theory and an elaboration on what it entails and how it relates to the current study. Also covered are discussions of SVCs and SVN in the context of semantic integration, grammaticalization and iconicity from a theoretical perspective.

2.1 Prototype Theory

2.1.1 Wittgensteinian Concepts of Categorization, Function and Context

"The problems are solved, not by giving new information, but by arranging what we have known since long." – Ludwig Wittgenstein (1953:§109)

Prototype Theory (PT) has emerged in philosophical, psychological and linguistic literature as an alternative to the Classical Theory (CT) of categorization. A significant figure in the early development of much of the philosophical basis of prototype theory was Ludwig Wittgenstein (1953; Wittgenstein *et al.* 1991). One of the central philosophical contributions of Wittgenstein is his advocacy of gradients, scales or continua in the form of family resemblances as opposed to the necessary and sufficient conditions

model necessarily required by CT. One of his most famous contributions in this area is his extended exposition on games and language-games.

Consider aphorism §66 in Wittgenstein's Philosophical Investigations. In this aphorism Wittgenstein calls on the reader, whether philosopher or linguist, to take a critical look at words and word usage. In one of his more well-known examples, he calls our attention to this through the word "game" asking "what is common to all games?" (Wittgenstein 1953:§66). The critical point to consider in this line of questioning is that beyond just being called games, there is something common to all activities known as games in the form of "similarities, relationships, and a whole series of them at that" (Wittgenstein 1953:§66). More depth is then added to the line of questioning as Wittgenstein asks what is shared between games such as chess, monopoly, card games and ball games. Are they all amusing? Is there competition? Is there skill involved? These questions are not so much rhetorical questions as they are questions designed to get the reader thinking about the words we use and what they truly mean on a deeper level. The result of this philosophizing is a tentative, yet instructional, result of examination; namely that "we see a complicated network of similarities overlapping and cries-crossing: sometimes overall similarities" (Wittgenstein 1953:§66).

After expounding upon numerous disparate examples of games, Wittgenstein then asks "What still counts as a game and what no longer does? Can you give the boundary? No. You can draw one; for none has so far been drawn" (1953:§68). Wittgenstein's philosophizing has a pointed objective: showing the inadequacy of the necessary and sufficient conditions model. Beyond abstracting about games, Wittgenstein is able to show 1) that language

finds its meaning not in abstract definitions, but rather in its functional usage and 2) that for philosophical concepts and words alike, there is a scalar continuum with fuzzy boundaries that can be useful (and is indeed intuitive) in categorization. Wittgenstein refers to this idea as family resemblance on analogy to the members of a category on par with members of a family:

> I can think of no better expression to characterize these similarities than "family resemblances"; for the various resemblances between members of a family: build, features, colour of eyes, gait, temperament, etc. etc. overlap and cries-cross in the same way.-And I shall say: 'games' form a family. (1953:§67)

In reference to the fuzzy boundaries, whereby there is a blurry demarcation between category membership and non-membership, Wittgenstein offers another concrete example to elucidate the point he makes. This second example takes the form of a sharply defined picture of a red rectangle juxtaposed with a blurred one. He draws the reader's attention to how hopeless a task it would be for one to attempt to draw a sharp picture that corresponds with the blurred one when the colors in the original merge with the one drawn. In such a situation, "Anything-and nothing-is right. And this is the position you are in if you look for definitions corresponding to our concepts in aesthetics or ethics" (1953:§67).

2.1.2 Eleanor Rosch's Concepts of Reasoning and Categorization

Another major figure in the development of prototype theory has been Eleanor Rosch (1975,1978,1983). In delineating differences between Prototype Theory and Classical theory, Rosch argues that:

> Prototypes of categories are reference points based on representativeness. According to the logic of classes, categories should have definitions specifying necessary and sufficient criteria for

> membership; all category members should be logically equivalent, and categories should otherwise obey the laws of class logic … However, by now there is a growing amount of empirical evidence pointing to the fact that categorization is better conceived as a representativeness phenomenon than as a matter of class logic or of simple probability. (Rosch 1983:81)

Theoretically, Rosch expresses dissimilarities between categorization as dealt with by PT versus CT in terms of different types of reasoning; logical reasoning and reasoning based on reference points. Rosch defines reference point as "a stimulus or model that other items are seen or judged 'in relation to' (Rosch 1975:532) due to what may be termed prototype effects (Rosch 1983:74). In a similar vein as Wittgenstein, she argues that "Although categories that do not have definitions or determinate boundaries can perhaps only be understood by means of their representativeness structure, categories with clear definitions are subject to both types of reasoning" (Rosch 1983:83-4). Despite the observation that categories with clear definitions still show prototype effect, Rosch remarks that "A logical interpretation of categories in terms of definitions with necessary and sufficient criteria and a prototypical interpretation of categories in terms of clear cases and gradients of membership are normally considered mutually exclusive" (Rosch 1983:73).[1]

Rosch further posits that "reference point reasoning is somewhat more empiricist and logical thinking more rationalist in flavor" (Rosch 1983:84). Rosch's point of departure in advocating an "empiricist flavor" of reasoning suggests that "human categorization should not be considered the arbitrary product of historical accident or of whimsy but rather the result of psychological principles of categorization, which are subject to investigation" (Rosch 1978:27). A major assumption in these empirical studies is the focus on the cultural specificity of categorization noting that

> [T]he issues in categorization with which we are primarily concerned have to do with explaining the categories found in a culture and coded by the language of that culture at a particular point in time. (Rosch 1978:28)

This observation from Rosch is central in our own understanding of SVCs and the SVNs derived from them. Semantic integration is culturally mitigated. SVCs can, therefore, be characterized on the basis of the degree to which the culture or language group in question has semantically integrated its SVCs. This, therefore, can form the basis of categorization of SVCs for a particular language group and between different language groups. Rosch goes on to explain that

> When we speak of the formation of categories, we mean their formation in the culture. This point is often misunderstood. The principles of categorization proposed are not as such intended to constitute a theory of the development of categories in children born into a culture nor to constitute a model of how categories are processed (how categorizations are made) in the minds of adult speakers of a language. (Rosch 1978:28)

Rosch postulates two general and basic principles for the formation of categories based on the function of category systems in general. The first function is to "provide maximum information with the least cognitive effort" (Rosch 1978:28). The second function is theorized as pertaining to the first in that "maximum information with least cognitive effort is achieved if categories map the perceived world structure as closely as possible" (Rosch 1978:28). The underlying assumption is that "the perceived world comes as structured information rather than as arbitrary or unpredictable attributes" (Rosch 1978:28). Therefore, a language, or, more appropriately speakers of a language, map categories to "given attribute structures or by the definition or redefinition of attributes to render a given set of categories appropriately structured" (Rosch 1978:28).

Central to the current discussion of SVCs and SVNs is the notion that there is a culturally mediated perceived world structure that is transferred to categories. This is a significant prelude to the discussion of the idiomaticity and collocationality of SVCs, which, in turn, impacts the realization of SVNs. Mapping of world structure and its transference onto language are also significant in relation to iconic temporal sequencing phenomena.

2.1.3 Rosch's Concept of Cognitive Economy

Rosch (1978) introduces the concept of Cognitive Economy as an intrinsic psychological motivation for the natural development of categorization. The fundamental understanding advanced by this concept is the idea that an organism attempts to gain the most information from categories while conserving its resources to the greatest degree possible. In other words:

> To categorize a stimulus means to consider it, for purposes of that categorization, not only equivalent to other stimuli in the same category but also different from stimuli not in that category. (Rosch 1978:28-9)

Thus a driving force behind categorization is on the basis of recognized or attributed similarity or dissimilarity. This is often accomplished through analogy. Through such analogies, the organism creates categories that work to its advantage such as knowing "as many properties as possible from knowing any one property" (Rosch 1978:28-9). In the context of the natural world, the utility of doing so may be not only useful, but, indeed, life-saving in the determination of predators, prey, poisonous vegetation, edible plants and more. Thus, a central purpose of categorization is:

> […] to reduce the infinite differences among stimuli to behaviorally and cognitively usable proportions. It is to the organism's advantage not to

> differentiate one stimulus from others when that differentiation is irrelevant to the purposes at hand." (Rosch 1978:28-9)

For Rosch, categorization, in any natural context, is wedded to the function for which it is intended.

In the current study, categories are also developed on the basis of function; namely on the basis of differentiating linguistic behavior. As becomes apparent upon examination of the data at hand, FL-ISVCs follow a particular pattern of nominalization behavior, PL-ISVCs follow a different pattern and CSCs follow yet another pattern. Using principles of cognitive economy, we are able to account not only for why some integrated SVCs occur, but also why others do not occur. We also are given a means of explaining native speaker judgments about acceptability of SVN forms of various degrees of semantic integration and idiomaticity as presented in questionnaires and focus groups.

In relation to the current study, idioms are inherently based in specific cultures, which are, in turn, environmentally (contextually) mitigated. Thus, no Full Lexicalized-Integrated SVC, understood as an SVC with a highly idiomatic meaning, exists in Akan, a language spoken in a tropical area, about a two-step process for shoveling snow or relating to the movements for ice-skating. This is due to the fact that such a differentiation "is irrelevant to the purposes at hand" (Rosch 1978:29). The only SVCs that become lexicalized as a result of their frequent occurrence are those events which are seen as culturally salient (see Rosch 1983:77-9).

2.1.4 Rosch's Concept of Perceived World Structure

Rosch advances a second principle of categorization which deals with perceived world structure as applicable to a cultural (language) group: She asserts that:

> Unlike the sets of stimuli used in traditional laboratory-concept attainment tasks, the perceived world is not an unstructured total set of equiprobable co-occurring attributes. Rather, the material objects of the world are perceived to possess […] high correlational structure. (Rosch 1978:29)

Rosch illustrates this point with the example of perceived complex attributes of feathers, fur and wings. Through empirical observation, the knower comes to observe that in the perceived world, there tends to be more co-occurrence of wings with feathers than with fur. Similarly, in the case of motor actions, such as sitting down, chairs are more likely to fit the bill than, say, cats. With this understanding, Rosch comes to the conclusion that:

> Combinations of what we perceive as the attributes of real objects do not occur uniformly. Some pairs, triples, etc., are quite probable, appearing in combination sometimes with one, sometimes another attribute; others are rare; others logically cannot or empirically do not occur." (Rosch 1978:29)

The above statement holds strong implicational importance for the current study as we are expressly dealing with co-occurrence of verbs in the form of different types of SVCs, some of which display high degrees of collocation between verbal elements. In the case of SVCs, the "empirical environment" is the cultural environment, context or perceived world structure within which the language is spoken. Within a particular cultural milieu, certain events which are empirically observed as co-occurring undergo a higher corresponding level of semantic integration to the point where the events are no longer even viewed as separate. In serializing languages such events expressed through SVCs are

grouped together on the basis of a common level of semantic integration and lexicalization. This follows the principle of cognitive economy. Within a given category of co-occurrence, FL-ISVCs for example, the phenomenon can proceed to the point of even causing problems of lexical decomposition whereby the individual verbs within the unit can no longer be ascertained (see Bamgbose 1964; Ogunwale 2005). This strong propensity of co-occurrence is coterminous with increasing levels of lexicalization of SVCs and increasing levels of semantic integration to the point of full lexicalization. These events in the perceived world with progressively higher correlational structures are enshrined in serializing languages via culturally determined and dependent idiomatic structures with scalar degrees of lexicalization.

Very much in line with Wittgenstein's critique of "language gone on holiday," Rosch emphasizes the role of the perceiver, individually and collectively in terms of the culture in which the perceiver is situated. According to Rosch:

> It should be emphasized that we are talking about the perceived world and not a metaphysical world without a knower. What attributes will be perceived given the ability to perceive them is undoubtedly determined by many factors having to do with the functional needs of the knower interacting with the physical and social environment. One influence on how attributes will be defined by humans is clearly the category system already existent in the culture at a given time. (Rosch 1978:29)

Rosch is careful to note, however, that "viewing attributes as, at least in part, constructs of the perceiver does not negate the higher-order structural fact about attributes at issue, namely that the attributes of wings and that of feathers do co-occur in the perceived world" (Rosch 1978:29). Rosch argues that the two aforementioned basic principles of categorization, namely "a drive toward cognitive economy combined with structure in the perceived world, have

implications both for the level of abstraction of categories formed in a culture and for the internal structure of those categories once formed" (Rosch 1978:29-30). While Rosch focuses on the internal structures of categories in terms of physical objects (birds, for example) in the perceived world, in the current study, we follow Taylor (1995:60) in arguing that these organizing principles of categorization can be extended to events within that same perceived world.

For natural languages, in general, actions and events are typically represented by verbs. In serializing languages, in particular, these events can be represented by serial verb constructions. SVCs, as such, can be categorized on the following basic assumptions that Rosch originally ascribed to objects that "(1) in the perceived world, information-rich bundles of perceptual and functional attributes occur that form natural discontinuities, and that (2) basic cuts in categorization are made at these discontinuities" (Rosch 1978:31). In the case of the current study, these discontinuities occur at levels of semantic integration of SVCs. These levels are observed in the nominalization of SVCs as CCs, PL-ISVCs and FL-ISVCs which are not expected to show the exact same type of behavior if, indeed, semantic integration is relevant as an organization principle in SVCs and SVNs in Akan amongst other serializing languages.

2.1.5 Rosch's Contextuality

Heavily influenced by the work of Wittgenstein, Rosch argues for examining objects in the perceived world given the assumption that "both the constraint of real-world factors and the construction and reconstruction of attributes are continually present" (Rosch 1978:42). In this understanding, the

focus is not on abstract attributes but, rather, “the contexts in which objects occur - that is, to the culturally defined events in which objects serve as props” (Rosch 1978:42).

Whereas Rosch focuses on the prototype effects in relation to objects, in this study the case is being made that these culturally defined events also have prototype structure. When we refer to events here, we are speaking of the events and event structures represented by verbal complexes in SVCs which are then transferred under nominalization to SVN. Rosch deals with events as standing “at the interface between an analysis of social structure and culture and an analysis of individual psychology” (Rosch 1978:43). Much of these concepts of categorization may be reduced to issues of language. It is language that provides the “scripts for events” through which one can “specify how culture and social structure [and linguistic structure] enter the individual mind” (Rosch 1978:43). This begs the question of how events are dealt with culturally as well as the objects that occur within the context of said event. In CSC structures, there are separate and separable events. In PL-ISVCs these events are moving towards being culturally conceptualized as one event yet with distinct parts while FL-ISVCs are cognitively understood as one event by speakers of the language. Because of these differences, it is expected that the different types of SVCs delineated above will show different characteristics under nominalization where nominalization is possible.

In the current study, we take the position that what determines the degree of lexicalization is how the event, or series of events, as the case may be, is viewed culturally with regard to semantic integration. We are advancing this as the **degree of idiomaticity** which can be measured empirically via

native speaker judgments. In this thesis, what is essentially being done is a combination of the work of Rosch (1975,1978,1983) and Osam (1994) in that Rosch deals with the prototypicality of objects in categories which show prototype effects while Osam deals with SVCs in categories showing prototype effects. This thesis aims to be an extension of the theoretical basis upon which both of these studies are based. By focusing on Serial Verb Nominalization, this is essentially the interface where prototypical objects occur in prototypical events (SVCs) in a culturally-relevant context of actual language use. The intensive study of SVNs may shed light on "empirical evidence for prototypes" (see Rosch 1978:46) of SVCs, providing structural facts about categories of SVCs through observing their behavior when nominalized. Similar to the studies of Rosch, this may have implications for the possible role of specific types of prototypes in "cognitive processing, representation, and learning" (Rosch 1978:46). As opposed to examining real-world objects, our primary concern is real-world events as encapsulated in the verbal system of Akan.

2.1.6 Rosch's Concept of Categorization

Rosch follows Wittgenstein explicitly in arguing that in the natural world, "Most, if not all, categories do not have clear-cut boundaries. To argue that basic object categories follow clusters of perceived attributes is not to say that such attribute clusters are necessarily discontinuous" (Rosch 1978:35). This assertion relates directly to the aforementioned discussion of cognitive economy. According to Rosch, a major consideration in cognitive economy "dictates that categories tend to be viewed as being as separate from each other and as clear-cut as possible" (Rosch 1978:35-6). In the western philosophical

tradition, this is done by means of imposing necessary and sufficient criteria as the required and determining factor for category membership.

Such a criterion of necessary and sufficient conditions applied to categorization was a definitional requirement, rather than an empirically proved reality. Thus, one of the foundational assumptions upon which much of science is based itself escaped the rigors of the scientific method from the outset. Rosch, however, calls on us to remember that the imposition of such criteria is not the only way to achieve clarity and distinctness in cases where categories are actually continuous. Another way to do so is by considering each category on the basis of its most salient cases rather than on the basis of its boundaries. This is the central foundational thought behind prototypes in Prototype Theory (PT). This was pointed out by Wittgenstein (1953) in that

> Categorical judgments become a problem only if one is concerned with boundaries - in the normal course of life, two neighbors know on whose property they are standing without exact demarcation of the boundary line. Categories can be viewed in terms of their clear cases if the perceiver places emphasis on the correlational structure of perceived attributes such that the categories are represented by their most structured portions. (Rosch 1978:35-6)

At this juncture, it is important to remember that none of the most salient or clear-cut cases are conceptualized as "the prototype" in and of themselves. They rather have more or less of the prototypical attributes associated with the category in question. According to Taylor,

> Events can be described as (more or less) prototypical instances of COWARDICE, objects exhibit a (more or less) prototypical TALLNESS. One could not, on the other hand, say that an event is *the* prototype of COWARDICE, nor could one pick out an object as *the* prototype of TALLNESS. (Taylor 1995:60)

To treat an entity as *the* prototype itself would be to posit an entity (a prototype) as an abstract representation of a category. Rosch herself entertained

the idea of PT as a theory of knowledge representation and later backed away from that position. Initially, Rosch theorized that

> [A prototype can be thought of] as the abstract representation of a category, or as those category members to which subjects compare items when judging category membership, or as the internal structure of the category defined by subjects judgments of the degree to which members fit their 'idea' or 'image' of the category. (Rosch and Mervis 1975:575)

Later, Rosch abandoned this idea stating clearly that

> "The fact that prototypicality is reliably rated and is correlated with category structure does not have clear implications for particular processing models nor for a theory of cognitive representations of categories" (Rosch 1978:38)

Thus Rosch consigned her experiments to being only an investigation of typicality effects investigating people's categorization judgments rather than a more ambitious representation of the cognitive structure from which such judgments arise. This point is discussed further below in terms of exemplars of a category and in relation to Lakoff's (1987) metonymical Idealized Cognitive Models (ICMs). In recent literature on SVCs, this idea of prototypical attributes has been referred to as clusters of features (see Aikhenvald 2006).

The theoretical crux of prototype theory lies in looking at categorization on the basis of prototype effects or prototypical attributes in clear cases. At the same time there is an acknowledgement of continuous categories at the fuzzy boundaries as alluded to by Wittgenstein (1953:§77). Rosch observes that "Although logic may treat categories as though membership is all or none, natural languages themselves possess linguistic mechanisms for coding and coping with gradients of category membership" (Rosch 1978:39). One means of doing so is through the utilization of what Lakoff (1972) refers to as "hedges" which, in English, encompass such qualifying terms as "almost" and

"virtually" (Rosch 1978:39). This is also evident in the asymmetry of judgments in relation to prototypical members of a category versus less-prototypical members (see Tversky 1977). An example of such asymmetry in the context of hedges would be like saying a penguin is virtually a bird. However it would be odd to say that a sparrow is virtually a bird. In such a scenario, the sparrow is not the prototype "bird" in and of itself but has a significantly high degree of attributes typically associated with the category "bird". Judgments of prototype effects are intuitions about the prototypicality or prototype effects of any given member in a category. To this effect, Rosch asserts that

> To speak of a prototype at all is simply a convenient grammatical fiction; what is really referred to are judgments of degree of prototypicality; Only in some artificial categories is there by definition a literal single prototype [(for example, Posner, Goldsmith, & Welton, 1967; Reed, 1972; Rosch *et al.*, 1976b)]. For natural-language categories, to speak of a single entity that is the prototype is either a gross misunderstanding of the empirical data or a covert theory of mental representation. (Rosch 1978:40)

In other words, prototypes of categories typically refer to the clearest cases of category membership. This is determined by people's judgments of goodness of membership within the category in question. There tends to be a misunderstanding of what prototype is because the notion has been construed by some to mean a specific category member or mental structure. However, members of the category that "most reflect the redundancy structure of the category as a whole" are those that show the most prototype effects (Rosch 1978:36-7)[2].

According to Rosch, in what became an influential series of programmatic studies, it was discovered that to a large degree, "the extent to which items have attributes common to the category was highly negatively

correlated with the extent to which they have attributes belonging to members of contrast categories" (Rosch 1978:37). This is seen as a component of the structure of categories in the real world. Rosch theorizes that

> […] It may be that such structure is given by the correlated clusters of attributes of the real world. Or such structure may be a result of the human tendency once a contrast exists to define attributes for contrasting categories so that the categories will be maximally distinctive. (Rosch 1978:37)

These results evoke Wittgenstein's philosophizing vis-à-vis family resemblances and games discussed above. This functional meaning of prototype is useful below as we discuss what critics have said in the famous guppy versus goldfish debate initiated by Osherson and Smith (see Osherson and Smith 1981).

Prototype theory is a tool for categorization. In addition to categorizing with prototype theory, one of the fundamental assumptions taken within this thesis pertains to the varied nature of categorization itself. The quotation below is instructive in our theoretical understanding of categorization in general and of our typology of Serial Verb Nominalization in particular in the current study.

> "[I]n the sorting task, twenty items representing five types of food, five types of clothing, and five types of cooking utensils were heaped on a table in front of a Kpelle subject. When the subject had finished sorting, what was present were ten categories composed of two items each — related to each other in a functional, not categorical, manner. Thus, a knife might have been placed with an orange, a potato with a hoe, and so on. (Glick 1975:635-6)

This type of categorization itself is a testament to functionality in the development of categories in the real world. In the case above, when asked why the categorization was done in the way it was done, the subject articulated the rationalization that, 'The knife goes with the orange because it cuts it.' The

subject also volunteered that a wise man would do things in this way. In other words, one who is wise knows what is needed to get to the particular food in question while the fool with this knowledge would simply group them based on things that go into one's mouth, things that are made of metal, etc. Indeed, "when an exasperated experimenter asked finally, 'how would a fool do it,' he was given back sorts of the type that were initially expected — four neat piles with foods in one, tools in another, and so on" (Glick 1975:635-6). Again, we have an example of categorization on the basis of empirical evidence of co-occurrence.

The meaning that we can glean from the above scenario pertains to the reality of cognitive economy as well as the essential subjectivity of categorization. This is a subjectivity that exists not only from one individual person to another or from one culture to another culture. Even for the same group or individual, categorization may vary depending on intent. In the Kpelle case study referred to above, when the respondents' intent was to categorize in the way "a wise man would do things", categorization took one form. When the intent was to categorize in the way a fool would do things, the categorization changed. The objects to be categorized remained the same. The intent is what changed and, as a result, the categorization changed.

There are several bases upon which one could choose to categorize Serial Verb Nominalization depending on one's intent. As mentioned in chapter one, categorization of SVCs and SVNs in Akan could be made on the basis of transitivity, argument sharing or semantic integration, amongst a whole host of other possibilities. A major consideration is that our categorization must show empirical relevance for Akan.

The understanding with which we are approaching our typology is, in itself, an overtly functional approach. The typology proposed is intended to account for one of many possible ways by which empirical observations may be categorized in a particular and systematic way.

In this thesis, we are not assuming an objectivist view of language either in the implementation of our methodology or in our analysis of data. Thus, this thesis is an intentional departure from the classical theory of categorization. According to Osam (1994), following Lakoff (1987), the Classical Theory (CT) of categorization may be explicated as follows:

> The classical theory which goes back to Aristotle, classifies entities according to necessary and sufficient conditions. This means that a certain category, for example, is defined by specific features; and each of the features is considered necessary for the definition of that category. For an entity to be said to belong to that category it must have all of the defining features of that category, otherwise it cannot be put in that category. The sufficiency of the defining features lies in the fact that an entity can be considered to belong to the category if it possesses each defining feature of the category. (Osam 1994:10)[3]

In other words, conceptual and linguistic categories are thought to have definitional structure (see Evans and Green 2006:249-51). This understanding is also found in the words of Lakoff that "to a very large extent, the objectivist view of language and thought rests on the nature of categories. On the objectivist view, things are in the same category if and only if they have certain properties in common. Those properties are necessary and sufficient conditions for defining the category" (Lakoff 1987:xiv). Under CT, categories are conceptualized as having very rigid boundaries. Either an item is a member of the category or it is not. Also there are no better or worse examples of a member of a category. All members are seen as having equal membership. This view was subjected to challenges philosophically, theoretically and

methodologically by Prototype Theory (PT) and its subsequent extensions in the form of Idealized Cognitive Models, both of which are discussed below.

2.1.7 Lakoff: Prototype Theory in Terms of Cognitive Models

Lakoff (1987) gives a comprehensive treatment of the central ideas of prototype theory. The first is *Family Resemblances*, which, according to Lakoff is "The idea that members of a category may be related to one another without all members having any properties in common that define the category" (Lakoff 1987:12). A second critical assertion is that of *Centrality. Centrality* is the "idea that some members of a category may be 'better examples' of that category than others" (Lakoff 1987:12). A third notion is that of *polysemy as categorization* which is described as "The idea that related meanings of words form categories and that the meanings bear family resemblances to one another" (Lakoff 1987:12). Fourthly, Lakoff presents *Generativity as a prototype phenomenon.* Lakoff states that "This idea concerns categories that are defined by a generator (a particular member or subcategory) plus rules (or a general principle such as similarity). In such cases, the generator has the status of a central, or 'prototypical,' category member" (Lakoff 1987:12).

Membership gradience is a fifth concept wherein "The idea that at least some categories have degrees of membership and no clear boundaries" (Lakoff 1987:12). Sixthly Lakoff presents the idea of "*Centrality gradience:* The idea that members (or subcategories) which are clearly within the category boundaries may still be more or less central" (Lakoff 1987:12). Another idea of prototype theory outlined by Lakoff is *Conceptual embodiment*. According to Lakoff, *Conceptual embodiment* is

> The idea that the properties of certain categories are a consequence of the nature of human biological capacities and of the experience of functioning in a physical and social environment. It is contrasted with the idea that concepts exist independent of the bodily nature of any thinking beings and independent of their experience (Lakoff 1987:12).

The next idea of prototype theory is the concept of *Functional embodiment*. Lakoff states that *functional embodiment* may be understood as:

> The idea that certain concepts are not merely *understood intellectually;* rather, they are *used* automatically, unconsciously, and without noticeable effort as part of normal functioning. Concepts used in this way have a different, and more important psychological status than those that are only thought about consciously. (Lakoff 1987:12)

A ninth central pillar of prototype theory, as outlined by Lakoff, is the idea of *Basic-level categorization. Basic-level categorization* is the idea that

> categories are not merely organized in a hierarchy from the most central to the most specific but are also organized so that the categories that are cognitively based are "in the middle" of a general-to-specific hierarchy. Generalization proceeds "upward" from the basic level and specialization proceeds "downward." (Lakoff 1987:13)

Lakoff conveys another concept associated with prototype theory, which is the idea of "*Basic-level primacy:* The idea that basic-level categories are functionally and epistemologically primary with respect to the following factors: gestalt perception, image formation, motor movement, knowledge organization, ease of cognitive processing (learning. recognition, memory, etc.), and ease of linguistic expression" (Lakoff 1987:13). Finally, Lakoff proposes the idea of "*Reference-point or 'metonymic,' reasoning:* The idea that a part of a category (that is, a member or subcategory) can stand for the whole category in certain reasoning processes (Lakoff 1987:13).

According to Lakoff, the unifying principle between these themes is the concept of a cognitive model. Such dominant Idealized Cognitive Models (ICMs) structure mental spaces which may be viewed as a "medium for

conceptualization and thought. Thus any fixed or ongoing state of affairs as we conceptualize it is represented by a mental space" (Lakoff 1987:281). Central to Lakoff's conceptualization of ICMs is the role of context in how mental spaces are structured. These mental spaces are developed on the basis of environment; spatial and temporal. They can also be developed on the basis of hypothetical situations. ICMs give background knowledge based on experience within the environmental context. This background knowledge can then be utilized for the purpose of structuring mental spaces. This process is referred to as schema induction. According to Lakoff, the structuring principles involved in the process include (1) image schemas; (2) propositions; (3) metaphor; (4) metonymy; and (5) symbolism.

Image schemas serve as much of the foundational building blocks for structuring space. Thus ICMs pertaining to spatial relations are structured by ICMs. Propositional ICMs include hypothetical situations and relations between elements which would be structured on the basis of previous experience. It can include preconceived rules for behavior, guidelines for classification *etc*. Metaphoric ICMs are structured by mapping from one domain to another. Metonymic ICMs are structured on the basis of ideals, paradigms and stereotypes which cause a single instance to stand for an entire category. Symbolic ICMs are structured on the basis of complementary lexical items required for their comprehension. Such ICMs, also may be construed as semantic frames which are structured by language explicitly and containing symbolic units (also see Evans and Green 2006:280-1).

2.1.8 Lakoff: Central Aspects of Prototype Theory

One of the strong points of utilizing cognitive models for Lakoff lies in ideas of conceptual embodiment. Conceptual embodiment leads to **basic-level categorization** and **basic-level primacy** in that movements and actions of the body are seen as being the source of such basic level categories (*i.e.* a cat is identifiable as a cat in early childhood development because it can be petted, similarly a flower is identifiable as a flower because it can be sniffed) (Lakoff 1987:30-1). Other characteristics of cognitive models include their use in "*reference-point, or 'metonymic,' reasoning"* in terms of gradience, family resemblances, polysemy, etc. According to Lakoff,

- *Membership gradience* arises when the cognitive model characterizing a concept contains a scale.
- *Centrality gradience* arises through the interaction of cognitive models.
- *Family resemblances* involve resemblances among models.
- *Polysemy* arises from the fact that there are systematic relationships between different cognitive models and between elements of the same model. The same word is often used for elements that stand in such cognitive relations to one another." (Lakoff 1987:12-13; Italics in original)

2.1.9 Critiques of Prototype Theory

Prototype theory has not been without its critics. In the paragraphs above, a general introduction to some of the foundations of modern PT has been presented. At this point, it is useful to survey more recent critiques of prototype theory and engage more recent defenses of the theory; especially as pertains to PT's applicability to linguistic categorization and categorization among linguists.

According to Evans and Green (2006), one failing attributed to PT has been that it has "failed to model the relational knowledge that humans appear

to have access to" (Evans and Green 2006:249). This criticism led to further developments of prototype theory to assert that prototypes may correspond to an exemplar, or a member of the category in question which in and of itself, is the best example of the category. This is in contradistinction to the idea that the prototype is simply a cluster of attributes or features which categorize the category. However exemplar-based models also did not adequately represent "the generic information that humans have access to when they use concepts in order to perform a host of conceptual operations, including categorisation" (Evans and Green 2006:249). Thus PT has largely been abandoned as a theory of knowledge representation. Nonetheless, the **prototype effects** discovered by Rosch and her associates are real psychologically.

One of the problematic implications associated with early variations of PT was the assumption that classical categories with distinct boundaries would not show prototype effects. This assumption was challenged by Armstrong (1983) in finding that even numbers do indeed exhibit typicality effects. In their series of empirical experiments Armstrong *et al.* (1983) found that subjects consistently rated '2', '4', '6' and '8' as better goodness-of-example representatives of the distinct category of even numbers than '98' or '10,002' (see Evans and Green 2006). This is a problem for prototype theory as definitional or classical categories are not predicted to exhibit prototype effects, only categories with fuzzy boundaries (Evans and Green 2006:254, 268).

PT also suffers from the problem of ignorance and error. This issue deals with how individuals can grasp a concept while being mistaken about its attributes. Prime examples of this are concepts such as whales which can be

possessed even if the person mistakenly believes it to be a fish with fish-like attributes, rather than a mammal. Similarly, the concept can be possessed without the individual even knowing what its attributes are. The end result is a serious problem for PT in that it may include those which have attributes that should not be included and may exclude those that should be included simply on the basis of attributes (Evans and Green 2006:268).

Another area of difficulty is the problem of compositionality (see Osherson and Smith 1981; Fodor and Lepore 1996; Storms *et al.* 1998). This issue is based on the observation that PT has no sufficient explanation for why complex categories fail to reflect the prototypical features of the concepts that contribute to them. The standard example given is that of a pet fish. The prototypical attributes of a pet may be that it is fluffy and affectionate. The prototypical fish may be grey and medium-sized. PT does not readily explain why "a prototypical pet fish is small and orange rather than medium, grey, fluffy and affectionate" (Evans and Green 2006:269). In other words, the prototype of a complex category is not simply the sum of its attribute parts.

In Osherson and Smith's (1981:264) critique of PT as expressed through fuzzy-set theory, exemplary of their critique is the logical counter-example of "an apple that is not an apple" as the conceptual conjunction of apple and non-apple. Within the context of classical (Osherson and Smith 1981) logic as extended through fuzzy-set theory, Osherson and Smith make a devastating critique of fuzzy-set theory (extending this critique to prototype theory as a whole) in that the value should intuitively be 0 (non-existence), yet it is 0.5. However, outside of the realm of standard logic, the case is less convincing when dealing with metaphor and idiom whereby "an apple that is

not an apple" is a riddle with the answer New York. This is due to the fact that idiomatically, "The Big Apple" is an apple that is not an apple: this is a conclusion which could be reached on the basis of past experience and knowledge being brought to bear.

This discussion of compositionality is relevant to the current study in that Serial Verb Nominalization (SVN) of itself is just such a case of conjunction both as a topic (the conjunction of serial verbs and nominalization) and in the actual examples of SVNs (V1 + V2 = Meaning 3). Within Lakoff's model, this issue is dealt with through the assertion that the complex concept, such as pet fish, has a category structure which exists independent of the two categories that it is related to. This category structure is derived from experience. Experience is thus the basis of the cognitive model rather than it simply being a composite of the sum of the attributes of its parts. This is dealt with further below and will be touched on in chapter three in dealing with Full Lexicalized Integrated Serial Verb Constructions as based upon salient and distinct event types.

Additionally, one must take into account the fact that "pet fish" is in and of itself a culturally-specific idiom that may not even make sense in say, rural Ghana or Nigeria, for example (i.e. How can a fish possibly be a pet instead of a meal?). This contextual necessity is reminiscent of our earlier discussion of ICMs which are "relatively stable knowledge structures that are build up on the basis of repeated experience" (Evans and Green 2006:279). Thus a well-known complex concept in one linguistic milieu may be non-existent in another. Even within the same language, a non-existent category like US Monarch may, due to pre-existing cognitive models, have meaning for

an expert in lepidopterology where it would designate a US Monarch butterfly as opposed to one from Australia or the Canary Islands. Pet and fish are no longer separate but there is some degree of semantic integration either to the point of simple collocation or further to the point of linguistic idiom. In such a case the primary query would be the degree to which "pet fish" is exemplary of the weakly compositional collocational concept that it invokes within a particular cultural context rather than whether the expression is more prototypical of a pet or a fish. The question then becomes not one of throwing out the proverbial baby (prototype theory) with the bath water (the linking of prototype theory with fuzzy-set logic to express conjunctive concepts), but rather one of looking at what tools are available to prototype theory that can adequately capture what goes on in cases of non-compositionality. Prototype theory has just such tools available in scalarity and gradience. In this case, the relevant scale would be scales of idiomaticity and scales of compositionality taking the view that the more idiomatic a conjunctive expression (in this study a nominalized SVC) is, the less compositional it is and *vice versa*.

According to Fodor and Lepore,

> PET FISH is a counterexample to the compositionality of prototypes, and that there is no reason at all to suppose that the problem it raises would be solved by whatever mechanism it is that the semantics employs to cope with BIG ANT. […] The reason that you can't derive the PET FISH prototype given the PET prototype and the FISH prototype, is simply that what *kinds of fish people keep as pets is not a fact about concepts or language.* It is therefore possible to be perfectly clear what "pet fish" means, and yet have no idea which pet fish are prototypical. Which pet fish are prototypical is something you *just have to go out and learn.* (Fodor and Lepore 1996:265)

Fodor and Lepore's observations are consistent with an ICM type of framework which takes context and past experience into account. Fodor and Lepore's critique is similar to the argument of Osherson and Smith's

(1981:261-278) critique of PT when formalized by means of fuzzy-set theory giving counterexamples whereby the min rule and max rule are violated in cases of conjunction and intersection. Osherson and Smith argue that

> One or more concepts combine to form another whenever the latter has the former as constituents. Grammatical constituency can often serve as a guide to conceptual constituency. Thus, the words "red" and "table" are constituents of the grammatical structure "red table," and in parallel fashion the concepts red and table are constituents of the conceptual structure *red table*. (1981:264)

The grammatical constituency notwithstanding, idioms do not work in the same way. According to Osherson and Smith

> The concept *dark horse* (as in political contests) does not have *dark* and *horse* as conceptual constituents. Such idioms notwithstanding, it seems safe in what follows to frequently rely on grammatical structure as a guide to conceptual structure. (1981:264)

The point that Osherson and Smith attempt to gloss over in terms of the compositionality of idioms is precisely the area that must be accounted for as will be discussed in the next section on idiomaticity, collocationality and prototype theory.

2.2 SVCs, SVNs AND PROTOTYPE THEORY

2.2.1 Idiomaticity, Collocationality and Prototype Theory

When dealing with grammatical constituency as a guide to conceptual constituency, one must differentiate between idioms and non-idioms. For example, the adequacy (or lack thereof) of generative linguistics to deal with idiomaticity was questioned relatively early on in the development of the

"Chomskyan Paradigm" by Chafe (1968). At that juncture, Chafe suggested that:

> The Chomskyan paradigm has already run into serious anomalies which suggest the need for a paradigm shift in a direction which I believe is clearly indicated. My intention in this paper is to call attention to idiomaticity as an example of such an anomaly: an area in which 'nature has somehow violated the paradigm-induced expectations that govern normal science.' (Chafe 1968:110-1)

In terms of defining idiomaticity, one of the main features of idioms is that "the meaning of an idiom, arrived at through the operation of the semantic component on such a deep structure, is not some kind of amalgamation of the meanings of the parts of that structure" (1968:111). Chafe suggests that idiomaticization is fundamentally a

> historical process by which certain specific semantic arrangements enter into a special kind of semantic 'split'. After such a split has taken place the original semantic arrangement is typically still present in the language, but in addition a new semantic unit has been formed by a shrinkage of the composite meaning into a new unitary meaning. Thus, the semantic arrangement 'kick the bucket' shrank into a single unit with a meaning similar to that of 'die'. The old, 'literal' arrangement did not thereby disappear, but remained in the language alongside the new unit, or idiom. The capacity of language to produce new semantic units in this way is evidently a useful capacity, for it brings new semantic material into the language at minimum expense by making use of units, arrangements and symbolizations already available. (1968:120)

Chafe outlines four central features of idioms consisting of "their anomalous meanings, their transformational deficiencies, the ill-formedness of some of them, and the greater text frequency of well-formed idioms relative to their literal counterparts" and further contends that these characteristics "must all be explained by a theory of language adequate to cope with idiomaticity" (1968:112). Levels or degrees of idiomaticity can be described within a range from including an "idiom, a construction, an idiomatically combining expression, a collocation or a fixed combination" (Sailer 2000:243). What cuts

across these various terminologies is the assumption that “there is something ‘irregular’ to these expressions” (2000:243). That irregularity is posited in this thesis as resulting from various degrees of idiomaticity in such constructions.

Chafe explains how it “has been recognized as impossible within the Chomskyan paradigm to treat idioms with literal counterparts as if they were unanalyzable lexical items” as a means of retaining the Chomskyan paradigm (Chafe 1968:116). He observes the central role of syntax within the Chomskyan paradigm and argues for semantics playing the central role, proposing a jettisoning of generative syntax for generative semantics. Here, we do not draw such an either/or distinction. Rather, we propose degrees to which the syntax is initiative scaling progressively to the point where semantics (as evinced through morphosyntactic processes) is initiative.

2.2.2 Serial Verb Nominalization and Prototype Theory

Thus, prototype approach/framework is useful in the current treatment of SVNs in that it is helpful in dealing with items on fuzzy boundaries. It also is useful in that it incorporates the idea of scalarity whereby we may deal with the fuzzy boundaries and elements contained therein.

The fundamental theoretical assumption is that the more salient an event type becomes within a speech community, the more idiomatic and less compositional it becomes. To elaborate, over time certain events come to occur more and more regularly in the perceived world in a culture. In serializing languages, these events may be expressed in two or more verbs that typically co-occur in a particular order. According to Rosch, this leads to greater levels of salience (physiological, social, salience in formal systems, etc.) (Rosch

1983:77-8). Eventually these separate verbs co-occur to the point of forming a collocational unit, in that they must, for native speakers, necessarily occur together to get the meaning specified or, at times, any meaning at all. At this point individual verbal elements cannot be removed without leading to what is judged by native speakers as an ungrammatical or even impossible utterance. Rosch sheds light on the fact that "the tendency to refer back to particular events that have been experienced can be seen as a stubborn empiricism. It is as though subjects were always slightly doubtful of abstract or theoretical information when it contradicts what they have seen or heard" (Rosch 1983:76). This notion is directly applicable to SVCs and SVNs that formally should be good, but are judged by native speakers as being ungrammatical because they lack the culturally relevant empiricism of the culture's perceived world.

According to Durie,

> If a non-serializing language has available a single lexical verb to represent a particular situation, then this reflects the codification of that situation by the speech community as a salient distinct event type. We will expect on the one hand that different languages will have many verbs which are quite similar in meaning, because of universal similarities in human environment and experience […] My main point here is that the verbal system of a language evolves as a categorization of the event-types that are salient, or communicatively in demand for the speech community. Sub-communities develop their own sub-inventories of verbs, to distinguish salient event-types of significance to them (e.g. θ-mark and c-command). (Durie 1997:321)

The key points to be highlighted here are the idea of salient event-types and the degree to which the verbs of various languages are mitigated by human environment and experience. The former notion of salient event-types is analogous to what is referred to in this thesis as SVCs with a high degree of idiomaticity. It is indeed argued here that the high frequency of use of the SVC

concretizes it as an institutionalized and familiar idiom. There are thought to be several stages postulated in the development of a highly idiomatic ISVC:

1) High frequency of an actual event or multi-stage event in the perceived world. This event becomes verbalized in the serializing language. As the language is a serializing one, it expresses these multi-stage events in Chaining Serial Constructions (CSCs), but with each event still essentially being viewed as conceptually separate and separable (by means of conjunction insertion).
2) The frequency of co-occurrence of these multi-stage events expressed through two or more verbs then becomes more and more common, contiguous with the frequency and/or salience of the event in the perceived world. This multi-stage series of sub-events then come to be thought of as collocational; necessarily occurring together. This collocationality is accompanied by the linguistic phenomenon of Partial Lexicalization.
3) Eventually, these co-occurring events cease being viewed as distinct events. At this point, the construction is no longer compositional; i.e. no longer simply the sum of its constituent parts. This is the point at which the SVC is thought of as being idiomatic in the sense that the term is being used in the current study. This is contemporaneous with the linguistic phenomenon of Full Lexicalization. The central point that is being argued here is that the formal and semantic phenomena that take place in the development of SVCs along the gradient of CSCs to PL-ISVC to FL-ISVC are as a result of functional processes; i.e. form follows function and function in turn follows the perceived world.

In relation to the development of SVCs, Durie proposes that "A concomitant feature of serialization is that high frequency serialized verbs typically develop meanings distinct from their non-serialized use" (Durie 1997:321). These distinct meanings tend to be idiomatic and exhibit a lesser degree of compositionality whereby the meaning of the whole is different from the simple addition together of the meaning of constituent parts.

2.2.3 Idiomaticity, Collocationality and SVCs

It is necessary to reiterate several of the following observations about SVCs which are particularly pertinent to the current discussion of SVCs in terms of idiomaticity and collocationality:

> (i) Verb serialization is universally characterized by heavy lexicalization of particular verb combinations. This is because the typing of events is matched by stereotyping of verb combinations used to represent these events. This has been extensively commented on in the verb serialization literature. (Durie 1997:322)
>
> (ii) This lexicalization exists alongside productivity of serialization, because many events can be typed in terms of certain predictable internal structures and structural components. (Durie 1997:322)
>
> (iii) The productivity of verb serialization is constrained in such a way that a large variety of syntactically well-formed verb combinations will be rejected by native speakers as unacceptable/ungrammatical because they do not correspond to a recognizable event-type, either within the actual experience of speakers, or alternatively within the permitted patterns of verb serialization within a language. This can be applied even where particular verbs involved in a combination are otherwise able to combine in productive patterns of serialization. (Durie 1997:322)

Points (i) and (iii) are dealt with in terms of collocationality (PL-ISVCs) and/or idiomaticity (FL-ISVCs), with an allowance for fuzzy areas at the borders. According to Kilgarriff, "A word that is very 'collocational' is one which has a strong tendency to appear with particular words, rather than appearing freely with large numbers of words" (Kilgarriff 2006:998). According to McKeown

and Radev (1997:3) “they are often discussed in contrast with free word combinations at one extreme and idiomatic expressions at the other, collocations occurring somewhere in the middle of this spectrum”. When juxtaposed in relation to free word combination and idioms, the observation can be made that:

> A free word combination can be described using general rules’ that is, in terms of semantic constraints on the words which appear in a certain syntactic relation with a given headword…An idiom, on the other hand, is a rigid word combination to which no generalities apply; neither can its meaning be determined from the meaning of its part nor can it participate in the usual word order variations. Collocations fall between these extremes and it can be difficult to draw the line between categories. A word combination fails to be classified as free word and is termed a collocation when the number of words which can occur in a syntactic relation with a given headword decreases to the point where it is not possible to describe the set using semantic regularities. (Mckeown and Radev 1997:3-4)

In English, for example, collocational types vary; however, there can be said to be collocations which show a great degree of prototype effects. Again, following Kilgarriff, “Prototypical collocations associate a base noun with the verb it is object of (pay attention) or a base noun with an adjective that modifies it (bright idea)” (2006:998). In this thesis, it is being proposed that an analogous situation can be posited for serializing languages whereby verbs used to describe salient events associate one verb with the other forming collocational types of constructions in cases of lesser semantic integration and idiomatic types of constructions in cases of higher degrees of semantic integration. A particular strength to this approach is that collocation cuts across syntactic categories particularly when analyzed in terms of behavior, such as nominalization. Because nominalization occurs for various syntactic categories, illuminating findings may become apparent when, as opposed to simply comparing apples to apples (i.e. serial verbs to serial verbs), we look at

how Verb-Verb collocations nominalize in conjunction with how Verb-Noun collocations nominalize, Verb-Adverb, *etc*. While such comparisons are beyond the scope of this thesis, they do point to promising further directions requiring further research.

A similar point is made by Durie (1997) in reference to event-hood and salient-events as combinations in SVCs:

> Lexical conceptual structure and event-hood which are in any case needed to account for the properties of verbs in non-serializing languages will also need to be deployed to deal properly with verb serialization. My main theme is that non-serial verbs and serial verb complexes are subject to the many of the same constraints on conceptual structure, and also on syntactic linking. This is in harmony with the traditional perspective that has defined verb serialization as two or more verbs 'acting' as one verb. An advantage of this approach for syntactic theorizing is that we can hope to achieve some clarity about which properties of serialization are manifestations or projections of semantic structure, culture-specific constructions of event-hood, and tendencies of grammaticization and lexicalization. (Durie 1997:349)

Durie's argument, in many ways dovetails with Osam's (1994) treatment of ISVCs which are in many ways, culture-specific constructions of event-hood, which are lexicalized over time either fully or partially. From Osam's analysis it can be inferred that ISVCs tend to arise from Clause Chaining Serial Constructions while those that do not are morphosyntactically patterned after those that do. Although CSCs may develop into ISVCs, not all clause chaining constructions have semantically integrated to the level of ISVC and some may never do so. While these constructions are culture-specific, it is advanced in this thesis that each serializing language lexicalizes its serial verb complexes across the continuum.

2.3 GRAMMATICALIZATION IN SERIAL VERB NOMINALIZATION

In our discussion of Serial Verb Nominalization, it is necessary to account for nominalization markers, typically affixes, found in Akan. Grammaticalization may be useful in accounting for such affixes. Grammaticalization as a term may be traced to Meillet (1912), who defines the term as "the attributions of grammatical character to a previously autonomous word" (see Hopper 1996:218; Amfo 2010:28). Thus lexical words develop into functional words under the process of grammaticalization (Heine and Reh 1982; Heine 1986; Heine *et al.* 1991; Hopper 1991; Traugott and Heine 1991; Hopper 1996; Campbell and Janda 2001; Hopper and Traugott 2003; Traugott 2004; Mortelmans and Leuschner ; Stefanidou 2007; Amfo 2010). This process of grammaticalization is a process of syntactic shift as pre-existing words are used by speakers of the language in question in novel ways and/or for novel concepts.

The source of grammaticalization is widely thought to be a cline as exemplified below:

Figure 3: Source of Grammaticalization Cline

change of use	→	change of meaning	→	change of form
(pragmatic)		(semantic)		(syntactic + phonological)

(Nicolle 2007:47)

In this shift between syntactic categories, it has been shown that there is a continuum or cline of grammaticalization within which the previously strictly lexical item gradually shifts to progressively more functional status. According to Hopper and Traugott:

> Basic to the work on grammaticalization is the concept of a cline. . . . . From the point of view of change, forms do not shift abruptly from one category to another, but go through a series of small transitions, transitions that tend to be similar across languages. (Hopper and Traugott 2003:6)

This series of small transitions is referred to by Hopper and Traugott (2003:7) as the cline of grammaticalization as rendered below:

Figure 4: Grammaticalization Cline

Content Item → Grammatical Word → Clitic → Affix

(Hopper and Traugott 2003:7)

In the cline of grammaticalization, the more the item shifts toward the right, the more progressively grammatical it becomes. This process has traditionally been regarded as unidirectional although counterexamples to unidirectionality have been presented in the literature and have become the subject of hot debate within historical linguistics (see Traugott 2001; Heine 2003; Haspelmath 2004).

McMahon similarly defines grammaticalization as occurring when "words from major lexical categories, such as nouns, verbs and adjectives, become minor, grammatical categories such as prepositions, adverbs and auxiliaries, which in turn may be further grammaticalised into affixes" (Mcmahon 1994:160).

In this case what we may actually be seeing is the phenomenon of regrammaticalization. Regrammaticalization may potentially refer to "three possible circumstances: (a) a form without any function acquires a new grammatical function; (b) a form is reinterpreted in a new grammatical function; and (c) a form which has lost its function regains it" (Brinton and Traugott 2005:53). The process of regrammaticalization as it pertains to

affixation is the focus of this aspect of the current study. Nominalization of SVCs in Akan tend to be accompanied by an affix of nominalization which may be a regrammaticalized erstwhile tense marker (see Obeng 2001) or remnant of a now defunct noun class system (Osam 1993,1994), or a combination of the two. Hopper (1996) describes grammaticalization as the transformation of lexical items and phrases into grammatical forms. He identifies two primary directions of this transformational process,

> The first involves etymology and the taxonomy of possible changes in language, in which semantic and cognitive accounts of words and categories of words are considered to explain the changes. The second involves the discourse contexts within which grammaticalization occurs. Some researchers have questioned the standard idea of a stable synchronic a priori grammar in which linguistic structure is distinct from discourse, and have sought to replace this with the idea of "emergent grammar" in which repetitions of various kinds in discourse lead to perpetual structuration." (Hopper 1996:217).

The concept of grammaticalization is a prominent notion in the functional-typological framework adopted herein. This is relevant because prefixes which occur in SVNs are posited to be the result of reanalysis. For example, PERF marker /a-/ in Akan is noticeably similar in form to derivational prefixes most commonly used in nominalization in the language. It may be posited therefore that the perfect tense/aspect underwent grammaticalization to the point of being made the designated derived (and/or gerundive to the extent that these categories are relevant to Akan) nominalization marker. Another possibility is that the PERF marker may have developed from a pre-existing nominalizer as shown in language families as diverse as Tibeto-Burman, some South American and even English (Osam 2013). While this subject cannot be delved into in the current study, it is a topic of high typological interest, which merits future research.

Such an analysis has been found in studies on certain Formosan languages (Huang 2002; Li 2002; Rau 2002; Zeitoun 2002). In Saisyat, for example, nominalizers are “also found to function as tense or aspect markers” (Yeh 2011:1).

Another argument may be that derivational prefixes came to be identified with erstwhile noun class prefixes (or vice versa) as has been argued for non-derived nouns in Akan (Osam 1993,1994). There is also the possibility of convergence between the two wherein derivational prefixes merged with a particular noun class or derived nouns formed a class in and of themselves. Such issues may be further illuminated through the collection and evaluation of empirically motivated and attested data and, while beyond the scope of this thesis, is a topic requiring further research.

More prominently, grammaticalization features in the discussion of grammaticalized PL-ISVCs where one verb in the SVC has been grammaticalized while not fully lexicalizing with the other verb in the SVC.

2.4 ICONICITY IN SERIAL VERB NOMINALIZATION

The concept of iconicity is typically associated with functional approaches to linguistics and has been covered by various linguists (Haiman 1980,1983,1983; Givon 1985; Jakobson and Rudy 1988; Geeraerts 1990; Newmeyer 1992; Fischer 1999; Bisang 2002). Iconicity is the idea that there is a non-arbitrary (motivated) correspondence or relationship between words and their meanings. This idea stands in contradistinction to the notion that words are completely arbitrary and can only be assigned meaning in the context of the structure of Saussurean sign, signifier and signified. The symbolic nature of

human language is, in turn, used to differentiate human language from animal communication systems (see Chomsky 2006). This latter view, largely attributed to Ferdinand De Saussure (Saussure 1959; Saussure and Komatsu 1993; Saussure *et al.* 1996,1997), became highly influential in the 20th century and is regarded as a foundational tenet of modern generative linguistics (Fromkin 2000). The philosophy of Wittgenstein, on the other hand, forms much of the foundation of modern functional linguistics which, for the most part, espouses the similarity or analogy between form and meaning as opposed to arbitrariness: iconicity.

Extreme examples of iconicity in language may be found in onomatopoeia. Other correspondences are found in reduplication of a word to correspond with a repetitive action in the real world. According to Bisang's (2002) definition of iconicity, "Theories on iconicity assume a certain similarity of the sign with the concept it denotes. There is an isomorphism between a concept and the way in which it is expressed. Language structure reflects structures of experience" (Bisang 2002:1). According to Haiman (1983) iconicity exists on various levels in human language:

> The distance between linguistic expressions may be an iconically motivated index of the conceptual distance between the terms or events which they denote. But the length of an utterance may also correspond to the extent to which it conveys new or unfamiliar information. Reduced form may thus be an economically motivated index of familiarity. Much of the arbitrariness of grammatical structure arises where equally plausible motivations such as iconicity and economy are, in effect, competing for expression on the same linguistic dimension. (Haiman 1983:781)

According to Haiman "since it is impossible to say everything at once, words must appear in a certain order. Several types of iconic motivation exploit the resulting linearity of the linguistic sign. As Greenberg observes (1966:103):

'the order of elements in language parallels that in physical experience or the order of knowledge'" (Haiman 1980:528). Iconicity, for the purposes of this thesis, refers to the relative word order between two syntactic elements or morphemes which is determined by the temporal order of the actions or states they represent in the conceptual universe (see Tai 1985).[4] Haiman (1980), following Jakobson's argument (1966,1971), refers to this type of iconicity as motivation. According to Haiman:

> [A] grammatical structure, like an onomatopoeic word, reflects its meaning directly. The clearest example of such iconicity is that of sequence. Other things being equal, the order of statements in a narrative description corresponds to the order of the events they describe. This I will term the iconicity of MOTIVATION. Unlike isomorphism, it is not universal; where it is quantifiable at all, it co-varies with the size of the lexicon. (Haiman 1980:516)

Semantic integration is analogous to Haiman's (1983) discussion of iconicity as expressed in terms of conceptual closeness. According to Haiman,

> two concepts are conceptually close to the extent that they share semantic properties (e.g., two verbs are closer if they share a common tense, mood, subject, object, or topic); second, two concepts are close to the extent that one is thought to affect the other (e.g. the conceptual closeness between a verb and its object varies with the transitivity of the verb); finally, two concepts are close to the extent that they are perceived as inseparable e.g., there is a closer conceptual link between a possessor and an inalienably possessed object than between a possessor and an alienably possessed object). (Haiman 1983:783)

In the current study, it is being argued that the reason that idiomatic SVCs come to be distinguished as such is due to the frequency of occurrence of the events reference therein in a particular culture's perceived world. This comes to be cemented in the linguistic phenomenon of lexicalization. We find that in SVCs in general and in lexicalized ISVCs in particular, there is a higher degree of closeness between the verbal elements with respect to higher degrees of lexicalization and semantic integration. In this sense, the very motivation for

SVCs themselves could theoretically be attributed to this function of lessening conceptual distance on the following scale:

Figure 5: Scale of Lessening Conceptual Distance

Separate sentences → Coordination → CSC → PL-ISVC → FL-ISVC

Haiman argues that "the linguistic distance between two expressions depends on the nature and the number of the non-segmental boundaries between them, even where they are physically contiguous" (Haiman 1983:781-2).

We further theorize that the more fused the morphemes in question become, the progressively less and less compositional they become until they are no longer separable either in form or semantic content. While it is not possible to fully explore the question of decomposability in this thesis, it is worthwhile to consider such a hypothesis in light of data where this hypothesis seems to be borne out.

Iconicity is thought to, in part, form the basis for word order of verbs in SVCs which is then reflected in SVNs. Iconicity of motivation is useful in accounting for word order for verbs and arguments in SVCs in both head-final and head-initial serializing languages. For the purposes of this thesis, the linear order of the verbs in sentential structures and in morphosyntactic lexical units (morphemes) once SVCs are nominalized is focused upon. The temporal ordering of morphemes in word-formation is not expected to hold in languages that do not use SVCs in which the syntax plays the major role in word formation processes in SVC nominalization. In Akan there is a mix between syntax and other morphological processes in SVC nominalization. Both of

these issues of grammaticalization and iconicity are discussed further in the data analysis of chapters three and four.

2.5 METHODOLOGY

There are two major works on semantic integration in SVCs in Akan from which examples were initially extracted: Osam (1994) and Agyeman (2002). Both of these seminal works gave examples of FL-ISVCs, PL-ISVCs and CSCs which show prototypical patterns with regard to nominalization in each case. Questionnaires were then developed using these more prototypical examples with the aim of ascertaining native speaker judgments of the most unambiguous cases according to the two aforementioned authors. Using these examples, similar SVCs were identified from within four of the most exhaustive corpuses available in Akan which also span over 80 years of development of the language: *The Dictionary of the Asante and Fante Language called Tshi (Twi)* (Christaller 1933), *Twi Nsɛm Nkorɛnkorɛ Kyerɛwbea* wordlist (Education Department of Ghana 1971), Boadi (2005) *Twi Kasa Mmara ne Kasɛsoɔ* and Bannerman *et al.* (2011) *Mfantse Nkasafua na Kasambirenyi Nkyerɛase: Dictionary of Mfantse Words and Idioms*. These corpuses were selected on the basis of their comprehensiveness and the diversity of time periods in which they were produced. They were also selected due to representation of the three major literary dialects of Akan. Once nominalization behavior from the most prototypical examples of SVN was clearly identified, these corpuses added breadth and depth by providing many other SVC/SVN examples. Within these new examples, a comparative

minority was identified in each case (FL-ISVN, PL-ISVN, and CSN) which did not conform to the prototypical examples given by Osam and Agyeman. From the attested corpuses, therefore, we were able to successfully identify SVC/SVN combinations that displayed the most prototype effects for the category in question as well as those which may occur at the fuzzy boundaries.

2.5.1 Bio Data of Akan Questionnaire Respondents

Participants were selected using purposeful sampling (Patton 2002:230) with the intent of gaining a greater amount of insight into issues of central importance to the study versus random sampling which would lend itself more towards arriving at empirical generalizations. Participants were selected on the basis of various criteria collected in the bio data; primarily dialect of Akan spoken, literacy (or lack thereof) and age. The rationale for selection on the basis of these factors were inclusivity (major literary dialects), broadness of educational backgrounds (no formal education to higher education) and for diachronic/synchronic representativeness (age). While purposeful sampling allowed us to select information-rich cases for study in depth, basing the selection on the aforementioned criteria was an intentional effort to mitigate bias and narrowness in the study.

Data collection occurred in two phases; Phase One (P1) and Phase Two (P2) totaling one hundred (100) participants. P1 Akan FL-ISVC data are based on seventy-five (75) usable questionnaires out of over 500 questionnaires distributed. Other questionnaires returned were not usable due to being incomplete[5] or due to respondents completely ignoring directions.[6] It is important to note in the way of terminology used in this thesis that the term

‘questionnaire respondents’ is differentiated from ‘participants’ with ‘respondents’ used exclusively for those who responded to a particular item (equivalent to the Valid Percent) while the term participants includes all who did the survey whether or not they responded to the item in question. Thus, for P1, the number of participants is invariably seventy-five (75) while the number of respondents fluctuates depending on those who filled out the questionnaire item. P1 focused on literate youth.

For P2, the total number of participants is twenty-five (25). In P2 field work, 25 elders, the majority of whom were non-literate, were consulted representing speakers of Fante, Akuapem Twi and Asante Twi. Twenty-two of the participants were over the age of 60, while 2 were in the range of 50-60 and 1 was in the range of 40-50. Eleven of the 25 had never been to school whatsoever. Others who had been to school had various levels of completion as will be discussed below with regard to the bio-data. While the focus was on non-literate speakers, because the research was carried out organically in varied settings, at times, elders were included who were, indeed, literate to some degree due to them fitting the age range and/or dialect prerequisites. With the exception of 4 Kumasi Asante Twi speakers and 1 Akropong Akuapem Twi/Asante Twi speaker, P2 interviews were conducted orally in focus groups based on shared dialect. In the former 5 cases mentioned, interviews were done individually.

Bio-data was collected from each of the 75 total 60-years-and-under P1 questionnaire participants, with 43.5% male respondents and 56.5% female respondents for the first phase. For the second phase (P2) of data collection,

focused on the elders, out of a total of 25 participants, 56% were males and 44% were females.

For P1, the ages of respondents varied from at least 18 years old to 60 years old. The large bulk of the respondents fell within the age range of 21-40 years old making up a total of 90%. By contrast only 5.7% of respondents were under 20 years of age with a minimum age of participation in the survey being 18 years of age. On the opposite end of the spectrum, only 4.3% of respondents were within the age range of 41-60 years old.

For P2, the opposite was the case as those of ages 61 and above comprised 88% of participants while those aged 51-60 made up 8% while one participant or 4% made up the 41-50 age range. The second phase was implemented expressly for the purpose of gaining the insight of elders in general and the non-literate elders in particular. The rationale for the implementation of the second phase was that elders may not only have a different perspective, particularly in the area of familiarity, but that non-literate elders may, in fact, have a deeper understanding of Akan. This is because, in many cases, this may be their only language and the language that they have used for their entire lives in various contexts, including for work.

From P1, a total Valid Percentage of 100% of all respondents indicated that they were educated with 83.9% identifying themselves as students, 3.6% as lecturers and 12.5% as teachers in some other capacity. The remainder of the participants in the first phase, 25.3%, simply opted out of answering the item. Therefore, at the very least, based on self-reporting, at least 74.7% of total participants of P1 are, to some degree, involved in the educational system. The educated status of respondents was further manifested in that 87.9% of all

respondents had a Bachelor's degree or better. Of this total, 68.2% of respondents indicated that they had a Bachelor's degree, 18.2% indicated that they had a Master's degree and 1.5 percent had a Doctorate degree. The final 1.5% indicated receipt of a certificate of some sort.

Again, P2 of the data collection was largely the opposite. In this phase 44% indicated that they had never been to school at all. Of those who had been to school, 12% reached Standard 7. Eight percent (8%), or two respondents in total, had been to polytechnic schools. The rest of the respondents were singular with no more than one participant reaching the same level in the educational system although a few of these individuals had finished school or worked in professions that would have required a high level of literacy.

For P1, questionnaires were distributed primarily at Winneba (University of Education-Winneba) 17.9%, Accra (University of Ghana-Legon) 48.1% and Cape Coast (University of Cape Coast) 37.3%.

For P2, twenty-eight percent (28%) of the respondents (7 individuals in total) were from Koforidua (Asante Twi - Sukwaw, Bɛtom, Odwaa and Sorodae communities), twenty-four percent (24%) (6 individuals) were from Akuapem-Akropong (Akuapem Twi - Aboaasa community), twenty-four percent 24% (6 individuals) were from Iture (Fante), twenty percent (20%) (5 individuals) were from Kumasi (Asante Twi – Suame) and four percent (4%) (1 individual) were from Ekumfi Otuam (Fante). Of the Akropong Akuapem Twi speakers, one (1) was born in Akropong of an Asante mother and thus spoke both Akuapem and Asante and was interviewed separately in Accra.

For P1, ninety-one percent (91%) of all respondents were native speakers of Akan with the largest percentage, 56.7% of the total, indicating

themselves to have Twi (either Asante or Akuapem) as their native language. An additional 16.4% further specified Akuapem as their dialect. The smallest percentage of those who indicated only one Akan dialect was that of those who had Fante only as their native language, with a total of 9.0%. There was some degree of overlap as several respondents identified themselves as native speakers of more than one dialect of Akan bringing the Fante total to 12% of P1 speakers surveyed. While only 9% of all P1 respondents indicated that they were not native speakers of Akan, some responded that they considered themselves to be native speakers of a dialect of Akan as well as another language. For the purposes of this thesis, native speaker is understood to be a self-identified L1 speaker of Akan.

Table 1: Native Akan Dialect of Respondent Phase One (P1)

		Frequency	Percent	Valid Percent
Valid	Asante Twi	38	50.7	56.7
	Fante	6	8.0	9.0
	Akuapem Twi	11	14.7	16.4
	Asante Twi/Akuapem Twi	4	5.3	6.0
	Asante Twi/Fante	2	2.7	3.0
	Not Native Speaker	6	8.0	9.0
	Total	67	89.3	100.0
Missing	System	8	10.7	
Total		75	100.0	

For P2 of data collection, 100% of the participants indicated that they were native speakers of some dialect of Akan. 48% of the speakers indicated their native dialect to be Asante Twi, 28% indicated their native dialect is Fante and 24% indicated their native dialect is Akuapem Twi including one participant (4%) that also spoke Asante Twi.

Table 2: Native Akan Dialect of Respondent Phase Two (P2)

		Frequency	Percent	Valid Percent
Valid	Asante Twi	12	48.0	48.0
	Fante	7	28.0	28.0
	Akuapem Twi	5	20.0	20.0
	Akuapem/Asante	1	4.0	4.0
	Total	25	100.0	100.0

In terms of bio-data, "other languages spoken by the respondent" had the most varied response with 21 different answers for P1. P2 was much less varied with 9 speakers saying that they spoke English and 6 saying they spoke Ga and individuals mentioning languages such as Kyerepɔn, Ahanta and Hausa.

Using the written corpuses in concert was therefore an effort to get a firm grip on SVN familiarity and institutionality synchronically and diachronically. For the most part, tables in the questionnaires distributed to respondents were broken down based on degree of semantic integration. The verbs selected for the Phase One (P1) questionnaire were primarily from Osam (1994) where they were given as prototypical of SVCs. The idea was to look at what these SVCs that show the most prototype effects of the category are doing with respect to nominalization and to use these to identify other instances of SVN in the language. Phase Two (P2) built upon P1, particularly focusing on FL-ISVCs where the prototypical SVCs advanced by Osam were introduced to elder non-literate speakers as the judgment of younger literate speakers was firmly established in P1. Additionally, some of the forms found to be questionable in P1 were also presented to P2 speakers to get their judgments and to add clarification where possible. While, due to time and space constraints, it was not possible to give a full analysis of each and every single SVN, an effort has been made in this thesis to provide the most exhaustive list

of SVCs and SVNs to date. Therefore some examples of greatest interest are discussed in great detail while others are included for the aim of comprehensiveness. Out of the idiomaticity characteristics outlined in chapter one, Section 1.3.2.3, these constraints had the most effect in the area of determining familiarity. Therefore, the second phase of research was implemented with the primary objective of determination of familiarity amongst elder speakers.

2.6 CHAPTER SUMMARY

Based on the preceding discussion, it may prove to be more useful to look at SVCs in terms of common properties rather than a single defining characteristic. In such an approach, SVCs which show the most properties are exemplifications of prototypical SVCs while those that show the least are further away from the prototype on the continuum. This approach helps in our discussion of SVNs because it allows us to develop a clear pattern for different types of SVNs and develop a categorizational model based on “baskets of features” of the SVN type. When we encounter an SVN that may conform to three of four features, we can still deal with it within the framework of the categorizational model simply as a non-prototypical instance of the SVN type rather than throwing it out or attempting to define it away into oblivion.

This is the theoretical approach for evaluative criteria and organizing principles that is adopted for the purposes of this thesis regarding definitions of both Serial Verb Constructions and Serial Verb Nominalization. This approach is useful in terms of avoiding a “paralysis of analysis” whereby one is confronted with a single counter-example and one’s whole definitional

characterization of a linguistic phenomenon is thrown out in favor of another until the next remote counter-example is found.

In this type of approach, the first objective in defining a phenomenon, in this case, SVCs, is to ascertain certain common properties, which may be seen as paradigmatic of SVCs cross-linguistically. Again, although there may be SVCs or serializing languages which do not have all of the features, such SVCs are simply understood to be atypical in regard to a prototype which includes the maximal amount of possible characteristics.

This chapter gave an overview of prototype theory in its original conceptualizations as well as more recent formulations of it. We also discussed the philosophical basis of PT in the works of Wittgenstein, the methodological manifestations of it through the work of Rosch and more contemporary theoretical considerations of it in the works of Lakoff. Also covered was the link between PT, SVCs and SVN. Finally this chapter discussed grammaticalization and iconicity as central concepts in this thesis. Finally, the methodology used in this thesis was discussed in section 2.5. In the next chapter, we deal with written and attested data as well as data collected from field work on FL-ISVN in Akan.

ENDNOTES

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[1] This reflection from Rosch came on the heels of empirical findings of Armstrong (1983) which indeed demonstrated that classical categories show prototype effects.

[2] Rosch notes that prototypical category members have been found to represent the means of attributes that have a metric, such as size (Reed, 1972; Rosch, Simpson, & Miller, 1976). Also see Rosch (1978: 37). While beyond the scope of the current study, it may be a useful direction of future research to investigate each type of SVC as prototypical in terms of "size" or some other metric.

[3] For a succinct, yet thorough discussion of the classical theory see Osam (1994) and Lakoff (1987).

[4] As we are arguing that condensation occurs at the level of FL-ISVC and erstwhile separate events come to be understood as a single event complex, it follows that iconicity will be reduced to applying to the position of formerly separate verbs that have undergone full lexicalization as opposed to applying to two separate events.

[5] Less than 50% of the questionnaire being filled out was considered unusable.

[6] i.e. providing all noun forms when being asked for verbs or vice versa.

CHAPTER THREE

NOMINALIZATION OF FULL LEXICALIZED-INTEGRATED SERIAL VERB CONSTRUCTIONS (FL-ISVCS) IN AKAN

3.0 INTRODUCTION

The goal of this chapter is to provide an analysis of the nominalization of Full Lexicalized Integrated Serial Verb Constructions (FL-ISVCs) in Akan using data based on original research, gleaned from questionnaires and existing written sources. It is anticipated that FL-ISVCs as a distinct level of semantic integration in Akan will be able to be nominalized and that nominalization will occur in a manner distinct from other levels of semantic integration in Akan.

3.1 SURVEY OF AKAN FL-ISVC NOMINALIZATION

In the current study, data from questionnaire respondents in two phases, P1 and P2 are presented in alphabetical order as well as data from written sources. All data is organized by the first consonant of the first verb, except in select cases where other data are briefly mentioned for comparative purposes.

The first FL-ISVC we will look at is *bɔ...gu* 'to reject' as attested in Osam (1994:205). This FL-ISVC ranks high in terms of the idiomaticity characteristics expected of FL-ISVCs, lexicalized idioms, in that it is non-compositional, has a high degree of collocability restrictedness and familiarity.

1. N/ø bɔ gu
   +NOM strike spill
   SVN: mmɔguo/bɔgu(o) 'rejection/defeat, interlude'

The nominalization marker in (1) is N, standing for any nasal at αplace of articulation, which, in nominalization, assimilates to the place of articulation of the following consonant. This phonological rule is productive throughout the language and may be expressed as follows:

2.

N^1	→	C [+nasal] [αplace]	/	_____ C [αplace]

+NOM indicates that the affix is a nominalization marker. *Bɔ...gu* 'reject' was one of the items asked about in both phases of the questionnaire distributed. When provided with the FL-ISVC *bɔ...gu*, a statistically significant 80.0% (56 respondents) of the total number of P1 respondents were able to provide the same form, namely *mmɔguo/mbɔguo*. For these speakers, *mmɔguo* was ascribed to have two meanings, with P1 respondents split on the definition with 26.7% (12 respondents) providing the meaning as 'interlude' while 22.2% (10 respondents) gave 'rejection' as the meaning.

Given that *mmɔguo* is also the word for interludes sung during the course of telling *Ananse* folktales, for some speakers it was unclear whether or not this is 'rejection' or 'interlude song'. Bannerman *et al.* (2011) defines *mbɔgu* as a 'story telling related song'. Boadi (2005:385) defines *mmɔguo* primarily as '*nea ɛbɛtware mu kwa*', which may be translated as 'that which is simply interspersed' which leans towards the 'interlude' definition. It is used texually in Owusu-Sarpong (1998) to introduce a song before starting an Ananse story:

3. Wiɛ, ɛnyɛ Kwaku Ananse ne
INTERJ, 3SG.INAN.NEG-be K. A. CONJ

mmoadoma ho anansesɛm na
animal-kingdom RN folktale FOC

yɛrebɛtoɔ yi, enti yɛbɛbɔ
1PL-IMM.FUT-throw this, therefore we-FUT-strike

mmɔguo:
interlude:

'Okay, isn't it a story concerning Kwaku Ananse and the animal kingdom that we are going to tell, therefore we will sing an interlude song.' (Owusu-Sarpong 1998:25)

This item was teased out further in P2 as four out of five of the Akuapem respondents to this item stated outright that there was no way to convert *bɔ...gu* 'reject' from verb to noun; they expressed that the noun *mmɔguo* can only carry the meaning of 'interlude'. However for Koforidua Asante speakers and Fante speakers, *bɔ...gu* can be nominalized as *boguo* or *bogu*, respectively, with the meaning 'rejection'. For two of the Asante speakers, one in Koforidua and one in Kumasi, *mmɔguo* can be either interlude or rejection. One Akuapem speaker, also an Asante speaker had *mmɔguo* both as 'interlude' and 'putting something by'. Thus, in terms of familiarity, as an SVC *bɔ...gu* appears to be highly familiar as is the nominal form *bogu* amongst Fante and Asante speakers. *Mmɔguo* was familiar to all as 'interlude' but only to 12.6% of the total number of P2 speakers surveyed as meaning 'rejection' or 'dismissal'. *Bogu* as 'rejection' or 'dismissal' was familiar to 56% of the total number of P2 respondents surveyed. Others, while familiar with the SVC, preferred it in verbal form rather than nominal form finding the SVN to be unacceptable.

Although there is a degree of nonconformity in how P1 respondents defined *bɔ...gu*, other definitions seem to be basically in fairly synonymous keeping with the sense of rejection used below in Fante:

4. Ebusuafo no bɔ-ɔ nsusui no gui
family DEF hit-COMPL proposal DEF fall-COMPL
"The family defeated the proposal." (Osam 1994:204)

Secondarily, an attempt was made in the P1 questionnaire to evaluate the degree to which respondents were able to ascertain the verbs from which the nominal, *mmɔguo*, is derived and the meaning of those verbs. Amongst P1 speakers, a relative consensus was reached with a valid percent of 84.8% (56 respondents) selecting *bɔ...gu*. However, there was no consensus of the meanings of constituent verbs *bɔ* and *gu*. For *bɔ*, respondents gave answers such as 'hit/beat' 22.2% (10 respondents), not sure 15.6% (7 respondents), 'kick' 11.1% (5 respondents), 'play' 11.1% (5 respondents), 'ignore' 11.1% (5 respondents), 'none' 4.4% (2 respondents) and a host of answers with 2.2% (1 respondent) such as 'break', 'condemn', 'joke' etc. For *gu* responses included 'away' 19.4% (6 respondents), 'pour' 19.4% (6 respondents), 'not sure' 19.4% (6 respondents), 'sow' 12.9% (4 respondents) and many with 3.2% (1 respondent) such as 'nurse', 'out', 'fall', 'fail' and 'scatter'. It is important to note here that both *bɔ* and *gu* have varied meanings, depending on context, with Christaller's (1933) dictionary alone providing 115 senses of the word *bɔ* and 33 senses of the word *gu*.

The varied P1 responses reflect that neither word has a concrete consensus meaning independent of the context of this SVC and that the meaning of the two together is dependent on the SVC structure as a whole. It is

viewed as a testament to the high level of semantic integration that respondents are able to agree on the definition of the whole more than the individual parts due to prototypical non-compositionality of the FL-ISVC structure.

For P2, because interviews were conducted orally, we had to actually give them the verbs themselves orally in the context of example sentences to get the SVN. Also, when P2 speakers were asked the meaning of verbs just given in context during the oral interviews, the meaning was always related back by giving the same example provided. Thus, decomposing SVN to its constituent verbs was primarily employed as a method for the written P1 of research.

Next, we will look at a pair of FL-ISVCs, *brɛ...gu* ‘to toil in vain’ and *yɛ...gu* ‘to toil in vain’. Typical of FL-ISVCs is the lack of compositionality and the collocability of the verbal elements, both due to semantic integration and subsequent lexicalization. Here, we have a case of collocational limitedness wherein the slot of V1 is subject to replacement while yielding the same composite meaning.

5. a. (ɔ) brɛ gu (o)
+NOM tire spill +NOM
SVN: (ɔ)brɛgu(o) ‘toiling in vain’

b. ɔ yɛ gu
+NOM do cast away
SVN: ɔyɛgu(o) ‘toiling in vain’

Because *brɛ...gu* was not included in the P1 questionnaire, it was included in P2 to determine its familiarity particularly amongst elder speakers. The concept and word were almost universally familiar to all participants but the manifestation of it had some degree of variance particularly due to dialectal

variation. Twenty six percent of respondents used the form *bregu* (6 Fante speakers), 21.7% used *obreguo* (Koforidua and Kumasi Asante Twi), an additional 21.7% used *obregu* (5 Akuapem Twi speakers, 1 Koforidua Asante Twi speaker), while 21.7% used *brɛguo* (3 Kumasi Asante Twi speakers, 1 Koforidua Asante Twi speaker) with a final 8.7% using *ɔbrɛguo* (2 Kumasi Asante Twi speakers). Therefore, despite dialectal variation, the concept, the SVC and the SVN are all judged as highly familiar amongst speakers interviewed.

The next SVN to be discussed is *mmɔtohɔ* 'procrastination'.

6.

N	bɔ	to	hɔ
+NOM	strike	throw	there

SVN: mmɔtohɔ 'procrastination'

This SVN follows a familiar base template of FL-ISVC nominalization. As will be discussed below, due to the familiar base template, 16.7% of P1 respondents chose 'procrastination' as the meaning of *mmɔtoso.* In this case, respondents seem to either consciously or subconsciously replace the meaning of the unfamiliar *mmɔtoso* with the more familiar *mmɔtohɔ* on the basis of empirical experience with the latter and/or lack thereof for the former. Again, as is the pattern for FL-ISVC nominalization in Akan, the verbal elements are contiguous under nominalization. Also, included in the nominalized form is the demonstrative, *hɔ* 'there'. Again, a consensus was reported by P1 questionnaire respondents who, when given the FL-ISVC elements *bɔ to hɔ,* 82.9% reported the SVN form *mmɔtohɔ/mbɔtohɔ*[2]. Also, 86% of respondents came up with procrastination/postponement as the meaning of *mmɔtohɔ* as also attested in written sources. Respondents were also readily able to identify the verbs from

which *mmɔtohɔ* is derived with a combined 80.3% identifying *bɔ to hɔ* and/or *bɔ to* as the verbs from which the SVN is derived. Familiarity was also attested in P2 respondents with 72.7% indicating familiarity with *mmɔtohɔ* (Asante and Akuapem) and 27.3% of respondents indicating familiarity with the form *mbɔntohɔ* (Fante) meaning all speakers were familiar with some dialectal variant of the SVN. For all respondents, the meaning attibuted was 'procrastination'.

This data is interesting in that for the majority of speakers of various backgrounds, they consistently included demonstratives, relator nouns and postpositions in their exposition of the FL-ISVCs from which the SVN they were given is derived.

Our original hypothesis was that serial verbs of different levels of semantic integration in Akan alone could form the basis of SVN typology in Akan. Based on our current analysis of questionnaire data, it is clear that semantic integration extends beyond the verbal elements of the SVC to demonstratives, direct objects and relator nouns when they occur as parts of the SVC.

Typically in serial verb literature, there is little mention of other elements in the construction and especially not in relation to semantic integration. This is seen most clearly in definitions of SVCs which typically only mention verbs; the number of them and how they behave. For example, Durie states "The archetypal serial verb construction consists of a sequence of two or more verbs which in various (rather strong) senses, together act like a single verb" (Durie 1997:289-290). Here we have no mention of what other

elements may make up the construction, much less whether or not such elements are obligatory and/or semantically integrated with those verbs. Similarly, according to Aikhenvald (2006) “A serial verb construction (SVC) is a sequence of verbs which act together as a single predicate, without any overt marker of coordination, subordination, or syntactic dependency of any other sort” (2006:1). In cases where other elements in the SVC are discussed typically this is done so in the context of argument sharing without any allusion to semantic integration of the verbal elements or the degree to which such semantic integration may extend to such elements. Examples of argument-sharing as a defining characteristic of SVCs can be found in Baker’s (1989) Argument Sharing Hypothesis. In other works where semantic integration between verbs is discussed in the context of nominalization (Osam 1994:205) there is no mention of this semantic integration being extended to other elements of the SVC or of how semantic integration including RNs, for example, impacts upon nominalization. Nor is there mention of how nominalization may shed light on semantic integration of all elements within the SVC from which the SVN has been derived. Further, there has not been a systematic study aimed at showing the cognitive basis of semantic integration by having native speakers decompose the SVN. Consistently, when native speakers decompose SVNs, they do not stop at “two or more verbs” acting as a single verb with or without syntactic dependency, but rather they identify all of the semantically integrated elements of the SVC. In retrospect, and as a result of the data obtained, it is most appropriate to ask speakers to decompose an

SVN to all elements and discard the verb-centric assumptions found in some theoretical definitions.

This is because in the P1 questionnaire, respondents were given the SVN form and were asked to decompose the form into its constituent verbs and to give the meaning of each verb. Consistently, respondents would not just give the verbal elements but would also include relator nouns whenever they were present in the SVN structure. Even in cases where the respondent did give only the verbal elements, oftentimes they gave the relator noun as well and then crossed it out or put it in parentheses upon realizing that they were asked to only give the verbs such as in the cases of P1 respondents #13 and #16. This begs the question of "was that questionnaire item legitimate?" In response, it appears that any focusing solely on verbal elements to the exclusion of other elements in an SVC should be avoided. As mentioned, many definitions of SVCs define them basically as two or more verbs acting together or where neither is syntactically subordinate to the other as opposed to, say, two or more verbs along with relator nouns which are just as semantically integrated as either of the verbal elements are with respect to each other. For the rest, for each SVN which included a relator noun, a majority of respondents included the verbal elements and the relator nouns postpositions or demonstratives in nearly all cases. This could be viewed as a "mistake" or an error of not knowing the difference between a verb and a noun. However, we analyze this phenomenon as evidence of how native speakers truly see these collocational and idiomatic SVNs and the underlying FL-ISVCs from which they are derived.

On the same topic of relator noun inclusion but in reference to another SVN, for example, the percentage of respondents who included the relator noun was also similarly high in the case of *ntwatoso,* where 87.7% of P1 respondents who filled in an answer included the relator noun, *so* 'top'. This tells us that the cognitive basis of these constructions as far as native speakers are concerned is that the relator noun must be taken as a semantically integrated part of the SVC. Thus any definition of SVC which is verb-centric to the exclusion of the RNs in the SVC is untenable for the Akan case. The SVNs in this chapter are organized by V1 alphabetical order and *ntwatosoɔ*, *nkabom(u)* and *mfatoho* will be discussed fully below. Here we are just introducing the SVN to make a point about relator nouns and semantic integration. Almost all P1 respondents, a whopping 95.5%, included the clitic postposition, *mu* 'inside' in their decomposition of *nkabom(u)* 'unity'. This is expected more than for any other combination since *mu* has cliticized onto *bɔ* in speech and is also, at times, reflected as such in writing. Finally, a valid percentage of 83.1% of P1 respondents included *ho* 'beside' in their decomposition of *mfatoho* 'comparison/example'. From the above data, for native speakers, which made up 91% percent of all respondents, including the relator noun was not an exception to the rule, it was rather the rule itself. Further buttressing this analysis is the fact that in another similar case, 90.3% of respondents were able to produce the form *mfatoho* 'comparison/example' when given each element *fa* 'take', *to* 'throw' and *ho* 'beside' while only 7.4% were able to come up with the same *mfatoho* form when only given the verbal elements *fa* and *to* **without** the relator noun *ho*.

The implication of the data is that, for native speakers, lexicalization and semantic integration extend not only to verbal elements in SVCs but to other elements which are a part of the SVC. This phenomenon is similar to that of idioms and collocations which require all elements of the idiom to be understood and intelligible.

An alternative analysis may simply attribute the addition of the relator nouns to respondents simply not following directions or understanding the directions which specifically required respondents to only include verbs. However, this makes the result even more compelling in that respondents consistently went with their intuitions of including all semantically integrated elements rather than following the directions of "just verbs" in showing the reality of semantic integration between the elements in the SVC and the SVN.

The next SVN is *butraso* 'overestimation'. While *butraso* was not included in the questionnaires, a similar pattern emerges as with other attested forms for Akan, namely in regard to the four idiomaticity characteristics, most prominently non-compositionality, contiguity of verbal elements and retention of the relator noun when nominalized.

7.	ø	bu	tra	so
	+NOM	calculate	jump/cross	top
	SVN: butraso 'overestimation'			

One aspect that is different from the previous two cases, in the case of *butraso* is that there is no overt nominalizing prefix.

We encountered about 35 FL-ISVCs without overt prefixes which will all be covered in this chapter such as *kyerɛtie*, *fakyɛ*, *kasakoa*, *kyinhyia*, *sigya*, *sufrɛ*, *suma*, etc. Osam (1994:136) argues that in Akan nouns without prefixes

have lost their prefixes “since that illustrates further the vestigial nature of the noun class system” which once existed in Akan. However, in light of cross-linguistic evidence, it may be worth considering Welmers’ (1971,1973) argument which suggests another formerly existing noun class marked by zero prefix. This may be worthy of a second consideration given cross-linguistic evidence from Bantu languages such as Sesotho which has a default class, class 9 with no prefix and a separate class, 1a, also without a nominal prefix. Similarly class 5 is the “default class in isiZulu into which foreign words tend to be placed since most native polysyllabic class 5 words in that language have no prefix” (see Demuth 2000:279-282)[3]. Thus, even if the noun class system had not decayed to the point where the new lexical acquisitions or derived creations in question were not assigned a class, the class they may have been assigned may have been one that did not have an overt prefix as in the case of the default class for various Bantu languages. Thus, in the past and certainly in the present, SVNs exist without overt markers of nominalization. While this subject requires further study and a comprehensive comparative analysis of Akan with modern Bantu language, for our purposes, nouns without an overt prefix are represented as ø +NOM. In terms of familiarity, in P2, only the Asante speakers were able to compose an SVN from *bu...tra...so*. Of these, 20.0% of total respondents produced the form *butraso*, 20% produced *mmutraso(ɔ)*. An additional 5% produced *obutraso*. All of the other speakers, from both Fante and Akuapem dialects, stated that there is no way to nominalize *bu...tra...so*. Thus we see evidence that familiarity may be peculiar to dialect.

The next SVN is *abuada/mbuada* ‘fasting’. This SVN is entirely non-compositional in that *bua* ‘cover’ + *da* ‘sleep’ has a composite meaning of ‘to fast’. It is also inflexible in that the verbal elements are not subject to reduplication or other morphological processes when occurring in FL-ISVC form: **buabua deda*. The form is also collocationally closed in that synonyms and antonyms are not able to replace either verbal element **kata* ‘cover’ + *tɔ nkom* ‘fall asleep’ ≠ ‘to fast’. Finally, the form *bua* ‘cover’ + *da* ‘sleep’ = ‘to fast’ fits the criterion of idiomatic familiarity with this common FL-ISVC featuring prominently in proverbs such as *Anomaa antu a, ɔbua da* ‘If the bird doesn’t fly, it goes hungry’. Due to limitations of space these tests are not fully articulated for each and every entry in this chapter, however, the illustration for *abuada/mbuada* shows what is meant by idiomaticity characteristics in each instance in which they are mentioned.

8.	a/m	bua	da
	+NOM	cover	sleep
	SVN: abuada ‘fasting’		

While in past works, the primary consideration in the categorization of degree of semantic integration has been that of compositionality, in this thesis, generally we are looking for these four elements of idiomaticity in concert. Also we are expecting FL-ISVCs to nominalize, although, as we have shown, even when an FL-ISVC does not have a nominal counterpart, or is not entirely non-compositional, it may still qualify within the continuum of FL-ISVC on the basis of the other primary elements of idiomaticity.

With that in mind, the next FL-ISVC is *di...ma* ‘to intercede’ with its SVN derivative *odima* ‘intercession’. Again the pattern of inflexibility, non-

compositionality, collocability and familiarity hold in adjudicating this as an FL-ISVC. It is also worth noting that typically ISVCs are composed of two verbs rather than the almost limitless numbers of verbal elements which can occur in Clause Chaining Constructions (CSCs).

9.	o	di	ma
	+NOM	eat	give
	SVN: odima ‘intercession’		

It should also be noted that in glosses, such as *di* ‘eat’ and *ma* ‘give’, the most prototypical meanings are given, with due note that *di* alone has over 100 senses and connotations ranging from consumption of food to copulation to engaging in any specific activity which is the direct object of *di*. Typically, the prototypical meaning is the one that is first thought of by the native speaker due to prototype effects. It is also, typically, the first sense of the word listed in dictionaries and glossaries and other corpuses consulted within this study. *Di...ma* was given to P2 participants to ascertain familiarity. Fante speakers chose the form *dzima* without prefix for a total of 18.2% of the respondent totals. Asante speakers produced the form *odima* for a total of 27.3% who found this form to be acceptable. As was the case for the majority of the data, the Akuapem speakers were by far the most conservative with all those interviewed stating that *di...ma* cannot be nominalized, although the Akuapem speaker who also identified as an Asante[4] produced both *odima* and *dima*. Additionally, some of the Asante and Fante speakers had a problem with it for a total of 31.8% of respondents who stated that there is no nominal form for *di...ma.* In retrospect and in future research, it may be beneficial to present speakers with *odimafo* ‘advocate’. However, because *–fo* can be added to most

of the SVNs to derive a noun meaning roughly ‘one who engages in X activity habitually/professionally’, for the current study, it would have been unwieldy to test this suffix against all SVNs since this, in and of itself, can form a study.

The next SVN is *nnɔbae(ɛ)/ndɔbaa* ‘produce’, derived from verbs *dɔ* ‘cultivate’ and *ba* ‘come’. It is worth noting that in addition to the typical nominalizing prefixes, there are nominalizing suffixes in this instance which vary according to dialect. In Asante Twi the nominalizing suffix is *–eɛ*, in Akuapem Twi it is *–e* and in Fante it is *–a*.

10.

N	dɔ	ba	e(ɛ)/a
+NOM	cultivate	come	

SVN: nnɔbae(ɛ)/ndɔbaa ‘produce’

The next SVN, *mfatoho* ‘comparison, example’ was also a questionnaire item. Questionnaire items were determined largely from the list of prototypical FL-ISVCs articulated by Osam (1994) and Agyeman (2002). Others were added based on analogy with the entries within these two lists.

11.

N	fa	to	ho
+NOM	take	throw	body

SVN: mfatoho ‘comparison, example’

Again, in the case of *mfatoho*, the nominalizing element is N +NOM. With respect to P1 questionnaire respondents, when given SVC elements *fa to ho*, 90.3% were able to produce *mfatoho*. A combined 92.1% of respondents produced one of the two main meanings of *mfatoho*, comparison or example with 65.1% giving ‘example’ and 27% giving ‘comparison’ as the meaning. For P2 respondents, 87% of respondents produced *mfatoho* with the remainder producing *mfantoho*. The *-n-*, in this case may be a phonological phenomenon conditioned by the environment of the nasal prefix, but this requires further

research. A distinction was made by one of the Fante participants who stated that *mfantoho* with prefix carries the meaning of example whereas *fatoho* carries the meaning of comparison.

When given the SVN form *mfatoho,* 83.1 percent of P1 respondents gave *fa to ho* which, of course, included the relator noun *ho* as part of the SVC complex. In contrast only 6.2% gave solely the verbal elements *fa...to.*

As an FL-ISVC, *fa...to...ho* fits most of the prototypical characteristics expected in relation to compositionality, collocability and familiarity as discussed above. It also patterns with the large majority of FL-ISVCs which tend to have SVN counterparts. Also, as is the pattern in instances of Akan SVNs, the verbal elements are contiguous in contrast with other SVNs like *mpaemuka* and *mfuanhwe*[5] which have intervening elements. The generalization, however, is that FL-ISVNs in particular tend to be contiguous. It is interesting to note here that *fa* is glossed as 'take', yet the majority of P1 respondents, 44.7%, gave the composite meaning of the entire FL-ISVC 'compare'. Consistently, although respondents were asked to give only the meaning of the separate individual verbs from which *mfatoho* is derived, they regularly gave the composite meaning. While this may be dismissed as a fluke, a clear pattern emerges when we look at other SVNs throughout the remainder of the chapter such as *nsɔhwɛ*, *gyedie* and *oyima*.

The next FL-ISVC/SVN combination is *fa...firi/(ɔ)fafir(i)* 'forgive/forgiveness'. The FL-ISVC is cited in Osam (1994:205). The form *fa…firi* was not included on the P1 questionnaire administered to native Akan speakers but was included in P2. 40% of P2 respondents gave *fafiri/fafire* as

the SVN form, 20% said that there is no nominal form of *fa...firi* and that the correct form is *fakyɛ*. An additional 20% chose *fafir* (corresponding wholly with Fante speakers) while 10% gave *mfafiri* as the form. A side note about the grammatical correctness came out during the interview that for at least some of those who had issues with *fa...firi* part of the issue seemed to stem from the idea that it is more socially/morally correct to *fa...kyɛ* 'forgive (completely)' than to *fa...firi* 'forgive (but with conditionality which may be brought back up later)'. Nonetheless, respondents were familiar with the SVC and at least 75% were familiar with some nominal form of the SVC. It should be noted that the predominant form was without any prefix and only respondent was familiar with the form *ɔfafiri* as was attested in the corpuses consulted as mentioned above. That one respondent had *ɔfafiri/fafir(i)* as the SVN forms.

12. ɔ/ø fa firi
+NOM take lend
SVN: ɔfafiri/fafir(i) 'forgiveness'

The next case, *fa...ka...ho* 'add', is an FL-ISVC which is also at the same time an instrumental construction. *Fa* 'take' is the suppletive form of *de* 'take' in instrumental constructions and the only one of the two which can be nominalized in this type of construction. *De* occurs in the present stative TAM, while *fa* occurs in all other instances including in nominalization.

13. m fa ka ho
+NOM take touch body
SVN: mfakaho 'addition'

The next FL-ISVC/SVN combination of *fa...kyɛ* 'forgive' and *fakyɛ*, forgiveness was also a questionnaire item for both P1 and P2. As with other FL-ISVCs, *fa…kyɛ* is non-compositional.

14.	ø	fa	kyɛ
	+NOM	take	give as gift
	SVN: fakyɛ	‘forgiveness’	

In this case, *fakyɛ* ‘forgiveness’ shares a common verbal element with *ɔfafiri* ‘forgiveness’, namely *fa* ‘take’ indicating collocational limitedness.

59.4% of P1 respondents selected *fakyɛ* as the correct form when given verbal elements *fa* ‘take’ and *kyɛ* ‘share, distribute, give as gift’. As with other SVN forms, some P1 respondents gave answers including prefixes such as *ɔ-* as in *ɔfakyɛ* and N- as in *mfakyɛ*. These divergent responses are given based on analogy with how speakers know nominalization occurs in other instances. Indeed, novel SVN forms are created based on principles of similarity and dissimilarity in making analogies with known existing forms. Thus, for speakers who may not be familiar with how the word is nominalized, they are likely to propose a form based on other known forms and word formation rules. 100% of P2 respondents affirmed that *fa...kyɛ* can be nominalized. 91.7% of P2 respondents gave *fakyɛ* as the nominal form while 8.3% gave *fakyɛm* as the nominal form. Thus *fa...kyɛ* and its SVN form *fakyɛ* are seen as being very familiar.

72.9% of P1 respondents agreed on the meaning of *fakyɛ* as ‘forgiveness’. Interestingly enough, 5.1% of speakers chose ‘gift’ or ‘dash’ as a result of one of the meanings of *kyɛ* alone ‘to share, to distribute, to give as a gift’. An even more interesting note is that some speakers chose the nominalization form of *fa...kyɛ* as *kyɛfa*. However *kyɛfa* comes from the verb *kyɛ* ‘to share, to distribute, to give as a gift’ and from the noun *fa* ‘half, part’

rather than the homonym verb *fa* ‘take’. Thus, *kyɛfa* is not an instance of SVN, but rather comes from a V-N source that undergoes nominalization. Indeed, several “mistakes” were made as a result of substituting the homophonous counterpart, typically a noun, with the verb as will be shown below as well in the case of SVC *fa...hyɛ*. Anticipation of such mistakes made getting a large enough sample crucial in undertaking this research as, even though a few speakers made “mistakes”, by and large, the majority produced expected results.

When asked to produce the verbs from which the SVN *fakyɛ* is derived, 89.4% of P1 respondents were able to correctly identify *fa...kyɛ* as the source. When asked about the meanings of the individual verbs from which the SVN *fakyɛ* is derived, many speakers, 40.0% of P1 respondents, chose the combined meaning of FL-ISVC *fa...kyɛ* ‘forgive’. In our analysis, this widespread pattern, seen throughout the course of the study is not viewed as a “mistake” per se. The majority of respondents in this case, however, at 45.5% were able to give the prototypical meaning of *fa* ‘take’ when it occurs alone.

The majority of speakers were able to give the two primary senses of *kyɛ* ‘give as gift’ or ‘distribute, share’ with a combined total of 68.0% with 45.2% selecting ‘give as gift’ and 25.8% selecting ‘distribute, share’ as the meaning of *kyɛ*.

The next SVN comes from FL-ISVC *fɛm...to...mu*. While *mfɛntom’* ‘interest’, is not compositional, neither is it etymologically opaque. The meaning is from *fɛm* ‘lend/borrow’ *to* ‘throw’ *mu* ‘inside’. *Mfɛntom’* follows a typical pattern of FL-ISVC nominalization when it occurs with a relator noun.

It also has one of the four typical prefixes marking verbal nominalization, N +NOM with the other three being *ɔ* +NOM and *a* +NOM and ø +NOM where ø indicates a null prefix which still has a feature of nominalization.

15. N fɛm to mu
+NOM +lend throw inside
SVN: mfɛntom(u) 'interest'

The next FL-ISVC is *firi...hyia* 'to meet an annual date' which nominalizes as *afirihyia/afenhyia* 'meeting of an annual date'. A synonym is *afenhyia* 'meeting of an annual date', which is not an SVN as it comes from the noun, *afe* 'year' and the verb *hyia* 'meet'. *firi...hyia* was not included among questionnaire items.

16. a firi hyia
+NOM from/leave meet
SVN: afirihyia/afrenhyia 'meeting of an annual date'

The next FL-ISVC, *ɔfonkum* 'to aim at bloody vengeance' is unique in that it has two attested SVN forms, *ɔfonkum* and *afom-akum*. The first form, *ɔfonkum* is typical of FL-ISVC nominalization as both verbs remain contiguous and nominalization is marked by a prefix, *ɔ-*, with a +NOM feature. The second form, *afom-akum* is more typical of CSC nominalization or in the rare instances of PL-ISVC nominalization in that each verb is marked with a nominalization marker. The form is similar to PL-ISVC *kɔ...ba* 'going and coming' which can be nominalized as *akɔaba*.[6] The *afom-akum* nominalization paradigm may, therefore, be based on analogy with the comparably rare instances of PL-ISVC nominalization in Akan or even CSC nominalization, which also tends to mark each verb in the SVC with a nominalization marker as will be shown in chapters 4 and 5, respectively. To ascertain familiarity,

fom...kum was included amongst interview items for P2 participants. Almost all participants were familiar with the nominalized form of *fom...kum*. Distinctions between forms of the nominal were, for the most part, broken down on the basis of dialectal variation. The strong preference for Fante speakers interviewed was *fomkum* which made up 26.3% of the total. Akuapem speakers, for the most part, chose *ofomkum* with 21.1% of the total while Asante speakers surveyed tended towards *ɔfonkum* with 36.8%. One Asante speaker and the Akuapem/Asante speaker both preferred *afom-akum* making up 10.5 percent of the total while one Asante speaker was 'not sure' about the nominal form. Thus the SVC and some nominal counterpart are seen as being familiar in the three primary dialects surveyed.

17. a. ɔ/ø fom kum
+NOM err kill
SVN: ɔfonkum 'aiming at bloody vengeance'

b. a fom (a) kum
+NOM err +NOM kill
SVN: afomkum/afom-akum 'aiming at bloody vengeance'

The next FL-ISVC is *fom...pata* 'to attempt to reconcile' which is nominalized as *afompata*. *Afompata* is partially compositional in that the gloss of *pata* 'reconcile' also surfaces in the composite meaning of *afompata* 'attempt at reconciliation. *Afompata* is inflexible and collocationally limited as it pairs with *afomkum* in having a V2 slot open for an antonymous reading. *Afompata* along with *afomkum* are seen as familiar as, apart from attestation in the three of the four primary corpuses consulted in this thesis, both *afomkum* and *afompata* are attested in the following proverb:

18. Yɛdi afompata na yɛnni afomkum
1PL.SUB-do reconciliation CONJ 1PL.SUB-NEG-do vengeance
'We reconcile, we don't avenge.' (Boadi 2005:104)

19. a/ɔ fom pata
+NOM err reconcile
SVN: afompata/ɔfompata 'attempt at reconciliation'

FL-ISVC, *foro...sian(e)* 'to circulate' seems to have two meanings: one a literal compositional meaning of 'climbing and descending' another, a non-compositional meaning of 'to circulate' as in how blood in the body circulates. While the meaning of 'to circulate' seems to be an extension of the idea of climbing and descending, it also seems to have moved towards an idiomatic meaning. When taken with its non-compositional meaning, *aforosian(e)* is a typical FL-ISVN. However when taken with its compositional meaning of climbing and descending, it would be an instance of rare Akan PL-ISVC nominalization.

20. a foro siane
+NOM climb descend
SVN: aforosiane 'circulation'

The next instance of FL-ISVC nominalization is *funtum...fra* 'to integrate', nominalized as *afuntumfra* 'integration'. The question may be asked whether or not *afuntumfra* is truly non-compositional as integration could be seen quite literally as plowing and mixing. The non-compositional understanding is most clearly seen in its metaphorical usage as shown below.

21. a funtum fra
+NOM plow mix
SVN: afuntumfra 'integration'

22. wodi afuntumfra
3PL-do integration
'They (people) are mixed together' (Christaller 1933:140)

Obviously in this instance, human beings cannot be plowed as dirt can. Thus the meaning is taken to be metaphorical and therefore not compositional like simply ‘plowing and mixing’. *Afuntumfra* is also regarded as inflexible and collocationally closed.

The next two instances of FL-ISVC nominalization are taken together as they show a limited degree of collocability. It should be recalled that collocability refers to the degree to which an element of the idiom, or, in this instance the FL-ISVC, which is regarded as a lexicalized idiom, can be replaced with a synonym or antonym. Here we have the non-compositional *frɛ...te* and *frɛ...tie* both glossed as ‘being obedient to a call’. Thus *frɛ* ‘to call’, the fixed element, can collocate with either of the two synonyms *te* ‘hear’ or *tie* ‘listen’ to come up with the same composite meaning.

23. a. ɔ frɛ te
+NOM call hear
SVN: ɔfrɛte ‘obedience to a call’

b. ɔ frɛ tie
+NOM call listen
SVN: ɔfrɛtie ‘obedience to a call’

Gye...di is highly institutionalized as native speakers understand the FL-ISVC based on the composite idiomatic meaning rather than the literal counterpart of receiving and eating. The level of familiarity is illustrated best in the results of our questionnaire. When given the verbs *gye* ‘take/receive’ and *di* ‘eat’, 97.3% of all respondents were able to produce the FL-ISVC form *gyedie* or some dialectal variation of it.

A whopping 95.9% of P1 respondents were able to produce the SVN combined meaning of ‘belief’ or ‘faith’ making it one of the most measurably

familiar forms encountered throughout the study. On the other side, in terms of discernment of the verbs from which *gyedie* is derived, 100% of all respondents were able to correctly identify FL-ISVC *gye...di*. The only participants who did not come up with this answer were those who simply refrained from answering the item. Of P2 respondents, again 100% of them were able to produce some nominal from *gye...di* with the differences primarily attributable to dialectal variation. The Koforidua Asante Twi speakers produced *gyidie* as did one of the Kumasi Asante Twi speakers for 33.3% of the total P2 respondents. The Akuapem speakers produced *gyedi* as did 3 of the Kumasi Asante Twi speakers and one Fante speaker for a total of 33.3%. The majority of the Fante speakers produced *gyedzi* for a total of 25%. The Akuapem/Asante speaker produced *gyidi* and a Kumasi Asante Twi speaker produced *gyedie* for a 4.2% of the total each.

Respondents were also clear on the meaning of *gye* alone, coming up with largely synonymous meanings of ‘receive’ ‘take/get’ and ‘collect’. Again, consistent with the pattern, 45.2%, of P1 respondents, a majority for any of the single responses for this item, gave the composite meaning of ‘believe/have faith’. This is thought to be due to the effects of semantic integration. In giving the meaning of *di*, 97% of all P1 respondents gave the meaning of ‘eat’ in response to this item.

The next FL-ISVC is *gye...to...mu* ‘agree, accept’ with a typical base template SVN form of *nnyetom(u)/ngyetomu*. Due to the cliticization process which regularly occurs with postposition *mu* ‘inside’, the written form, in following the pronunciation, may be rendered as *nnyetom’* or *nnyetom(u)* in

writing. Here again, non-compositionality comes from the metaphorical idiomatic usage of *gye...to...mu*. This FL-ISVC is also collocationally closed as synonyms and antonyms cannot replace any single element of the FL-ISVC complex and retain the composite meaning of whole. In terms of familiarity amongst speakers surveyed, 29.2% of P2 respondents (Koforidua Asante Twi speakers) indicated that there is no nominal form of *gye...to...mu* and further proposed the form *mpenesoɔ* as the nominal equivalent of the same meaning. An additional 16.7% of respondents simply said that there is no nominal equivalent without offering a nominal alternative but stating that it sounded like Akyem dialect of Twi (Akuapem-Akropong Twi speakers) for a total of 45.9% of the total P2 respondents stating that *gye...to...mu* cannot be nominalized. This brought up the role of identity and dialect as a sub-discussion of familiarity. Even when a SVN may be familiar to some degree to speakers, they may not use it or may judge it as ungrammatical for their particular dialect. Amongst those who said nominalization is possible, the preferred forms were *ngyentom*' 16.7%, *ngyetom'* 16.7%, *gyetomu* 8.3% and *nnyentom(u)* 8.3%. Along dialectal lines, the Fante speakers appeared to be split between *ngyentom'* and *ngyetom'*. The intervening -*n*- in *ngyentom'* appears to fit the phonologically conditioned environment of being optionally inserted when C1 is a nasal as shown below. In such cases, the intervening vowel between C1 and the inserted nasal appears to undergo nasalization itself due to the influence of C1 which is realized as the nasal inserted post-vocalically:

24. a.

ø	→	C [+nasal] [αplace]	/	C1 [+nasal]	_____	C [αplace]

b.

V [-nasal]	→	V [+nasal]	/	C1 [+nasal]	_____

Kumasi Asante Twi speakers were also split in the forms they produced with 8.3% of the total P2 respondents producing *nnyentom(u)*, 8.3% of the total P2 respondents producing *gyetomu* and 4.2% of the total P2 respondents producing *ngyetom'* as was seen for the Fante speaker breakdown. Although one of the Kumasi speakers produced *nnyentom(u)*, he noted that it "doesn't sound Twi" to him. This also highlighted a difference between the Koforidua Asante speakers who stated that no nominal is possible for *gye...to...mu* and the Kumasi Asante speakers who produced three varieties of forms. One speaker of Akuapem and Asante produced *ogyetum*.

25.

N	gye	(n)	to	mu	
+NOM	receive		put	inside	

SVN: nnye(n)tomu/ngyetomu 'agreement'

(O)hiahwɛ 'looking after each other in times of need', is another SVN which patterns after typical FL-ISVC nominalization, taking ø +NOM or *o-* +NOM as its nominalization marker. Under nominalization, verbal elements are contiguous with no intervening elements. *Hiahwɛ* is non-compositional, inflexible and collocationally closed, typical of FL-ISVC nominalization. In terms of familiarity, while the form without the prefix was attested in the three written sources consulted, 63.2% gave the form as *ohiahwɛ* while only 5.3%, a

Koforidua Asante Twi speaker, produced *hiahwɛ*. SVN forms for *hia...hwɛ* were universally rejected by Iture/Ekumfi Otuam Fante speakers surveyed. *Ohiahwɛ* was produced by Koforidua Asante Twi speakers, Akuapem-Akropong Twi speakers and Kumasi Asante Twi speakers. It is therefore seen to be a familiar form interdialectally to the exclusion of Fante speakers surveyed.

26.	o/ø	hia	hwɛ
	+NOM	need	look
	SVN: hiahwɛ ‘looking after each other in times of need’		

The next case is far more clear-cut in terms of non-compositionality. FL-ISVC *huan/hwan...bɔ* ‘to disappoint’ In addition to being non-compositional, *huan/hwan...bɔ* is also collocationally closed and inflexible. In terms of familiarity, 100% of respondents produced an SVN from *huan/hwan...bɔ*. As expected, differences appeared based on dialect. Fante speakers produced *huambɔ* with 20% of the total number of P2 respondents (25 individuals in total), all Akuapem speakers produced *nhuammɔ/nhuambɔ* with 20% of the total number of P2 respondents, Koforidua Asante and Kumasi Asante speakers produced *hwammɔ* with 50% of the total P2 respondents. An additional Kumasi Asante speaker produced *huammɔ* as did an Akuapem/Asante speaker for 10% of the overall total P2 respondents valid percentage.

27.	ø/N	huan/hwan	bɔ
	+NOM	set off a trap/pull from under	strike
	SVN: huammɔ/hwammɔ ‘disappointment’		

FL-ISVC *huruhuru...dwo* comes from verbs *huru* ‘to boil’ and *dwo* ‘to cool’. It becomes non-compositional when used in a metaphorical sense which

does not literally refer to boiling and cooling. Christaller gives the example shown below in (28):

28. Mma ɛnnyɛ ahurahuradwo,
NEG-let 3SG-INAN-be effervesce-cool,

na ma ɛnkɔ so sɛ
but let 3SG-INAN-IMPER-go top like

afi ase yi.
PERF-from underneath this.
'Don't let it be a quick but transient effervescing, but let it continue as it has begun' (Christaller 1933:196)

29. a huruhuru dwo
+NOM boil cool
SVN: ahuruahuruadwo/ahurahuradwo 'quick but transient effervescing'

The next FL-ISVC *huru(w)/huri...fɛm* 'to practice usury', which is nominalized as *hurufɛm/hurifɛm,* is also typical of SVN in Akan. *Huru(w)/huri...fɛm* is non-compositional, inflexible and collocationally closed.

30. ø huru(w)/huri fɛm
+NOM jump lend
SVN: hurufɛm/hurifɛm 'practice of usury'

The next FL-ISVC, *huru(w)/huri...si* is more clearly in line with other FL-ISVCs as it has both a literal interpretation as well as a figurative, metaphorical interpretation. On a literal level, *ahurusi/ahurisie* is simply jumping and alighting, but on a non-literal level, it carries the meaning of rejoicing in general. Its non-compositional nature places *ahurusi/ahurisie* firmly in the realm of prototypical FL-ISVCs but with a view into its etymological origins. *Ahurusi/ahurisie* is also inflexible and collocationally closed.

31. a huru(w)/huri si
+NOM jump alight
SVN: ahurusi/ahurisie ‘rejoicing’

The next two will be taken together as collocationally limited as there is one slot available, that of V1, where a substitution can occur to give a similar meaning. In all other respects each of the two patterns in the manner of FL-ISVC nominalization.

32. N/ø hwe bɔ mu
+NOM strike strike inside
SVN: (n)hwebom(u) ‘cooperation’

The next SVN is prototypically non-compositional, coming from FL-ISVC *hwɛ* ‘look’ and *sie* ‘keep/bury’, giving a combined meaning of *(ɔ)hwɛsie* ‘providence’. *(Ɔ)hwɛsie* is inflexible and is also collocationally closed. *(Ɔ)hwɛsie* was included in the P2 questionnaire to determine familiarity. 26.3% of total number of P2 respondents produced *hwɛsie* with the 4 out of the 5 respondents being Fante speakers. The 5th speaker to produce this form was a Kumasi Asante Twi speaker. An additional Kumasi Asante Twi speaker produced *ohwɛsie* while an Akuapem and Asante speaker produced *ɔhwɛsie*. Koforidua Asante Twi speakers and the majority of Akropong Akuapem Twi speakers surveyed were not familiar with any SVN form associated with *hwɛ...sie*. Such differences are in keeping with the often regional or dialectal nature of idioms.

33. ɔ/ø hwɛ sie
+NOM look keep
SVN: (ɔ)hwɛsie ‘providence’

The next FL-ISVC is *hyɛn...firi*, with a SVN form *ahyemfir(i/e)*. The basic meaning of entering and leaving derives the non-compositional idiomatic

meaning of the whole, which is ‘frequenting of a place’. It is also collocationally closed and inflexible as is expected for FL-ISVCs and their nominal counterparts. *Hyɛn...firi* was included in P2 focus group interviews wherein 40% produced *ahyɛmfiri*, 30% produced *hyɛmfire* while an additional 5% produced *hyɛmfiri*. 20% of speakers, comprising the Fante speakers, preferred *akɔnaba* to any SVN derived from *hyɛn...firi*. Thus, this form is peculiar to Asante and Akuapem, but not Fante.

34. a hyɛn firi/fire
+NOM enter from/leave
SVN: (a)hyemfir(i/e) ‘frequenting of a place/going in and out’

A few textual examples include:

35. a. odii yɛn mu ahyemfiri
3SG.eat-COMPL 1PL inside in-and-out
He went in and out among us. Acts 1,21
(Christaller 1933:210)

b. munnni dan mu hɔ
2PL-IMPER-NEG-eat room inside there

ahyemfiri sa
in-and-out such
‘do not keep going in and out of that room like that!’
(Christaller 1933:210)

Hyɛ...to...hɔ is nominalized as *ɔhyɛtohɔ* with an idiomatic meaning of any ‘agreement’ or ‘contract’. Although the meanings are dissimilar, *ɔhyɛtohɔ* shares common elements with *mmɔtohɔ* ‘procrastination’ with *to hɔ* ‘throw there’ in each case connoting intentionally putting something to the side. It is another example of a collocationally limited FL-ISVC expression in that one slot is available for switching out while keeping the same meaning of ‘agreement’ or ‘contract’. Both forms are also similarly non-compositional.

Also, in terms of flexibility, *hyɛ* can be subject to reduplication as *hyehyɛ...to...hɔ*.[7]

36.	a.	ɔ	hyɛ	to	hɔ
		+NOM	fix	throw	there
		SVN: ɔhyɛtohɔ ‘agreement/contract’			
	b.	N	ka	to	hɔ
		+NOM	speak	throw	there
		SVN: nkatohɔ ‘agreement’			

Ahyɛyɛde ‘duty/obligation’ comes from FL-ISVC *hyɛ...yɛ...de*. In this case, however, there is no relator noun and *de* ‘thing’ from independent lexical item *ade(ɛ)* ‘thing’ occupies the DO position that we have seen previously occupied by relator nouns such as *ase* ‘under’, *so* ‘top’, etc. In *ahyɛyɛde*, the position typically held by relator nouns is held by a noun, *(a)de(ɛ)* ‘thing’. Here, it can be argued that there are two nominalizations (or nominalization and subsequent compounding) going on. *Ahyɛyɛ* is first nominalized and then compounded with *(a)de(ɛ)* whereby *ahyɛyɛ* modifies *(a)de(ɛ)* to specify the type of thing. It is also non-compositional, as is the case for the vast majority of cases of FL-ISVC nominalization.

37.	a	hyɛ	yɛ	de(ɛ)
	+NOM	fix	do	thing
	SVN: ahyɛyɛde ‘duty/obligation’			

The next SVN shares a similar form to *nkabom(u)*. However, with the change of the postposition *m(u)*, to the relator noun, *ho*, the composite meaning is completely different.[8] They are therefore seen as completely independent lexical entries that just happen to be formed on the basis of the same nominalization base template. It is also worthy of note that although FL-ISVC *ka...bɔ...ho* is non-compositional and collocationally closed, it is partially

flexible as *ka* can be reduplicated as *keka...bobɔ...ho*. Reduplication here would signify specification for number; that is specification for plural. Thus, while it does not, in that sense, appear to be the most prototypical FL-ISVC in terms of expectations of idiomaticity, we argue that it does exist somewhere on the FL-ISVC continuum on the basis of other considerations.

38.	N	ka	bɔ	ho
	+NOM	touch	strike	body
	SVN: nkabɔho ‘annexation’			

As mentioned above, *nkabom(u)* ‘unity’ is also seen as being highly familiar and non-compositional. In the area of flexibility, *ka...bɔ...mu* may be subject to reduplication as specification for number as *keka...bobɔ...mu* with the sense of various items being put together.[9]

39.	N	ka	bɔ	m(u)
	+NOM	touch	strike	inside
	SVN: nkabom(u) ‘unity’			

Ka...bɔ...mu was also an item on the questionnaire distributed to participants. Here we see further evidence of *nkabom(u)* as a highly familiar form in that 95.8% of P1 respondents were able to produce the SVN form when given the FL-ISVC elements *ka...bɔ...mu*. 100% of P2 respondents were able to produce the same form making this the most familiar form interdialectally not only conceptually but formally. Interestingly, in the focus groups one of the Fante speakers initially felt that *koroyɛ* was more Fante than *nkabom’*. However the input of another speaker which was given highlighted a connotational distinction that *koroyɛ* refers more to unity of thought while *nkabom’* can refer to physical unity without the implication of each person being on the same page. This was a type of clarification that only became

possible in the oral interview style of P2 focus groups which was absent in the primarily written P1 questionnaires.

There was also a consensus on the general meaning of *nkabom(u)* as respondents gave virtual synonyms or closely related glosses of the SVN as ‘unity’.

When given the SVN *nkabom(u)*, 95.5% of all P1 respondents were able to ascertain that the FL-ISVC from which it is derived is *ka...bɔ...mu* or *ka...bom* in accounting for cliticization of the postposition as argued for in Osam *et al.* (2011). It is also significant here that no respondents gave *ka...bɔ* as the verbs from which *nkabom(u)* is derived. This is seen as semantic integration extended to the postposition, mu ‘inside’.

In giving the meaning of *ka* in *nkabom(u),* 35.2% of P1 respondents gave the meaning of ‘add up/gather’ in relation to the composite meaning of *nkabom(u)* itself. 25.9% gave the gloss as ‘say’, likely influenced by a homophone with an entirely different meaning.

In terms of questionnaire responses, *bɔ* was probably one of the most diversely defined, but the majority of responses that had anything to do with a range of meaning denoting ‘striking’ were taken together as a combined percentage of 62.9% of P1 responses.

The following FL-ISVC is partially compositional as the composite meaning is derived from the meaning of one of the verbs, *fra* ‘mix’.

40.	N/ø	ka	fra
	+NOM	touch	mix
	SVN: (n)kafra ‘mixing’		

Ɔkaguso as an SVN patterns on the base meaning shared by *mmɔtoso*, *ɔkatoso* and *ntwatoso*, all attested in Christaller (1933). *Ɔkaguso* is, however, non-compositional in keeping with the pattern that we see for FL-ISVCs and their nominal counterparts. Only Kumasi Asante Twi speakers were able to produce nominal forms *nkagusoɔ* with 10.5% of all P2 respondents in total and *nkangusoɔ* with 5.3% of all P2 respondents in total, the latter fitting the pattern of intervening nasal when C1 is nasal. The lone speaker of both Asante and Akuapem produced *ɔkaguso* 'false accusation' as well. Otherwise, SVNs derived from *ka...gu...so* were almost universally rejected by Koforidua Asante, Akuapem Akropong and Fante speakers. Those Kumasi Asante speakers who produced the form *nka(n)gusoɔ* shared the same interpretation of 'false accusation'.

41.	ɔ/N	ka	gu	so
	+NOM	touch	spill	top
	SVN: ɔ/nka(n)guso(ɔ) 'accusation'			

The next FL-ISVC/SVN combination is *ka...hwɛ* 'taste'/*ɔkahwɛ*. Again we have a prototypical FL-ISVC nominalization form which is found in each of the three primary texts referenced in the study which is collocationally closed, non-compositional and familiar (institutionalized). However, this entry is more flexible than more prototypical SVNs as it allows partial reduplication, the primary way in Akan that verbs may inflect for number with *ɔkekahwɛ* as attested in Christaller (1933). In terms of the FL-ISVC itself, it may be subject to reduplication as *keka...hwɛ* 'repeated tasting' while, of course, still retaining its idiomatic meaning.

42. a. ɔ ka hwɛ
+NOM touch look
SVN: ɔkahwɛ ‘touch/taste’

b. ɔ keka hwɛ
+NOM taste repeatedly look
SVN: ɔkekahwɛ ‘tasting food, experiment’

Ɔkahyɛ ‘the act of reputing a saying to someone else’ and the previous item, *ɔkahwɛ*, seem to share the same base template form. Interestingly, *ɔkahyɛ* has an alternate meaning for Koforidua Asante speakers surveyed for P2 as will be discussed in the next example for *ka...hyɛ...mu. Ɔkahyɛ* is used in the current context is exemplified below:

43. ɔkahyɛ sɛe nneɛma pii
reputed-sayings spoil things many
‘Misrepresented sayings spoil many things’ (Boadi 2005:493)

44. ɔ ka hyɛ
+NOM speak fix
SVN: ɔkahyɛ ‘the act of reputing a saying to someone else’

The next FL-ISVN is *ɔkahyɛm(u)/nkahyɛm(u)*. It is non-compositional and collocationally closed. In terms of flexibility as an SVC, *keka...hyehyɛ* mu exists in *keka ataadeɛ hyehyɛ mu* ‘tucking one’s shirt in’[10] but here, reduplication has no idiomatic meaning of ‘siege/confinement’ due to the fact that here the morphological reduplication signifies an entirely different verb rather than repeated action. It is expected that when FL-ISVCs are subject to specification, as with other idioms. In terms of familiarity, different dialects produced different forms. This largest percentage, 35%, comprising the Koforidua Asante Twi speakers, had the SVC and the accompanying SVN as *ka...hyɛ* and *ɔkahyɛ* respectively; noticeably without the postposition in either case. 20% of speakers produced *kanohyɛ* (Fante), 15% produced *nkanhyem*

(Kumasi Asante) and 10% produced *nkahyɛmu* (Kumasi Asante). The all-around most conservative group in relation to nominalization, the Akuapem focus group members, stated that there is no SVN counterpart to *ka...hyɛ...mu*. The reduplicated form *keka...hyɛ...mu* was also given to P2 speakers with 21.1% (all Fante) producing *kekahyɛm'* and 15.8% (Kumasi Asante) producing *nkekahyɛmu* both as 'tucking in one's shirt'. The majority of respondents, 57.9%, from other areas and dialects stated that no SVN can be made from *keka...hyɛ...mu* while 5.3% were not sure.

45. N/ɔ ka hyɛ (mu)
+NOM touch fix inside
SVN: nka(n)hyem(u)/ɔkahyɛ 'siege/confinement'

46. N/ø keka hyɛ mu
+NOM touch fix inside
SVN: (n)kekahyɛm(u) 'tucking in one's shirt'

The following example features the SVN, *nkakuho* 'reduplication' which is derived from the FL-ISVC *ka...ku...ho*.

47. N ka ku ho
+NOM speak bend to body
SVN: nkakuho 'reduplication'

The next set of SVNs is grouped due to the fact that each SVN is derived from the same verbal elements; *ka* and *kyerɛ*. As is the overwhelming pattern for derived Serial Verb Nominals, typically, derivational morphology in Akan is heavily prefixing. According to The World Atlas of Language Structures Online, Akan is listed as "strong prefixing" in reference to the category "Prefixing vs. Suffixing in Inflectional Morphology" (Dryer and Haspelmath 2012). While derivational morphology is missing from the list of linguistic characteristics of Akan, the current study shows that Akan is also

strongly prefixing in this area as well. This is why *nkakyerɛe* is relatively unique in the scheme of derivational morphology as it pertains specifically to serial verb nominalization.[11] *Ɔkakyerɛ* is also derived from SVC *ka...kyerɛ*, however as we see, the changing of the initial prefix changes the meaning of the resulting SVN. In both cases, the aspects of familiarity, collocability, compositionality and flexibility show both to be typical of FL-ISVCs as lexicalized idioms and their nominalized counterparts.

48. a.

N	ka	kyerɛ	e
+NOM	speak	show	+NOM

SVN: nkakyerɛe ‘repeated telling’

b.

ɔ/ø	ka	kyerɛ
+NOM	speak	show

SVN: ɔkakyerɛ ‘information, knowledge, wisdom’

Ɔkakyerɛ was also one of the questionnaire items for both P1 and P2. When given the verbal elements *ka* and *kyerɛ*, the majority, 47% of P1 respondents, selected *ɔkakyerɛ* as the appropriate form. An interesting inclusion was *tekakyerɛ* which is most known in the proverb *Tekakyerɛ bɔ kuro* ‘gossip ruins a town’. Although the verb *te* was not included in the questionnaire, apparently the mind of the respondent went to the form that had *kakyerɛ* in it that was most familiar. While no particular definition stuck out as a majority in the meanings attributed to *ɔkakyerɛ*, most of those given are relatively synonymous or, at the very least, pertain to the multifaceted meanings of *ɔkakyerɛ* as ‘telling’. Forty-five percent of the total number of P2 respondents produced the form *kakyerɛ*, 22.7% of the total number of P2 respondents produced *ɔkakyerɛ*, and 18.2% produced *nkae*, while 4.5% percent produced *nkakyerɛ*. *Nkae* was produced solely by Fante speakers. There was

some discussion of some variation of *ɔkakyerɛ* as a noun, but the end result was that *nkae* is the best way to express the concept in Fante. Koforidua speakers were split between *kakyerɛ* (4 speakers) and *ɔkakyerɛ* (3 speakers). Four (4) Akuapem respondents surveyed chose *kakyerɛ* while one, also a speaker of Asante, produced *ɔkakyerɛ*. Variation was found in Kumasi respondent answers with 2 for *kakyerɛ* and 1 for *ɔkakyerɛ*. The most variation was found amongst Fante speakers who produced *nkae, nkakyerɛ, ɔkakyerɛ* and *kakyerɛ*.

In giving the meaning of *ɔkakyerɛ*, the largest majority of P1 respondents abstained from the questionnaire item with 49.3% skipping the item entirely. The next highest percentage was 'not sure' with 36.8%. Even though the majority agreed on the same SVN form, comparatively few knew the actual meaning of *ɔkakyerɛ* with only 21.1% giving the meaning as 'telling' or some variation thereof. An additional 13.2% incorrectly gave the answer as 'dictation' which is the correct answer for the near-homonym FL-ISVC *ka...kyerɛw*, but not *ka...kyerɛ*. For both P1 and P2 speakers, there seems to be variation in the correct prefix that this form should have and whether there should be a prefix at all. This may be a side effect of the loss of the pre-existing noun class system argued for by Osam (1993) with an after effect being that prefixes that once served as noun class markers have been reanalyzed and/or lost synchronically. In terms of the actual understanding of what the SVN means, P2 speakers seemed to have a better command of *(ɔ)kakyerɛ*.

In terms of the verbs from which *ɔkakyerɛ* is derived, almost universally, P1 respondents were able to determine *ka...kyerɛ* as the source at

92.6%. Indeed, this was the only answer given by those who gave any answer to this item.

P1 respondents were equally clear on the meaning of the two verbs with *ka*'s meaning given as 'say/speak/tell' at an even higher 96.2% and *kyerɛ* translated as 'show/teach' at 85%. The remaining 5% of those who gave an answer gave 'report' as their answer. It should be noted that some answers, such as 'say, speak, tell' were grouped together based on the fact that they are synonyms in English. Throughout the study, respondents who gave answers that were synonymous were grouped together based on the best judgment of the researcher as a native speaker of English.

The next FL-ISVC *ka...kyerɛw* which carries the dual meaning of 'orthography' or 'dictation' seems to have more of a non-compositional meaning when taken as 'orthography' than when used as 'dictation' as dictation is, quite literally, speaking and writing or, rather, writing what is spoken.

49.	ɔ	ka	kyerɛw/twerɛ/twerɔ
	+NOM	speak	write
	SVN: ɔkakyerɛw 'orthography/dictation'		

(Ɔ)kasakyerɛ 'admonition' is another example of a non-compositional FL-ISVC undergoing nominalization in a standard pattern. As an SVN, 90.5% of P2 respondents chose *kasakyerɛ* with 4.8% choosing *ɔkasakyerɛ* and 4.8% choosing *nkasakyerɛ* with each of the last two coming from Kumasi Asante Twi speakers. The chosen form across dialects by a huge margin was *kasakyerɛ*.

50. (ɔ) kasa kyerɛ
+NOM speak show
SVN: (ɔ)kasakyerɛ ‘admonition’

Ɔkasama and *ɔkama*, are examples of collocationally limited FL-ISVCs. To this end, the base template form has one slot, the V1 position, available for insertion of a synonym while retaining the same meaning in both instances. Both variations are non-compositional and inflexible. It should be noted that neither Education Department of Ghana (1971) nor Boadi (2005) have *ɔkasama* although Boadi defines *ɔkasamafo* as ‘*nea ɔgyina obi anan mu ka asɛm*’, translated as ‘spokesperson’, or ‘representative’.

51. a. ɔ ka ma
+NOM speak give
SVN: ɔkama ‘intercession/advocacy’

b. ɔ kasa ma
+NOM speak give
SVN: ɔkasama ‘intercession/advocacy’

The next FL-ISVC is another instance of a collocationally limited set of FL-ISVCs; *ka...san...mu*, glossed as ‘repetition’ and *kasa...san...mu* ‘awkward repetition in speaking’. V1 is the slot that allows for synonyms *ka* and *kasa* to be interchanged while yielding similar meanings. It also must be noted that, in this case, the prefixes are different, perhaps lending to the different meaning.

52. a. N kasa san mu
+NOM speak return inside
SVN: nkasasanmu ‘repetition’

b. ɔ kasa san mu
+NOM speak return inside
SVN: ɔkasasanmu ‘awkward repetition in speaking’

The next SVN form is *nkasramso* ‘harrowing’, derived from *ka...sram...so* ‘to harrow’. *Nkasramso* is attested in Christaller (1933) marked

with the symbol † indicating that it was a novel form at the time of the writing of the dictionary. Accordingly, “New words derived from words already existing in the language, are marked by a dagger (†); a certain number of modern terms have not been admitted, because not as yet sufficiently approved” (Christaller 1933:V). Here, it should be remembered that Christaller was a missionary and some of the novel terms created were for use in translating particular passages in the bible. *Nkasramso* is an example of how novel forms follow pre-existing base-template patterns. Such templates are thought to contribute to the overall semantics and, indeed, be part of the semantic integration of SVCs as much as the verbal elements, relator nouns and affixes. It is also non-compositional, collocationally closed and, from its attestations, it has become institutionalized to some degree since its introduction.

53.	N	ka	sram	so
	+NOM	speak	overflow	top
	SVN: nkasramso ‘harrowing’			

Mentioned previously in our discussion of *mmɔtoso* and other ‘accusation’-related words, the next FL-ISVC is *ka...to...so* ‘accusation’. In both instances, the SVN form is the expected morphological form of SVN in Akan with prefix, V1 and V2 retaining their sequential order and, finally, the relator noun. Again, although such FL-ISVCs as *ka...to...so* are seen as expressing events that have come to be seen as unitary due to semantic integration, it is interesting to note that the word order still follows temporal sequencing of separate events (iconicity). This verbal order is the order in which the corresponding events happen in the real world (*i.e.* the speaking

happens before the throwing on top of someone, which as a composite whole makes up the sum total of accusing). In terms of familiarity *nkatosoɔ* was proposed independently by 15.8% of P2 respondents (all Koforidua Asante speakers) as a synonym of *ntwatoso(ɔ)* and an alternative to less-familiar *nkaguso*. Although *nkatodo* was not independently produced by Fante speakers, it is possible that this may have also been a familiar form amongst Fante-speaking participants.

54.

ɔ/N	ka	to	so
+NOM	speak	throw	on

SVN: ɔkatoso/nkatoso(ɔ) ‘accusation’

The next FL-ISVC is *ka...toa...mu*, the gloss of which is ‘to connect’. *Nkatoam(u)*’s marker of nominalization is N with a feature of +NOM.

55.

N	ka	toa	mu
+NOM	touch	connect	inside

SVN: nkatoam(u) ‘connection’

Nkatwam(u) ‘that which is unspeakable/ inexpressible’, shares a similar base template for nominalization as *nkatoam(u)* as displayed above, although the meanings are completely different and unrelated. This is an example of the malleability of base templates for nominalization in Akan and in general that serializing languages in particular make use of. There is more than enough evidence in the form of well-attested word formation rules that Akan and all other natural languages follow which show that for any given language with productive nominalization, nominalization follows regular rules of word formation established within the language.

56.

N	ka	twa	mu
+NOM	speak	cut	inside

SVN: nkatwam(u) ‘that which is unspeakable/inexpressible’

The next SVN, *akaye* ‘free movement’ is derived from *ka* ‘move’ and *ye* ‘to be good’ which may be understood as a verbal adjective (see Chinebuah *et al.* 1976:22 for this terminology in reference to Akan). The resulting composite gloss is ‘free movement’ which is non-compositional and collocationally closed. While more could be said about this FL-ISVN, for considerations of space we simply include it as yet another example of FL-ISVN in Akan.

57.

a	ka	ye
+NOM	move	to be good

SVN: akaye ‘free movement’

The FL-ISVC, *kasa...bɔ...din*, is slightly different from the majority of FL-ISVCs above in that the SVN incorporates a DO of V2 in the slot we have typically seen occupied by a relator noun in previous SVNs. We find, therefore, that this slot in the base template is prototypically occupied by various types of noun without a restriction that only relator nouns can fill the slot. This phenomenon is also similar to the observation made by Appah (2005) that “there is evidence of action nominals derived from nouns as well as verbs and their internal arguments” (Appah 2005:132). The non-compositionality of *akasabɔdin* comes from its extended meaning of indignation and cursing with a connotation of repetition.

58.

a	kasa	bɔ	din
+NOM	speak	mention	name

SVN: akasabɔdin ‘repeated mentioning of a matter with indignation or cursing’

The next SVN is *akasaguaa* ‘slander’. It is non-compositional, inflexible and collocationally closed.

59. a kasa guaa/dwaa
+NOM speak separate
SVN: akasaguaa/akasadwaa ‘slander’

Kasakoa ‘idiom’. Here, *kasakoa* is treated as an SVN, however, there is the possibility that kasa ‘speak’ may actually be the homonym, *(ɔ)kasa* ‘speech, language’ and *koa* ‘bend’. In such a view, *kasakoa* would be treated as V-N nominalization which has undergone permutation of under nominalization of the verb-nominal complex. Examples of the two are shown below:

60. a. ɔ-kasa-kyerɛ *inf*. [kyerɛ kasa] the teaching of a language; instruction in a language, grammar.

b. ɔ-kasa-kyerɛ, *inf*. [kasa kyerɛ] *admonition, exhortation;* syn. *afotu.*

c. kasa-koa *idiom*. (Christaller 1933:229)

(60a) is an instance of *kasa* as a noun ‘speech, language’ while (60b) shows *kasa* as a verb ‘to speak’. Permutation in Akan is a marker of V-N compounding which readily distinguishes it from SVN. On the V-N compounding argument, it could be taken that *koa* is a change of state verb which must refer to some noun. In such an analysis, the thing that is being bent metaphorically must be a noun, which, in this instance, would be co-referent with *kasa* ‘speech’. While this may require further research including delving into V-N compounding and the influence of tone on such determinations, for our purposes, we look at *kasakoa* as an instance of SVN with the action of speaking together with an action of bending. We look forward to future research that can hash out the differences between V-N compounding and SVN in a systematic and in-depth way.

61. ø kasa koa
+NOM speak bend
SVN: kasakoa ‘idiom’

The next FL-ISVC is *ɔkasamee* ‘talkativeness’. This is given the literal definition of “satiating with speaking, i.e. talkativeness, loquacity, garrulity” (Christaller 1933:229). As an instance of SVN, it prototypically patterns with other instances of FL-ISVC nominalization in reference to the other three primary criteria of idiomaticity: flexibility (inflexible), compositionality (non-compositional) and collocability (collocationally closed).

62. ɔ kasa mee
+NOM speak satiate
SVN: ɔkasamee ‘talkativeness’

Ɔkasasie is prototypically collocationally closed, inflexible and non-compositional as expected for FL-ISVCs when subjected to nominalization in Akan.

63. ɔ kasa sie
+NOM speak bury
SVN: ɔkasasie ‘previously arranged agreement’

The next item, *nkogu(o)/ɔkogu* ‘defeat’, was also included as a questionnaire item due primarily to its specific mention as an FL-ISVC that is subject to nominalization in Osam (1994:205). While Osam (1994) may not have captured all the prototypical cases of ISVC in Akan, the examples provided therein, to a large degree, have formed the basis of ISVCs gathered in this thesis. Also, while Osam does not provide all the prototypical cases of ISVC in Akan, the cases of ISVC found in Osam tend to show a high degree of categorial prototype effects with regard to nominalization behavior and idiomaticity characteristics.

64. N ko gu
+NOM fight spill
SVN: nkogu(o)/ɔkogu ‘defeat’

A pattern emerges in that, typically for Akan FL-ISVC nominalization, the verbal elements tend to remain contiguous during nominalization. Also, nominalization typically occurs marked by a nominalizing affix; typically a prefix such as *a* +NOM, *ɔ* +NOM, N +NOM, or ø +NOM. 77.1% of P1 questionnaire respondents were able to produce the form *nkogu/nkoguo* when given the SVC *ko...gu*. Further, 82% of P1 respondents were able to correctly identify the meaning of *nkogu(o)* as ‘defeat’ or ‘failure’. For P2 respondents 100% of those surveyed produced either *nkogu* (Akuapem and Fante) or *nkoguo* (Asante). Thus, *nkogu(o)* is seen as being highly familiar.

A side effect of semantic integration in SVCs is the ambiguity of one (or both) verbs in the construction when taken individually. For example in the noun *nkogu(o)* ‘defeat’, there seemed to be a consensus on the verbs in the SVN being *ko* and *gu* with a valid percentage of 93.8% of P1 respondents agreeing on the answer. Respondents also seemed to be in agreement with the meaning of *ko* being ‘fight’ or ‘defeat’ (which is the meaning of *ko* and *gu* together) with 57.1% of P1 respondents giving the meaning of *ko* as ‘fight’ and an additional 18.4% giving the meaning as ‘defeat’ for a total of 75.5%. However there was no majority consensus for the meaning of *gu*, with respondents giving disparate answers such as ‘fall’ ‘pour’ ‘sow’ ‘nurse’ ‘nothing’ ‘collapse’ ‘spread’ ‘vain’ ‘spill’ and ‘fail’[12]. The most answers were for ‘pour’ ‘fall’ and ‘sow’, each with just 5 P1 respondents giving these as the meanings of *gu*.

In accounting for the data, the issue at hand here is not that speakers do not know or cannot agree on a meaning for the verb. The lack of solid consensus on meaning is due to the fact that *gu* is a complementary part of a compositional whole. While *gu*, in and of itself, has multifaceted meanings, in this instance, the meaning of *gu* is inextricably linked to the other verb in the SVC. Because *ko* means 'fight', *gu*, in this particular context, simply carries the connotation that action delineated by the first verb was not carried out successfully. In other words, in cases of high semantic integration/lexicalization, for speakers surveyed, it seems that the individual verb is meaningless or difficult/impossible to interpret outside of the context of the other elements it collocates with.

Ɔkofonee 'a tiresome fight' is derived from the FL-ISVC *ko...fono*. Here, the SVN has two nominalization markers; the prefix *ɔ* +NOM and the suffix *ee* +NOM. As is typical in FL-ISVC nominalization, verbal elements are made contiguous under nominalization with no intervening affixes or nominal elements. Therefore, *ɔkofonee* is similar to other FL-ISVN instances in that V1 and V2 are made contiguous under nominalization, while it is dissimilar in that it takes a separate nominalizing suffix. *Ko...fono* is also non-compositional, collocationally closed and inflexible, as is expected for FL-ISVCs.

65.	ɔ	ko	fono	ee
	+NOM	fight	become loathsome	+NOM
	SVN: ɔkofonee 'a tiresome fight'			

The next SVN is *ɔkoguan*. The idiomaticity of this SVN comes from the additional sense of 'defeat' or 'loss in battle' which is expressed by the verbal elements *ko* 'fight' and *guan* 'flee'.

66. ɔ ko guan/dwane
+NOM fight flee
SVN: ɔkoguan/ɔkodwane ‘flight after defeat’

The FL-ISVC *kɔ...dadwen* which is nominalized as *akɔdadwen* ‘care’.[13] Here, the nominalizing element is the prefix *a* +NOM. *(A)kɔdadwen* is inflexible, non-compositional and collocationally closed. To ascertain familiarity, *kɔ...dadwen* was included in P2 focus group interviews. 50% of respondents produced the form *kɔdadwen* while 22.2% produced *kɛkadwen*. An additional 22.2% of respondents states that no nominal could be formed from *kɔ...dadwen.* Interestingly, in the interviews, some of the Koforidua speakers viewed the SVC as *kɔda...dwen(e)* ‘go to sleep...think’ rather than *kɔ...dadwen(e)* ‘go...meditate’ as it appears in Christaller (1933).

67. a kɔ dadwen
+NOM go meditate
SVN: akɔdadwen ‘care’

SVN *nkotɔsrɛ/nkotoserɛ* ‘supplication’ is non-compositional, though it is made up of related verbs; the FL-ISVC *kotɔ...srɛ*. *Nkotɔsrɛ* shares a similar sense with *sufrɛ* ‘supplication’ but they are unrelated in terms of form, verbal elements and affixation. According to Christaller, *kotɔ* ‘entreat, beseech, supplicate, implore’ is a verb which can be nominalized as *nkotɔ* ‘entreaty, supplication’. An alternate analysis of this form may take the origin of *kotɔ* as *koto(w)* ‘bend, bow, go down to one’s knees’ which is consistent with the spelling found in Bannerman *et al.* (2011). Under such an interpretation, *nkotɔsrɛ* would be ‘bowing and begging’ which would be non-compositional and more like the pattern of PL-ISVN.

68. N kotɔ srɛ
+NOM beseech beg
SVN: nkotɔsrɛ ‘supplication’

The next four FL-ISVCs are taken as a group as they share the same affixes and verbal elements: *ɔkrabɛhwɛ*, *ɔkrakɔhwɛ*, *ɔkrakɔse* and *ɔkrakɔsu*. Here, we follow Osam (2003) in dealing with *kɔ-* and *bɛ-* as motional prefixes as they are simply “used to code physical movement towards or away from a deictic center” (Osam 2003:11; also see Apraku 2005). Thus, the focus of the alternation in the four forms is on the V2.

Ɔkrabɛhwɛ is also the only one that is non-compositional while the rest pattern after compositional PL-ISVNs to be discussed next chapter.

69. ɔ kra bɛhwɛ/bɔhwɛ
+NOM send word come watch
SVN: ɔkrabɛhwɛ/ɔkrabɔhwɛ ‘a wonder/most beautiful spectacle’

70. ɔ kra kɔse
+NOM send word go say
SVN: ɔkrakɔse ‘sending word that one should go and say’

71. ɔ kra kɔsu
+NOM send word go cry
SVN: ɔkrakɔsu ‘sending word that one should go and cry’

Akyɛnyade ‘share’, as in ‘portion’ is an SVN derived from FL-ISVC *kyɛ...nya...ade*. It is, however, inflexible, collocationally closed and non-compositional. Here again, we have a DO of V2 in the place typically occupied by relator nouns in other SVN constructions covered to this point.

72. a kyɛ nya de
+NOM divide obtain thing
SVN: akyɛnyade ‘share’

Ɔkyɛso(e), as we have seen with *nkakyerɛe* ‘repeatedly telling’ and *ɔkofonee* ‘a tiresome fight’ has two markers, each with the apparent purpose of

simply signifying nominalization of the SVC construction. AFF2 does not seem to add any appreciable additional meaning to the composite meaning of the SVN as a whole but rather functions as a nominalizing suffix. *Ɔkyɛso* is a well-known appellation for the Supreme Being in Akan (i.e. *Ɔkyɛso Nyame*). When presented to P2 speakers, 70% of all P2 respondents chose *ɔkyɛso* due to familiarity of *ɔkyɛso* as a praise name for the Supreme Being. In fact, one Fante speaker could only have *Ɔkyɛso* in the praise name context and not as 'a gift for several' or anyone who 'is generous towards all'. Five percent (5%) of all P2 respondents had *kyɛso* as the form without prefix and 20% of all P2 respondents stated that no nominal could be formed from *kyɛ...so*. Only one respondent, 5% of the total, chose the attested form *ɔkyɛsoe* and had the opinion that anyone, not just the Supreme Being, could be *ɔkyɛsoe*. Saying "*menyɛ nyiyim'"* or 'I do not show favoritism'.

73. ɔ kyɛ so (e)
+NOM send word suffice +NOM
SVN: ɔkyɛso(e) 'a gift for several, one who is generous towards all, appellation for Supreme Being'

Akyerepae 'swollen to bursting' fits the pattern of FL-ISVCs as lexicalized idioms in that *kyere* 'tie' and *pae* 'split' together form a combined meaning of 'swollen to bursting'. Based on P2 responses, only one speaker was familiar with this form, a Kumasi Asante Twi speaker, and the form produced was *ɔkyerepae*. All of the rest of the respondents stated that no nominal could be formed from *kyere...pae* although Koforidua Asante Twi speakers offered *kyeresoɔ* (a non-SVN) as an equivalent meaning to the Christaller definition. In total 88.9% of P2 respondents stated that there is no nominal and 5.6% in addition indicated that they were not sure.

74. a/ɔ kyere pae
+NOM tie split
SVN: akyerepae ‘swollen to bursting’

The next FL-ISVC *kyerɛ...tie* is inflexible, non-compositional and collocationally closed. Forty-one percent of P2 respondents (Koforidua Asante Twi speakers) were familiar with *kyerɛtie* while an additional 5.9% (one Kumasi Asante Twi speaker) selected *ɔkyerɛtie*. Forty seven percent of respondents stated that there is no nominal form and, of that, 23.5% of all P2 respondents (the Fante speakers) suggested *sotsei* as a possible alternative.[14] Therefore, *kyerɛtie* is only seen as familiar regionally or dialectally on the basis of focus group research.

75. ø kyerɛ tie
+NOM teach listen
SVN: kyerɛtie ‘listening to instruction’

The next FL-ISVC is *kyin...hyia* which is nominalized as *kyinhyia* ‘revolution/rotation’.

76. ø kyin hyia
+NOM circulate/go around meet
SVN: kyinhyia ‘revolution/rotation’

Onyinkyɛ(re) also features prominently in prayers:

77. Onyame mma wo nyinkyerɛ.
Supreme Being IMPER-give 2SG.OBJ long-life.
‘May the Supreme Being give you long life.’ (Boadi 2005:475)

78. o nyin kyɛ(re)
+NOM grow last long
SVN: onyinkyɛ(re) ‘longevity of life’

The SVN, *mpaemuka* ‘open confession’ is another example of a non-compositional FL-ISVC that undergoes nominalization. What makes this addition interesting is that it breaks the pattern of nominalization encountered

up to this point as there is an intervening DO between V1 and V2 meaning that here, they are not contiguous.

Other non-continuous cases included *awunnyade* and *mfuanhwe* although the latter two may be better treated as PL-ISVNs on the basis of compositionality. In one of the few works which specifically deals with contiguity of SVNs, Bodomo (2006:6), dealing with data from Dàgáárè, makes the following case:

> It seems that for one reason or another, the verbs have to be obligatorily adjacent in these constructions. This is a first indication by the facts of SVN in support of our theoretical analysis of serial verb constructions as complex predicates which undergo syntactic operations as a single unit (Bodomo 2006:6).

Bodomo cites the following Dàgáárè data to make his case:

79. à nɛ́ǹ dóg ɔ́ɔ́-ó
DEF meat boil chew-NOM
'The cook chewing of the meat.'
(i.e. 'The cooking of the meat in order to eat')

80. a. à tàńgmà zò gàà dí-íú
DEF shea fruit.PL run go eat-NOM
'The run go eating of the shea fruits.'
(i.e. 'Running there in order to eat the shea fruits')

b. *à zò gàà tàńgmà dííú

c. *à zò tàńgmà gàà dííú

Bodomo states that "In nominalizing serial verb constructions in Dàgáárè, the last of the series of verbs gets the nominalized suffix. If there is a direct object to the last verb, it can only occur at the outer left of the verbal cluster" (Bodomo 2006:5). However, we see here, in the case of *mpaemuka* in Akan that the DO can remain in its prenominalized position indicating that Bodomo's observations are not universal. While the facts of Dàgáárè are not

overtly stated to be universal, this counterexample from Akan does have implications towards Bodomo's use of contiguity as the basis of a theoretic analysis that complex predicates undergo operations as a single unit cross-linguistically. According to Bodomo "These issues have been addressed with mainly data from Dagaare, but it is expected that data from other serialization and other complex language predicate languages would illustrate similar phenomena" (Bodomo 2006:16). Contiguity, while common in FL-ISVC nominalization in serializing languages, is not the absolute rule for all of them as illustrated here by the case of *mpaemuka*. It is also worth noting that *mpaemuka* could be viewed as example of collocation between *pae* and its internal argument *mu* before the introduction of V2 *ka* in the serial verb construction.

In terms of familiarity, 59.1% of all P2 respondents gave the form *paemuka*, 22.7% of all P2 respondents produced *mpaemuka*, 13.6% produced *apaemuka* and 4.5% produced *paepaemuka*. The selection of forms was not split along dialectal lines as only Akuapem speakers all gave the same response (*paemuka*) while other groups gave a mix of the varied responses mentioned above. The single Fante speaker who produced *paepaemuka* insisted that *paepaemuka* is better Fante than *paemuka* which, to her, was more characteristic of the Twi dialects. In terms of flexibility, *paemuka* can be reduplicated as seen in the proverb:

81. Paepaemuka yɛ ahomka na anito
Open confession be cathartic but embarrassment

na ɛwɔ mu.
FOC located inside.

Outspokenness is a virtue but it entails embarrassment. (Ampem 1998:146)

The proverb that example (81) comments on is:

82. Pae-mu-se yɛ fɛre, nso ɛma abodwo.
Open-confession be fearful, DISJ it give relief.
"An honest confession (or frank speech) is difficult to make, but it brings peace of mind." (Opoku 1997:73)

Thus we see that *paemuka* is collocationally limited, rather than collocationally closed, as one slot is open and available for replacement by a synonym. Further, *paemuka* is partially non-compositional as the pae 'split' aspect is metaphorical and therefore carries an idiomatic meaning rather than a literal one. The case of *paemuka/mpaemuka* illustrates that semantic integration, as well as morphosyntactic operations as a unit, extend past only the verbal elements in an SVC. As discussed above, various theoretical definitions of Serial Verb Construction tend to focus on the verbal elements of the SVC the "construction" aspect which would include other elements. Constructions, as such, contain RNs, PPs and morphosyntactic base template forms which are just as much a part of the SVC as the verbal elements are. As discussed earlier, respondents who did not simply give the verbal elements but rather all elements of the SVN may have, indeed, given us a window into the cognitive basis of semantic integration as expressed in SVN decomposition. These other elements are oftentimes just as semantically integrated and just as

morphosyntactically salient as part and parcel of the composite unit as evinced by the morphosyntactic process of serial verb nominalization.

83. N/ø pae/paepae mu ka/se
+NOM split/(repeatedly) inside speak/say
SVN: mpaemuka/paemuka/paamuka/paapaamuse/paepaemuka/ paemuse/paamuse ‘open confession’

The next FL-ISVC is *pae...si...ho* ‘to pay or charge 50% interest’ which is nominalized as *mpaesiho*. It is non-compositional, collocationally closed and inflexible.

84. N pae si ho
+NOM split stand body
SVN: mpaesiho ‘paying or charging 50% interest’

The next FL-ISVC, *ɔpamsɛn* was not attested in any of the four primary corpuses consulted for the study, but was found in Warren and Andrews (1990:39) documenting “Elements of Change in a Ghanaian Indigenous Knowledge System” and innovative terminology used for Akan arts and aesthetics. According to Warren, “Ready-made clothes are termed *ɔpamsɛn* (*pam* ‘to sew’, *sɛn* ‘to hang up’) and are disparaged in comparison to tailor-made clothes which are supposed to fit better” (Warren and Andrews 1990:39). In Fante, the form *otwasɛn* was reported to be used with the same meaning.[15] However, only one speaker, a Kumasi Asante Twi speaker, was able to produce *otwasɛn* and this was left without definition while 88.2% of respondents indicated that there is no SVN derivable from *twa...sɛn*. None of the Fante speakers surveyed were able to verify *otwasɛn* as an SVN variant of *(ɔ)pamsɛn*.

85. ɔ/ø pam sɛn
+NOM sew hang
SVN: (ɔ)pamsɛn ‘ready-made clothes’

When given the FL-ISVC *pam...sɛn*, the majority of P1 respondents indicated that they were not familiar with the term at a total of 30.2%. The second largest percentage of P1 respondents was from those who produced the SVN without the prefix *ɔ* +NOM as *pamsɛn.* The third highest percentage was from those who produced the form as it appeared in Warren and Andrews (1990:39) as *ɔpamsɛn*. Amongst P2 respondents 42.1% selected *pamsɛn* without prefix as the correct form, 21.1% selected *ɔpamsɛn*, 21.1% chose *pamsɛnhɔ* while 5.3% chose *pamsensɛn* and *mpamsɛn*, respectively. All of the above were attributed the same meaning of 'ready-made clothing'.

When asked the meaning of *ɔpamsɛn*, 59.5% of P1 respondents responded that it translates to 'ready-made clothing'. While over half of all P1 participants, 38 out of 75 or 50.7% were abstentions, out of those who did respond, *ɔpamsɛn* seemed to be relatively familiar.

The next lexicalized idiom has two variations, *ɔpanyɔ* and *mpanyɛe*, both with the same gloss; 'previous agreement'. Both forms have typically contiguous verbs while *mpanyɛe* has an additional nominalizing suffix which, as we have seen, is not nearly as common as the nominalizing prefix in Akan. It should also be noted that both forms show standard homorganic nasal assimilation as /m/ in *pam* assimilates to the place of articulation of the following consonant, /y/.

86. ɔ/N pam yɔ/yɛ (e)
+NOM agree do +NOM
SVN: ɔpanyɔ/mpanyɛe 'previous agreement'

The next FL-ISVC is *patu...kum*, which is nominalized as *mpatukum*. The base template form seems to be based on the demonstrably more familiar *mpatuwu(o)* as shown below.

87. N patu kum
+NOM surprise kill
SVN: mpatukum ‘unexpected killing’

Mpatuwu(o) is not as non-compositional as other FL-SVNs that we have seen nominalized. It also has one slot, the V2 position, open and available for replacement by another verb making it collocationally limited rather than entirely collocationally closed as typically expected for FL-ISVCs. On analogy the form *mpatuyare* could exist on the basis of the saying *Epatu yare a, epatu wu* ‘When you pretend to be sick, you would pretend to die’.[16] When tested amongst P2 speakers, all except the Fante speakers found a SVN derived from *patu...yare* to be acceptable. Of these, 36.8% chose *mpatuyare*, 31.6% chose *patuyareɛ*, 5.3% chose *mpatuyareɛ* and 5.3% chose *patuyare*. Amongst the Fante speakers who took issue with a *patu...yare* based SVN, they alternatively provided *mpatuwu* as a similar form, though with a different meaning.

88. N/ɔ patu wu
+NOM surprise die
SVN: mpatuwu(o)/ɔpatuwu(o) ‘unexpected death’

89. N patu yare
+NOM surprise sick
SVN: mpatuyare ‘unexpected sickness’

The next FL-ISVC is *pe...we* ‘to attempt unsuccessfully’. It is inflexible, non-compositional and collocationally closed.

90. ɔ pe we
+NOM cast upon chew
SVN: ɔpewe ‘unsuccessful attempt’

The next FL-ISVN is *ɔpensian* ‘invincible/impregnable’. It is non-compositional and collocationally closed as is expected of an FL-ISVC.

91. ɔ pem sian
+NOM strike descend
SVN: ɔpensian ‘invincible/ impregnable’

The next SVN is *ɔperɛhwɛ* ‘secret derision’. It is non-compositional as *perɛw* ‘pinch’ and *hwɛ* ‘look’ combine to mean ‘secret derision’. In terms of flexibility, there is not much evidence to suggest changes in morphological specification of either verb for number through reduplication, which is the only such process typical for Akan verbs. As for familiarity, 21.1% of P2 respondents were not familiar with an SVN derived from *perɛ(w)...hwɛ* and suggested that the Fante dialect variant of that concept is *mpotsikyer*. Twenty-one percent of respondents chose the form *mperɛwhwɛ* as the Akuapem version. Twenty-one percent selected *perɛhwɛ* and 21.1% selected *ɔperɛhwɛ*. Ten percent had *mperɛhwɛ*. For the most part the breakdown was dialect-based with the three latter answers split amongst Koforidua and Kumasi Asante speakers.

92. ɔ perɛ(w) hwɛ
+NOM pinch look
SVN: ɔperɛhwɛ ‘secret derision’

Ɔperɛtoso is similar in meaning to other SVNs discussed previously such as *ɔkatoso/nkatoso*, *ntwatoso*, *ɔkaguso* and *mmɔtoso*. *Ɔperɛtoso* is similarly non-compositional but, in that it seems to have common items with the related forms, it is thought to be collocationally limited at best to the extent that it is synonymous with other SVNs formed from the same base template form.

93. ɔ perɛw to so
+NOM shift throw top
SVN: ɔperɛtoso ‘shifting of blame’

Ɔposawe ‘masturbation’ is non-compositional, collocationally closed and inflexible. Its lack of documentation in more recent volumes suggests lack of institutionalization although the culturally obscene nature of the referent is not ruled out as the culprit for its exclusion. In Fante a form *mposawee* is known meaning food that is difficult to chew such as boiled plantain versus *fufu(o)* for instance.[17] This was confirmed with P2 Fante speakers, who produced the form *mposawee* with the meaning of ‘dry food’. Asante speakers chose the form *posawe* ‘teeth-cleaning sponge’ which is consistent with Boadi’s definition of *(ɛ)posaweɛ* as *afifideɛ a wɔboro de twitwi ɛse* ‘a plant that is beaten and used for cleaning teeth’. Thirty-nine percent of all respondents chose the form *posawe*, 27.8% chose *mposawee*, while 5.6% chose *ɔposawe*. Twenty-two percent (Akuapem speakers) said that there was no noun that can be formed from *posa...we*. The final 5.6% gave the answer of ‘not sure’.

94. ɔ posa we
+NOM rub chew
SVN: ɔposawe ‘masturbation’

95. N posa we e
+NOM rub chew +NOM
SVN: mposawee ‘food that is difficult to chew’

96. ø posa we
+NOM rub chew
SVN: posawe ‘teeth-cleaning sponge’

Sanba has two meanings ‘return’ and ‘advent’. Taken with the ‘advent’ meaning, it is non-compositional. *Sanba* is analyzed here as collocationally

closed since neither verb can be replaced with a synonym or antonym to produce an attested form.[18]

97. ø san ba
+NOM return come
SVN: sanba ‘return/advent’

The next SVN combination is a classic example of a collocationally limited pair in that V2 allows for interchangeability between near synonyms *te* ‘hear’ and *t(s)ie* ‘listen’, yielding the same composite gloss ‘obedience’. Both *ɔsete* and *(ɔ)set(s)ie* share the characteristic of non-compositionality.

98. a. ɔ se te
+NOM say hear
SVN: ɔsete ‘obedience’

b. ɔ se tie
+NOM say listen
SVN: (ɔ)set(s)ie ‘obedience’

The FL-ISVC *se...yɛ* is nominalized as *ɔseyɛ* ‘one who carries out one’s word’ is partially compositional. It is inflexible as neither verb can be subject to reduplication while retaining the same meaning. It is also collocationally closed as neither verb can be replaced with a synonym or antonym while still retaining the same meaning.

99. ɔ se yɛ
+NOM say do
SVN: ɔseyɛ ‘one who carries out one’s word’

The next FL-ISVC is *asɛyɛde* ‘duty’ is non-compositional and inflexible.

100. a se yɛ de(ɛ)
+NOM say do thing
SVN: aseyɛde(ɛ) ‘duty’

Sigya(w) ‘single life/unmarried state’ is the next FL-ISVN. *Sigya(w)* is regarded as familiar, non-compositional, collocationally closed and inflexible.

101.	ø	si	gya(w)
	+NOM	stand	leave
	SVN: sigya(w)		‘single life/unmarried state’

The next SVN is *osisan*. It is familiar, non-compositional, inflexible and collocationally limited to the extent that V2 can be replaced (as in *osiwieiɛ* ‘full stop’).

102.	o	si	san
	+NOM	stand	return
	SVN: osisan ‘semicolon’		

The next FL-ISVC/SVN combination is *sohɔsan* ‘arriving somewhere and returning’.[19] It is partially compositional because *san* ‘to return’ is part of the composite meaning. Due to the metaphorical meaning of *so* ‘to be enough’ used as reaching a destination, the form is seen as within the realm of being an FL-ISVC more than a PL-ISVC which would be fully compositional. Christaller defines *so* (with nasal vowel õ) as ‘to reach, arrive at’, ‘to attain/overtake’, ‘to be sufficient/enough’, ‘to be able’, ‘to be fit for’, ‘to be big/large/great/much’, ‘to be loud’, ‘to be of great value’, ‘to dream,’ and ‘to master’. With the exception of ‘to dream’, the rest seem to derive metaphorically/metonymically from a most basic meaning of being enough or sufficient. In the case of *sohɔsan,* in our estimation, movement continues up to the point of that which is simply sufficient for reaching/arriving, after which point, one returns.[20] The form is notable because it is another case of non-contiguous verbs under nominalization since there is an intervening DEM.

103.	ø	so	hɔ	san
	+NOM	be enough	there	return
	SVN: sohɔsan ‘arriving somewhere and returning’			

The next FL-ISVC is *sɔ...ba* which is nominalized as *sɔba/nsosɔmba* ‘playing catch’. It appears to be partially compositional as the verb *sɔ* ‘catch’ is similarly featured in the composite definition of *sɔ...ba* ‘playing catch’. *Sɔ...ba* is also collocationally closed as there were no attested forms found in which synonyms or antonyms replacing either V1 or V2.

104.	ø	sɔ	ba
	+NOM	catch	come
	SVN: sɔba/nsosɔmba ‘playing catch’		

The next FL-ISVC is *sɔ...hwɛ* and is one of the most familiar forms based on attestation in corpuses and based on questionnaire responses received. *Nsɔhwɛ* is a prototypical instance of FL-ISVC nominalization in every aspect as it is highly familiar, collocationally closed, non-compositional and inflexible.

105.	N/ɔ/ø	sɔ	hwɛ
	+NOM	spark	look
	SVN: nsɔhwɛ/ɔsɔhwɛ/sɔhwɛ ‘test’		

P1 respondents to questionnaires overwhelmingly chose *nsɔhwɛ* as the nominalized form when given the FL-ISVC *sɔ...hwɛ* with 86.7% of all respondents choosing the form. The remainder chose the form *sɔhwɛ* with 13.3%. This was one of the few forms with no abstentions as every P1 questionnaire participant gave either one of the two answers. For P2, 91.7% of respondents chose *nsɔhwɛ* as the nominal form while *sɔhwɛ* was chosen by 8.3%. Again, *sɔ...hwɛ* and *nsɔhwɛ* are seen as being highly familiar in the scale of idiomaticity.

The majority of P1 respondents chose one or more of three answers for the meaning of *nsɔhwɛ*. 55.1% of respondents chose test and others wrote exam, but as these are near synonyms, we collapsed both of these responses into the same answer. 21.7% of respondents chose 'temptation' as the gloss. An additional 20.2% of respondents chose both as their response. All four are corpus-attested responses and therefore make up a total of 97.2%. In terms of familiarity, *nsɔhwɛ* is seen as a highly institutionalized and current lexical item.

Ninety-seven percent of all respondents were similarly able to come up with the same FL-ISVC from with *nsɔhwɛ* is derived as *sɔ...hwɛ*.

In terms of compositionality, the majority of respondents at a combined 70.9% (32.7% 'try', 32.7 'test', 5.5% 'tempt') gave a composite meaning of *sɔ...hwɛ* as the meaning of the individual verb *sɔ*. As discussed previously, this widespread pattern amongst respondents is seen as tangible evidence of semantic integration in that speakers see the meanings of the verbs not as separate and individual verbs but rather as a composite whole.

As mentioned, respondents typically gave composite answers of the meaning of the two verbs put together rather than the meaning of individual verbs. However, amongst the 33% of all respondents who gave a gloss for the second verb, *hwɛ*, they overwhelmingly gave the meaning of *hwɛ* as some variation of 'look' or 'see'.

The next FL-ISVC is *som...nya...(a)de* which is nominalized as *sonnyade*. *Som...nya...(a)de* appears to be a collocationally closed idiom as there is no attested evidence of synonymous forms with synonyms or antonyms replacing available slots.

106.	ø	som	nya	(a)de
	+NOM	serve	obtain	thing
	SVN: sonnyade ‘merit’			

Ɔsrabɛhwɛ seems to be built upon the same base template form as the previously discussed *ɔkrabɛhwɛ, ɔkrakɔhwɛ, ɔkrakɔsu* and *ɔkrakɔse*. Although it shares a similar form, it does not share any similar overall meaning, therefore, for its meaning it is viewed as collocationally closed. Boadi (2005) has a different form for the same meaning, namely, *ɔsrahwɛfoɔ* ‘*nea ɔhwɛ sɛ dwumadie bi kɔ so yie anaa*’ (one who sees whether or not work is being done well) which is understood as the same ‘overseer’ meaning. Boadi’s form of the SVN appears to have diverged from the initial *ɔkrabɛhwɛ* base template form to a form which is more in alignment with human nouns with both the standard prefix *ɔ-*, and standard suffix, *-fo(ɔ)*.[21]

107.	ɔ	sra	bɛhwɛ
	+NOM	visit	come look
	SVN: ɔsrabɛhwɛ ‘overseer’		

The next FL-ISVC *sra...hwɛ* features the same verbs as the previous item minus the motional prefix, *-bɛ-*. It is non-compositional, but not etymologically opaque. It is also collocationally closed and inflexible.

108.	N	sra	hwɛ
	+NOM	visit	look
	SVN: nsrahwɛ ‘tour’		

The next SVN is *ɔsrɛma* ‘intercession’. *Ɔsrɛma* is non-compositional and collocationally closed. There are also no attested flexible forms with either partial or total reduplication of either verb.

109.	ɔ	srɛ	ma
	+NOM	beg	give
	SVN: ɔsrɛma ‘intercession’		

Sufrɛ is the next SVN covered in the study. *Su...frɛ* was included in Osam's (1994:205) list of prototypical FL-ISVCs which undergo nominalization.

110. ø su frɛ
+NOM cry call
SVN: sufrɛ 'crying out, supplication'

While there was a clear majority of P1 respondents who chose the form *sufrɛ* with 64.9%, 25.7% of respondents chose *osufrɛ* as an alternate form. *Sufrɛ* is partially compositional when ascribed the meaning of 'crying out', but the link is less direct when taken as 'plea' or 'supplication'. While 'a plea' in certain contexts may be a type of crying out, there are other uses of the term where it is simply a request, written or verbal. Similarly, while *su*, taken by itself, has the connotation of literally crying, *su...frɛ* can simply mean 'to implore' without the connotation as to the manner and whether or not one is literally crying or making the request by literally crying out, per se. All of the above were judged to be acceptable meanings of SVN *sufrɛ*. Of P2 respondents 95.7% chose *sufrɛ* as the acceptable SVN form while 4.3% chose *osufrɛ*. Thus, across both phases of field research *sufrɛ* is seen as highly familiar.

P1 respondents appeared to be quite clear as to the meaning of *sufrɛ* with 89.5% selecting 'crying out/calling out/plea' or some related synonym such as supplication.

P1 respondents were nearly unanimous in relation to the verbs from which sufrɛ is derived with 98.6% of respondents correctly identifying *su...frɛ* as the corresponding FL-ISVC.

In contrast with other individual verbs, comparatively few respondents gave the composite meaning of *su...frɛ* together with a total of 11.2% (cry out, 9.3%; plea 1.9%). 85.2% gave the meaning of the individual verb *su*. This is explained by 1) the lack of multifaceted meanings for the verb *su* 2) the partial compositionality of *su...frɛ* as an FL-ISVC and *sufrɛ*, the SVN.

Respondents were even clearer on the meaning of *frɛ*, glossing it as 'call' in 92.1% of all valid (non-missing) responses.

The next FL-ISVC was one of the most interesting ones in that *su...ma* 'to sympathize' was included in Osam's (1994:205) original list of FL-ISVCs as described.[22] While, as we have seen, the predominant majority of FL-ISVCs have SVN counterparts, *su...ma* was not attested in any of the four corpuses consulted. There is no SVN form of *su...ma* in Christaller (1933), Education Department of Ghana (1971) or Boadi (2005). However, according to P2 respondents, 59.1% of all P2 respondents were able to produce the nominal *suma* (7 Koforidua Asante Twi speakers, 5 Fante speakers, 1 Kumasi Asante Twi speaker), 4.5% (1 Kumasi Asante Twi speaker) produced mistakenly produced *asuma* (with the meaning of 'hidden') and 4.5% (1 Akuapem/Asante speaker) produced *osuma.* Thirty-one percent said that there is no nominal associated with SVC *su...ma*. Familiarity was found for Koforidua Asante Twi speakers and Fante speakers but not for Akuapem (of whom no respondents found a nominal acceptable) or Kumasi respondents.

111. ø su ma
+NOM cry give
SVN: suma 'sympathizing'/'?sympathy'

In attempting to elicit the SVN form for *su...ma*, there was no consensus and, in fact, the majority of P1 respondents indicated "not sure" as their answer with 37.3%.[23] An additional 9% wrote none, meaning that in their judgment, there is no nominalized form of *su...ma*. Interestingly enough, 10.4% of respondents chose the near homophone, *suman* 'charm, oracle' while others chose *suma* 'hide' which is a single verb, not an SVN.

As evident by the varied responses, meanings were oftentimes those of near homophones or homonyms such as 'charm/oracle' from *suman*, or 'hidden' from the verb *suma* 'to hide'. The majority of respondents wrote not sure with 32.6% or none at 8.7%.

The next SVN that we will look at is *(o)suahu(nu)* 'experience', derived from FL-ISVC *sua...hu(nu)*. *(O)suahu(nu)* is thought to be one of the more familiar SVNs It is non-compositional, inflexible and collocationally closed. While it could be argued that *(o)suahu(nu)* could mean 'useless knowledge' with *hunu* as an adjective as in *ɔtanhunu* 'baseless hatred'. However, such an interpretation is unlikely in light of such proverbs such as "*Nyansa nyinaa ne osuahu* 'All wisdom (knowledge) is acquired by learning'" (Opoku 1997:71). In context, we see it recur in the very common *ayan* 'drum text' line "*meresua, momma menhu*" where knowing as encapsulated in the concept of seeing is the consequence of learning (Nketia 1974:39). It is also worthy of note that while the verb *hunu* 'to see' has a shorter form, *hu*, the adjective, *hunu*, does not. Further, according to Bannerman *et al.* (2011), *suahu* is defined as 'thorough knowledge' which is distinguished from *suahun* 'useless knowledge'.

112. o sua hu(nu)
+NOM learn see
SVN: osuahunu ‘experience’

Suasen is seen as partially compositional as *sua* ‘imitate’ retains the same meaning in the FL-ISVC as it does under nominalization: a literal meaning. *Suasen* is also inflexible and collocationally closed as is typical for FL-ISVC/SVN pairs.

113. o sua sen
+NOM imitate surpass
SVN: osuasen ‘excessive imitation/mimicry’

Sua...yi is partially compositional as *sua* has a literal meaning ‘swear’, which is retained. *Osuayi* is also inflexible and collocationally closed.

114. o/N sua(a) yi (e)
+NOM swear remove +NOM
SVN: osuayi/nsuaayie ‘exemption (from those affected by swearing)’

(O)susuka and *(o)susukyerɛ* are seen as collocationally limited in that the V2 slot may be interchanged while retaining the same essential meaning in both cases. Each SVN is non-compositional, although neither is etymologically opaque. Both are similarly inflexible.

115. a. o/ø susu ka
+NOM estimate speak
SVN: osususuka ‘guess/accuse falsely’

b. o/ ø susu kyerɛ
+NOM estimate show
SVN: osusukyerɛ ‘conjecture/guess’

The next SVN is *ntekam(u)* ‘omission’. *Ntekam(u)* is derived from the FL-ISVC *te...ka...mu*. *Ntekam(u)* is non-compositional carrying the composite

idiomatic meaning of ‘omission’. It is also inflexible, and collocationally closed.

116.	N	te	ka
	+NOM	tear	remain
	SVN: ntekam(u) ‘omission’		

The next FL-ISVC *te...kɔ* ‘bearing of tales’ is nominalized as *tekɔ* ‘tale-bearing’. The idiomatic meaning of *tekɔ* makes it non-compositional, though not etymologically opaque (one can understand how ‘tale-bearing’ can be associated with hearing something, *te*, and going elsewhere, *kɔ*, with that information). Based on Christaller, *tekɔ* is inflexible without any other inflected forms existing. *Te...kɔ* and its SVN counterpart *tekɔ* are also viewed a collocationally closed since other forms with similar meanings and/or similar components were not attested.

117.	ø	te	kɔ
	+NOM	hear	go
	SVN: tekɔ ‘tale-bearing’		

There is an homophonous SVC, *te...kɔ* ‘tear...go’ the SVN of which was not found in the corpuses consulted but is attested in such expressions as *ne dɔ ate kɔ* ‘his/her love has gone away’ or *ahoma no ate kɔ* ‘the telephone has disconnected’. When this second understanding was put before P2 respondents, only Asante Twi respondents were able to produce a nominal with varied responses of *ntekɔ* at 17.6%, *tekɔ* at 17.6% and *atekɔ* at 11.8%. Akuapem and Fante speakers 47.1% of the total, while familiar with the SVC form, stated that no nominal could be made from it. The final 5.9% gave a response of ‘not sure’. In each case, the context was given as ‘to break off/out from under an external influence’.

The next SVN is *ɔtekum* ‘sudden anger’ derived from *te...kum* ‘to become angry suddenly’. This FL-ISVC/SVN combination is non-compositional as neither individual verb meaning surfaces in the composite meaning ‘sudden anger’. It is also inflexible and collocationally closed.

118.	ɔ	te	kum
	+NOM	hear	kill
	SVN: ɔtekum ‘sudden anger’		

Te...ma is nominalized as *t(s)ema* ‘sympathy, empathy’. It is non-compositional, inflexible and collocationally closed. The form is solely attested in Bannerman *et al.* (2011) of the written corpuses consulted and the form was suggested by Osam (2012). When tested with P2 speakers, 12 Asante Twi speakers (7 Koforidua and 5 Kumasi) produced the form *tema*. Four out of six Akuapem speakers provided the form *tema* with the fifth providing *ɔtema* and the sixth not providing any answer. Four of four Fante respondents provided the form *tema* with the three remaining Fante participants not providing any answer for the item. In total 76.2% of P2 respondents chose the form *tema*, 19.0% of respondents chose *tsema* and 4.8% produced *ɔtema*.

119.	(ɔ/ø)	t(s)e	ma
	+NOM	feel	give
	‘sympathy, empathy’		

Ntiafunu is partially non-compositional as *tia* ‘kick’ features in the composite meaning of the SVN ‘kicking and flogging at the same time’. There were no flexible alternate forms attested. *Ntiafunu* is also collocationally closed.

120.	N	tia	funu
	+NOM	kick	dig up
	SVN: ntiafunu ‘kicking and flogging at the same time’		

The next SVN is interesting in that it is one of the only entire SVN forms which was found to be wholly fronted under predicate clefting. Following the field work of Martin (2010) testing SVCs extensively for native speaker judgments, in Akan, only V1 is typically clefted. However see (120) below.

121. Otintinkum na
Murder-without-revealing-reason FOC

ɔretintim me akum me
3SUBSG-PROG-impress 1OBJSG CONT-kill 1OBJSG
"He wishes to kill me without showing me a reason for doing so." (Christaller 1933:515)

While not all SVNs were tested for predicate clefting within this study, native speaker judgments in Martin's (2010) field work show a clear pattern. Predicate clefts, in Akan, as with other languages are nominalized VPs or, in this case, nominalized SVCs. In Akan, typically only the V1 is clefted, leaving the V2 behind. Consider the following examples below taken from Martin (2010)[24]:

122. wɔ na Ama wɔɔ bayerɛ no diiɛ
pound FOC A pound-COMPL yam DET eat-COMPL
'It was pounding that Ama did to the yam and ate it.'

123. kye na Kofi kyee akwadaa no
catch FOC K catch-COMPL child DET

bɔɔ no
beat-COMPL 3rd.SG
'It was catching that Kofi did to the child and beat it.'

124. *di na Ama wɔɔ bayerɛ
eat FOC A pound-COMPL yam

no diiɛ
DET eat- COMPL
'It was eating that Ama pounded the yam.'

125. *bɔ na Kofi kyee akwadaa
beat FOC K catch-COMPL child

no bɔɔ no
DET beat-COMPL 3rd.SG
'It was beating that Kofi caught the child.'
(Martin 2010:20-23)

Again, as we can see from the Asante Twi examples (121-124) above, typically V1 of the SVN is fronted to the exclusion of V2 in Akan, whereas V2 cannot undergo predicate clefting to the exclusion of V1. Thus (123) and (124) are starred because, according to speakers surveyed, clefting of V2 to the exclusion of V1 is prohibited in Akan. In the case of *otintinkum*, however, we have both V1 and V2 undergoing nominalization and then being fronted as a unit. Due to finding this textual example, a future direction for research would be testing SVNs for predicate clefting possibilities as well as for relativization. The case of *otintinkum* is viewed as attributable to morphosyntactic constituency along the lines of Dàgáárè (see Hiraiwa and Bodomo 2008:245-246). Interestingly enough, this fronting of the nominalized SVC is the same thing that we see in Yorùbá:

126. a. tí-ti ṣubú ni Jímọ̀ ti Akin ṣubú
pushing/falling FOC J push A fall
'Jimo PUSHED Akin down.'

b. tí-ti ni Jímọ̀ ti Akin ṣubú

c. *sí-subú ni Jímọ̀ ti Akin ṣubú (Cho and Nishiyama 2000:43)

Here, we analyze *otintinkum* as being a highly idiomatic non-compositional, inflexible, collocationally closed SVN derived from the FL-ISVC *tintim...kum*.

127. o tintim kum
+NOM impress kill
SVN: otintinkum ‘murder without revealing the reason’

The next FL-ISVC *tintim...gye* seems to be built around the same base template form as *otintimkum* and both seem to nominalize the same way. *Otintinnye* is non-compositional, inflexible and collocationally closed.

128. o tintim gye
+NOM impress receive
SVN: otintinnye ‘extortion’

Ɔtogu is partially compositional as casting can be construed as the base meaning of to ‘throw’.[25] It is collocationally closed as neither verb can be replaced with a synonym or antonym to come up with the same or opposite meaning.

129. ɔ to gu
+NOM throw spill
SVN: ɔtogu ‘casting away’

A separate query into the possibility of nominalizing *tɔ...gu...(so)* ‘limp badly’ was put forward to P2 participants. Of this, 5.6%, or one Kumasi Asante Twi speaker produced *ɔtɔgu* (with no accompanying definition) and 5.6% another Kumasi Asante Twi speaker produced *ntɔngu(so)* (again with no supplied definition). 83.3% of all respondents stated that no noun could be made from this SVC and 5.6% indicated ‘not sure’.

To...twene/kyen(e) is nominalized as *totwene/tokyen(e)* ‘desertion, abandonment’. It is non-compositional, inflexible and collocationally closed. The form was suggested by Osam (2012) and was also found in Bannerman *et al.* (2011). When consulted, 7 Koforidua Asante Twi speakers produced *totwene* while 1 Kumasi Asante Twi speaker produced *ntontwene*, 1 produced

the form *totwene* and 1 produced *tokyene*. Four out of six Akuapem speakers provided the form *tokyen* with the fifth providing *ɔtowkyene* and the sixth not providing any answer. Seven out of seven Fante respondents provided the form *tokyen*. In total 47.8% of P2 respondents chose the form *tokyen*, 34.8% of respondents chose *totwene* and 4.3% produced *ɔtowkyene*, *tokyene*, *ntontwene* and "not sure" (1 Kumasi Asante Twi speaker), respectively.

130. (ɔ/ø) to kyen(e)/twene
+NOM throw fling
'desertion, abandonment'

The next FL-ISVC is *tɔn...tɔ* which is nominalized as *ntɔntɔ* 'the buying of things on a joint account and share the money received from the sales'. Although *tɔn* 'sell' and *tɔ* 'buy' are both lexical items denoting economic transactions, the composite meaning of *ntɔntɔ* is regarded as non-compositional in that the meaning is different from the sum of the individual verbs from which it is derived. The FL-ISVC is inflexible and collocationally closed.

131. N tɔn tɔ
+NOM sell buy
SVN: ntɔntɔ 'the buying of things on a joint account and sharing the money received from sales'

The next FL-ISVC/SVN combination is *tra...twa* and *ɔtratwa* 'an action of behavior which is not consistent with one's position or rank'. It is non-compositional and inflexible. It is also collocationally closed. As the verbs are contiguous and the sole affix is the typical prefix, *ɔtratwa* is seen as a prototypical case of FL-ISVC nominalization.

132. ɔ tra twa
+NOM move over cut
SVN: ɔtratwa 'an action or behavior which is not consistent with one's position or rank'

The next FL-ISVC is *tu...bɔ* which is nominalized as *atubɔ* ‘the act of changing one’s dwelling place’. Typical of FL-SVNs, both verbs are contiguous under nominalization without any intervening elements. The single affix is one of the standard prefixes, *a-*, a remnant of a now defunct noun class system (see Osam 1993,1994). *Atubɔ* is non-compositional, inflexible and collocationally closed. It is non-compositional, inflexible and collocationally closed.

133. a tu bɔ
+NOM uproot strike
SVN: atubɔ ‘the act of changing one’s dwelling place’

The next FL-ISVC is *tu...bra*, nominalized as *atubra* ‘to colonize’. It is non-compositional, inflexible and collocationally closed.

134. a tu bra
+NOM uproot to be reborn into another world
SVN: atubra ‘to colonize’

The next pair of SVNs is interesting in that they are both derived from the same underlying FL-ISVCs, they both have the exact same SVN form, yet they have divergent meanings. *Tu...gya(w)* is nominalized as *otugya,* glossed as ‘dried up riverbed’ on one hand and ‘desertion’ on the other. In terms of idiomaticity, the version which carries the meaning of ‘dried up riverbed’ is more idiomatic in the sense of even less compositionality in relation to the verbs which make up the FL-ISVC. On both accounts, however, *otugya* is collocationally closed.

135. o/a tu gya(w)
+NOM uproot leave
SVN: otugya/atugya ‘dried up riverbed/desertion’

The next FL-ISVC is *tu...kɔ*, nominalized as *otukɔ* ‘exile’. It is non-compositional though not etymologically opaque. It is also collocationally closed and inflexible. The dialectal variations notwithstanding, *otukɔ* is inflexible and collocationally closed.

136.	(o)/ø	tu	kɔ(r)/korɔ
	+NOM	uproot	go
	SVN: (o)tukɔ(r)/tukorɔ ‘exile’		

The next FL-ISVC is *tu...kyin*, nominalized as *(e)tukyin* ‘migration’. *Tukyin* is non-compositional and collocationally closed.

137.	ø/e	tu	kyin
	+NOM	uproot	wander
	SVN: (e)tukyin ‘migration’		

The next FL-ISVC is *tu...tena*, which is nominalized as *atutena* ‘journey (e.g. with herds)’. *Atutena* is non-compositional, inflexible and collocationally closed.

138.	a	tu	tena
	+NOM	uproot	live
	SVN: atutena ‘journey (e.g. with herds)’		

The next FL-ISVC is *twa...gu*, which is nominalized as *atwagu* ‘to pass numerously’. *Atwaguo* is highly idiomatic especially in reference to non-compositionality. It is also inflexible and collocationally closed.

139.	a	twa	gu
	+NOM	cut/cross	fall
	SVN: atwagu(o) ‘to pass numerously’		

The next FL-ISVC is *twa...ho...hyia*, which is nominalized as *ntwahohyia* ‘circumference’. *Ntwahohyia*, is, however, non-compositional, inflexible and collocationally closed.

140. N twa ho hyia
+NOM cut/cross body meet
SVN: ntwahohyia ‘circumference’

Twahwɛ ‘test of gold on a touchstone’ is derived from the FL-ISVC is *twa...hwɛ*. *Twa...hwɛ* is non-compositional, inflexible and collocationally closed.

141. ø twa hwɛ
+NOM cut/cross look
SVN: twahwɛ ‘test of gold on a touchstone’

The next SVN is *atwahwe* ‘cutting in one stroke’, which is derived from FL-ISVC, *twa...hwe*. *Atwahwe* is non-compositional, inflexible and collocationally closed.

142. a twa hwe
+NOM cut/cross strike
SVN: atwahwe ‘cutting in one stroke’

The next pair of FL-ISVCs is *twa...ka* and *twa...we*. In sharing the same meaning, the pair is seen as an example of collocational limitedness in that the V2 slot is subject to replacement. As such, although both were apparently based on the same base template form, *twaka* seems to have become the more preferred form, displacing *twawe* in the language. Both SVNs are non-compositional, inflexible and collocationally limited.

143. ø twa ka
+NOM cut/cross dip
SVN: twaka ‘friendly communion’

144. ø twa we
+NOM cut chew
SVN: twawe ‘friendly communion’

The next FL-ISVC is *twa...ka,* which is nominalized as *ntwakae* ‘remnant after cutting’. *Ntwakae* is partially-compositional in that the meanings

of *twa* ‘cut’ and *ka* ‘remain’ are still part of the composite meaning of ‘remnant after cutting’. *Ntwakae* is inflexible and collocationally closed.

145.	N	twa	ka	e
	+NOM	cut	remain	+NOM
	SVN: ntwakae ‘remnant after cutting’			

The next FL-ISVC is *twa...si*, which is nominalized as *atwasi* ‘journey (i.e. with herds)’. *Atwasi* is wholly non-compositional, inflexible and collocationally closed.

146.	a	twa	si
	+NOM	cut/cross	stand (vertically)
	SVN: atwasi ‘spin’		

Atwataa ‘puddle’ is an SVN which is derived from the FL-ISVC is *twa...taa*. *Atwataa* is non-compositional, inflexible and collocationally closed.

147.	a	twa	taa
	+NOM	cut/cross	stand (horizontally)
	SVN: atwataa ‘puddle’		

The next FL-ISVNs are similar in translation and even share common elements. *Ntwatoso(ɔ)* and *ntwayere(e)*, while similar, are constructed on different base template forms. The most obvious difference is the lack of relator noun in *ntwayere(e)*. Both *ntwatoso(ɔ)* and *ntwayere(e)* are non-compositional as the meanings of the verbs in each do not surface in the composite meaning. This was confirmed in *ntwatoso* as a questionnaire item.

148.	N	twa	to	so	(ɔ)
	+NOM	cut	throw	on	+NOM
	SVN: ntwatoso ‘false accusation’				

149.	N	twa	yere	(e)
	+NOM	cut	stretch	+NOM
	SVN: ntwayere(e) ‘false accusation/besieging/encompassing’			

Ntwatoso(ɔ) was included in both P1 and P2. Given the FL-ISVC elements *twa...to...so*, an overwhelming majority of P1 respondents, 97.2%, gave the expected form of *ntwatoso(ɔ)*. The SVN counterpart of *twa...to...so* was also universally familiar across dialectal lines with 45.8% producing *ntwatosoɔ* (Koforidua and Kumasi Asante Twi), 29.2% producing *ntwatoso* (Akuapem and Kumasi Asante Twi) and 25% producing *ntwantodo* (Fante). 100% of respondents produced one of the 3 forms. Thus *twa...to...so/do* is seen as a highly familiar form as all P2 respondents gave 'false accusation' as their understanding of the SVN.

Further, in terms of familiarity, an equally impressive 93.2% of P1 respondents were able to produce 'false accusation' as the gloss of *ntwatoso*. *Ntwatoso* is probably one of the most recognizable, current and institutionalized cases, providing an archetypical example of FL-ISVC nominalization when a relator noun in included within the SVC structure.

When given the SVN, *ntwatoso* 'false accusation', 87% of P1 respondents gave all three elements of the FL-ISVC including the relator noun while only 6.2% gave just *twa...to*. Again, this goes to the observation that when we speak of SVC, typically, from a perspective of linguistic analysis, one may think of the verbal elements first. However, for native speakers, the relator noun is just as much a part of the construction as the verbal elements and, as we have seen, the majority found it difficult to come up with the correct SVN structure when only given the verbal elements to the exclusion of the non-verbal elements. This is seen as a testament to semantic integration being extended to all aspects of the FL-ISVC structure including the morphosyntactic

base template form itself. While not appealing to semantic integration specifically, a similar case was made by Chomsky (1970) for verb-particle constructions in American English, Hoekstra (1986) for composite functions in Dutch and Bodomo (2006) for complex predicates Dagaare and other serializing languages. In each case, the author argues for some type of tight bond between elements as seen particularly under (typically contiguous) nominalization.

Although *twa* 'cut' as a verb in and of itself is relatively unambiguous, with 55.3% of P1 respondents giving its definition as 'cut', still 27.7% gave the composite definition of *twa...to...so* as an FL-ISVC unit. Again this goes to the point of semantic integration in that the pattern amongst speakers has been that the meanings of the individual verbs are secondary to the composite meaning even when asked to give the meaning of the individual verbs and those verbs are unambiguous.

When asked to give the meaning of the verb *to*, 26.7% of P1 respondents gave throw as the meaning while 46.7% gave 'put' or 'put on' as the overall meaning which again is the composite of *to* 'throw/put' and the relator noun *so* 'on'.

Atwaye 'easy cut' is an SVN which is derived from the FL-ISVC is *twa...ye. Atwaye* is non-compositional, inflexible and collocationally closed. It should be pointed out here that, in *atwaye* and other SVNs such as *akaye* 'ease of movement', *ye,* when it appears in a nominal as V2 has a borderline functional-semantic meaning of 'ease' in reference to the action described by V1.

150. a twa ye
+NOM cut be good
SVN: atwaye ‘easy cut’

Ntwekɔ ‘seduction/banishment’ is derived from the FL-ISVC is *twe...kɔ*. *Ntwekɔ* is unique in that it has two meanings that seem divergent in relation to the verb *twe* ‘pull’, from which both are derived. In the meaning of seduction, *twe* seems to connote a pulling towards, while in the meaning of ‘banishment’, *twe* seems to connote pulling away. Thus there is a difference in relation to the deitic movement described in relationship to a person or in relationship to a particular place. *Ntwekɔ* is non-compositional, inflexible and collocationally closed.

151. N twe kɔ
+NOM pull go
SVN: ntwekɔ ‘seduction/banishment’

Twe...san is nominalized as *(ɔ/n/ø)twesan* ‘hindrance, regression’. It is non-compositional, inflexible and collocationally closed. The form was suggested by Osam (2012) and is attested in Bannerman *et al.* (2011). When tested with P2 speakers, four of six Akuapem speakers provided the form *ɔtwesan* with the fifth providing *twesan* and the sixth not providing any answer. Four of four Fante respondents provided the form *twesan* with the three remaining Fante participants not providing any answer for the item. Asante Twi speakers were mixed between responses of *ntwe(n)san* and *twesan*. Four Asante Twi respondents (3 Koforidua, 1 Kumasi) provided *ntwesan* and one provided *ntwensan* (1 Kumasi). Five Asante Twi respondents (4 Koforidua, 1 Kumasi) provided the form *twesan*. In total 52.6% of P2

respondents chose the form *twesan*, 21.1% of respondents chose *ɔtwesan*, 21.1% chose *ntwesan* and 5.3% produced *ntwensan*.

152. (ɔ/n/ø) twe san
+NOM pull return
SVN: (ɔ/n/ø)twesan ‘hindrance, regression’

The next FL-ISVC, *wae...we* is nominalized as *waewe* ‘something to be gotten from a person’. *Waewe* is non-compositional, inflexible and collocationally closed.

153. ø wae we
+NOM peel off chew
SVN: waewe ‘something to be gotten from a person’

Ɔwetare ‘slander’ is derived from the FL-ISVC *we...tare* ‘to slander’. *Ɔwetare* is wholly idiomatic and non-compositional. It is also inflexible and collocationally closed. As an SVN, *ɔwetare* is a prototypical example of FL-ISVC nominalization in Akan.

154. ɔ we tare
+NOM chew stick to
SVN: ɔwetare ‘slander’

Ɔworowe ‘gnawing fish or pieces of meat from a pointed stick on which they are filed’ is derived from the FL-ISVC *worɔ...we. Ɔworɔwe* is partially-compositional in that *we* ‘chew’ surfaces in the composite meaning. *Ɔworɔwe* is inflexible and collocationally closed.

155. ɔ worɔ we
+NOM peel off chew
SVN: ɔworɔwe ‘gnawing fish or pieces of meat from a pointed stick on which they are filed’

Ɔyarewu(o) ‘fatal disease’ is derived from the FL-ISVC *yare...wu.* Interestingly enough, in the entry for *ɔyarewu(o)* in Christaller (1933)

references *owuyare(ɛ)* which is similarly found in all three corpuses and has the same meaning of 'fatal disease'. Only *ɔyarewu(o),* is a case of Serial Verb Nominalization. *Owuyare(ɛ)* is a case of V-N nominalization yielding noun-verb compounding, which is marked by permutation. Here, *owuyare(ɛ)* is a particular type of sickness; a fatal one.

The SVN was highly familiar to P2 respondents with each speaker of each dialect giving a form. 40% produced *yarewuo* (7 Koforidua Asante, 1 Kumasi Asante), 25% produced *oyarewuo* (4 Fante, 1 Kumasi Asante), 20% produced *yarewu* (Akuapem) and 10% produced *ɔyarewu(o)* (2 Kumasi Asante). One speaker (Akuapem/Asante), 5% of the total, preferred the form *owuyare*, a V-N compound, to the SVN *(o)yarewu(o).*

156.	(ɔ)	yare	wu	(o)
	+NOM	be sick	die	+NOM
	SVN: ɔyarewu(o) 'fatal disease'			

The next SVN, *ɔyɛkyerɛ* 'demonstration' is derived from FL-ISVC *yɛ...kyerɛ. Ɔyɛkyerɛ*, is non-compositional, inflexible and collocationally closed.

157.	ɔ	yɛ	kyerɛ
	+NOM	do	show
	SVN: ɔyɛkyerɛ 'demonstration'		

The next SVN, *ɔyɛnya* 'merit/profit' is derived from FL-ISVC *yɛ...nya. Ɔyɛnya*, is non-compositional, inflexible and collocationally closed.

158.	ɔ	yɛ	nya
	+NOM	do	get
	SVN: ɔyɛnya 'merit/profit'		

The next SVN, *(ɔ)yɛt(s)ia* 'doing against/demonstration' or 'object/patient' (grammatical) is derived from FL-ISVC *yɛ...tia.* However, as it

is a known metalanguage word, Agyekum (2003) was consulted and *(ɔ)yɛtia* was found there with the definition of ‘patient’ in the semantics sense of the word. Nearly sixty four percent of all P2 respondents produced the form *yɛtia* while 13.6% of all P2 respondents produced *ɔyɛtia*. As was the pattern, the typically conservative Akuapem Twi speakers, 18.2% of the total number of P2 respondents, stated that no noun could be formed from *yɛ...tia* and that the verb form is preferable for them. *(Ɔ)yɛt(s)ia*, is non-compositional, inflexible, collocationally closed and familiar.

159. ɔ/ø yɛ t(s)ia
+NOM do step on
SVN: (ɔ)yɛt(s)ia ‘doing against, object’

The FL-ISVC *yɛ...tia* was one of the questionnaire items provided to respondents. When given the FL-ISVC *yɛ...tia*, a respectable 62.5% of P1 speakers agreed that the best way to nominalize is with the form *ɔyɛtia*.

In deciphering the meaning of the SVN *ɔyɛtia*, 17% of P1 respondents reported the meaning as ‘acting against’ with an additional 5.7% reporting the meaning as ‘demonstration’. Also, a mere 30.2% reported the grammatical meaning of ‘object’ for *ɔyɛtia*. Thus, although the SVN is seen as current within its particular domain, based on respondents’ answers, it does not appear to be particularly familiar amongst native speaker respondents surveyed.

Conversely, when given the SVN form, *ɔyɛtia*, 91% of P1 respondents were able to correctly identify *yɛ...tia* as the FL-ISVC from which it is derived.

Here, we have the majority of P1 respondents giving the individual meaning of the verb *yɛ* as ‘do’ with 64.7%. As not many respondents were comparatively familiar with the composite meaning of *yɛ...tia*, this item

diverged from the general pattern wherein a majority or statistically significant number of respondents gave the composite meaning of the FL-ISVC when asked to give the meaning of individual verbs.

In the case of *tia*, 65.3% of P1 respondents gave the meaning as 'against' while 12.2% of respondents reported the meaning as 'trample/step'.

The next FL-ISVC is *yi...fi(ri)*, nominalized as *nyifi(ri)m'* 'subtraction'. Here, we follow Osam *et al.* (2011) in treating *mu* as a grammaticalized (cliticized) postposition occurring in the slot where we have previously seen relator nouns occupying. *Mu* 'inside' is regarded as a postposition due to it moving along the cline of grammaticalization to become a clitic as is seen in *nyifi(ri)m'*. According to Osam *et al.* (2011), "Even though both the full form [mu] and the clitic (-m) are used side by side in the language, the latter is evidence that the form is moving to become a spatio-locative affix... The evidence therefore suggests that **-m** can be appropriately categorized as a postposition in the language." (Osam *et al.* 2011:11-2).[26] *Nyifi(ri)m'* is non-compositional, inflexible and collocationally closed.

160.	N	yi	fi(ri)	mu
	+NOM	remove	from/leave	inside
	SVN: nyifi(ri)mu 'subtraction'			

The next FL-ISVC is *yi...kɔ*, nominalized as *oyikɔ* 'a subtraction'. *Oyikɔ*, while non-compositional, is not etymologically opaque as it comes from *yi* 'remove', and *kɔ* 'go'. *Oyikɔ* is also inflexible and collocationally closed.

161.	o	yi	kɔ
	+NOM	remove	go
	SVN: oyikɔ 'a subtraction'		

The next SVN is *oyikyerɛ/nyikyerɛ* ‘manifestation/vision/revelation’ which is derived from the FL-ISVC *yi...kyerɛ*. *Oyikyerɛ* is also non-compositional, inflexible and collocationally closed.

162.	o/N	yi	kyerɛ
	+NOM	remove	show
	SVN: oyikyerɛ/nyikyerɛ[27] ‘manifestation’		

The next SVN is *oyima* ‘treachery, donation’ which is derived from the FL-ISVC *yi...ma*. *Oyima* is non-compositional, inflexible and collocationally closed.

163.	o/ø	yi	ma
	+NOM	remove	give
	SVN: (o)yima ‘treachery, donation’		

Yi...ma was included in the questionnaires given to both P1 and P2 participants. When given the FL-ISVC form, 55.2% of P1 respondents were able to produce the form oyima. P1 respondents were split on the two primary meanings of *oyima* ‘act of giving/donation’ with 49% and ‘betrayal’ with 31.4%. An additional 2% gave both as the definition. Thus we received a total of 82.4% P1 respondents giving expected definitions of *oyima*. This was teased out further in P2 with 56.5% producing *yima*, 8.7% producing *nyima*, 4.3% producing *eyima*, 4.3% producing *oyima* and 4.3% producing *ɔma*. Amongst Koforidua Asante speakers, their chosen nominal form *yima* could mean either betrayal or donation. However, amongst the majority of Akuapem Twi speakers, once *yi...ma* is nominalized, it can only carry the meaning of donation. Similarly, Fante speakers stated that to get the meaning of betrayal, it has to remain in its finite form. One Akuapem speaker, also a speaker of

Asante Twi, found *yima* to be fine with either the meaning ‘betrayal’ or ‘donation’.

Ninety-seven percent of P1 respondents were able to correctly identify the FL-ISVC from which *oyima* is derived as *yi...ma*. In giving the meaning of the individual verbs from which the SVN *oyima* is derived, 31.8% of P1 respondents gave the gloss of *yi,* as ‘take’ while 29.5% glossed it as ‘remove’. Both are relatively prototypical meanings of *yi* when taken alone. However, consistent with the pattern of respondents with all familiar FL-ISVCs covered in the study, a statistically significant 27.3% of P1 respondents gave the composite meaning of ‘betray’ for *yi* with an additional 2.3% giving the composite meaning of ‘give’. Eighty-three of P1 respondents glossed *ma*, which is relatively unambiguous, as ‘give’.

In previous analyses of FL-ISVCs, the dominant factor in categorizing them as such has been compositionality (semantic integration) alone. However, because Akan FL-ISVCs, in their original conception, were seen as lexicalized idioms (Osam 1994:238) we decided to bring in other idiomaticity factors in addition to compositionality such as familiarity and the related concepts of institutionalization and currency adapted from Barkema (1996). We also looked at collocability; the degree to which slots within the lexicalized idioms can be replaced by other synonyms to bring forth the same meaning or antonyms to bring an inverse meaning. We looked at flexibility in terms of the degree to which specification for number, person, *etc.* can be implemented within the idiom. While flexibility is less of a factor for Akan than, say, for English, it was useful to include in such cases as when the SVN in question

featured a reduplicated form such as in above in *paemuka* and *paepaemuka*, both glossed as 'open confession'. Finally, we looked at familiarity through questionnaires and focus groups.

In our analysis of Akan FL-ISVCs, we have come to the conclusion that FL-ISVNs which show the greatest degree of prototype effects within the category are those which are non-compositional, inflexible, collocationally closed and familiar (institutionalized and current). Additionally, we have seen that FL-ISVCs predominantly have SVN counterparts. While not all FL-ISVCs have SVN counterparts, as is evident from the comprehensive data presented, those that do not are the exception rather than the rule. Also, as we discuss PL-ISVCs in the next chapter, we will show that not all SVNs are necessarily FL-ISVCs in Akan although those that are not are, again, the exception rather than the rule. Also, we will see that there is a fuzzy boundary between nominalized FL-ISVCs and the comparatively fewer nominalized PL-ISVCs that exist.

In analyzing data, we also looked at written attestation selecting *The Dictionary of the Asante and Fante Language called Tshi (Twi)* (Christaller 1933) and cross-referencing *Twi Nsɛm Nkorɛnkorɛ Kyerɛwbea* wordlist (Education Department of Ghana 1971). Boadi (2005) *Twi Kasa Mmara ne Kasɛsoɔ* and Bannerman *et al.* (2011) are also cross-referenced. These corpuses were selected on the basis of their comprehensiveness and the diversity of time periods in which they were produced. They were also selected due to representation of the three major literary dialects of Akan.[28] Using the three in concert is therefore an effort to look at attestation synchronically and

diachronically across dialects of Akan. Representation within these four corpuses is illustrated in Table 3 below:

Table 3: FL-ISVN representation in 4 major corpuses

	SVN	Christaller (1933)	Education Department of Ghana (1971)	Boadi (2005)	(Bannerman *et al.* 2011)
1.	(m)mɔgu(o)	no	yes	yes	yes
2.	(ɔ)brɛgu(o)	yes	yes	yes	yes
3.	ɔyɛgu(o)	yes	yes	yes	yes
4.	mmɔtohɔ/ mbɔtohɔ	yes	yes	yes	yes
5.	butraso	yes	yes	yes	no
6.	abuada/ mbuada	yes	yes	yes	yes
7.	odima	yes	yes	yes	no
8.	nnɔbaɛ(ɛ)/ ndɔbaa	yes	yes	yes	yes
9.	(ɔ)fafir(i)/(e)	yes	yes	yes	yes
10.	mfakaho	yes	no	no	no
11.	mfatoho	yes	yes	yes	yes
12.	fakyɛ	yes	no	yes	yes
13.	mfɛntom’	yes	yes	yes	no
14.	afirihyia/ afrenhyia	yes	yes	no	yes
15.	ɔfonkum	yes	no	no	no
16.	afom-akum	yes	no	no	no
17.	afomkum	no	no	yes	no
18.	afompata /ɔfompata	yes	no	yes	yes
19.	aforosian(e)	yes	yes	yes	no
20.	afuntumfra	yes	yes	yes	no
21.	ɔfrɛte	yes	no	no	no
22.	ɔfrɛtie	yes	no	no	no
23.	gyedi(e)/gyidie/ gyedzi	yes	yes	yes	yes
24.	nnyentom(u)/ ngyetomu	yes	no	yes	yes
25.	hiahwɛ	yes	yes	yes	no
26.	huammɔ/ ohuambɔ/ hwammɔ	yes	yes	yes	yes
27.	hurufɛm/	yes	yes	yes	no

	hurifɛm				
28.	ahurusi /ahurisie	yes	yes	yes	yes
29.	(n)hwebom(m)	yes	yes	yes	no
30.	(ɔ)hwɛsie	yes	yes	yes	no
31.	ahyemfir(i/e)	yes	yes	yes	no
32.	nkatohɔ	yes	yes	yes	yes
33.	ɔhyɛtohɔ	yes	no	no	no
34.	ahyɛyɛde	yes	no	no	no
35.	nkabom(u)	yes	yes	yes	yes
36.	nkafra	yes	no	no	no
37.	ɔkaguso	yes	no	no	no
38.	ɔkasakyerɛ	yes	yes	yes	yes
39.	ɔkatoso	yes	no	no	no
40.	nkatoso	no	yes	yes	no
41.	mmɔtoso/ mbɔntodo	yes	no	no	yes
42.	ɔkahwɛ	yes	yes	yes	no
43.	ɔkahyɛ	yes	yes	yes	no
44.	nkahyɛ(mu)	yes	yes	yes	yes
45.	nkekahyɛmu	no	no	no	no
46.	nkakuho	yes	yes	yes	no
47.	akasabɔdin	yes	yes	no	no
48.	ɔkekahwɛ	yes	no	no	no
49.	ɔkakyerɛ	yes	no	no	yes
50.	ɔkakyerɛw	yes	yes	yes	yes
51.	nkasramso	yes	yes	no	no
52.	nkatoam(u)	yes	yes	yes	no
53.	nkatwam(u)	yes	no	yes	no
54.	akasaguaa	yes	yes	yes	no
55.	nkasaguaa	no	yes	no	no
56.	nkasadwaa	no	yes	yes	no
57.	kasakoa	yes	yes	yes	yes
58.	ɔkama	yes	no	no	yes
59.	ɔkasama	yes	no	no	no
60.	ɔkasamee	yes	no	no	yes
61.	ɔkasasie	yes	yes	yes	yes
62.	ɔkofonee	yes	yes	yes	no
63.	nkogu(o)/ ɔkogu	yes	yes	yes	yes
64.	ɔkoguan	yes	no	no	no
65.	akɔdadwen	yes	no	no	yes
66.	nkotɔsrɛ/ nkotoserɛ	yes	yes	yes	yes
67.	(ɔ)krabɛhwɛ/ ɔkrabɔhwɛ	yes	yes	yes	yes

68.	ɔkrakɔhwɛ	yes	no	no	no
69.	ɔkrakɔse(ɛ)	yes	yes	yes	no
70.	ɔkrakɔsu	yes	no	no	no
71.	akyɛnyade	yes	no	no	yes
72.	ɔkyɛso(e)	yes	no	yes	yes
73.	akyerepae	yes	no	no	no
74.	kyerɛtie	yes	no	yes	no
75.	kyinhyia	yes	yes	yes	no
76.	onyinkyɛ(re)	yes	yes	yes	yes
77.	mpaemuka	yes	no	yes	yes
78.	mpaesiho	yes	no	no	no
79.	ɔpamsɛn	no	no	no	no
80.	ɔpanyɔ	yes	no	yes	no
81.	mpanyɛe	yes	no	no	no
82.	mpatukum	yes	no	no	no
83.	mpatuwu(o)	yes	no	yes	yes
84.	ɔpatuwuo	no	yes	yes	no
85.	apatuwu	no	no	no	yes
86.	ɔpewe	yes	yes	yes	no
87.	ɔpensian	yes	yes	yes	no
88.	ɔperɛhwɛ	yes	no	no	no
89.	ɔperɛtoso	yes	no	no	no
90.	ɔposawe	yes	no	no	no
91.	(ɛ)posaweɛ	no	no	yes	no
92.	sanba	yes	yes	no	no
93.	ɔsete	yes	no	no	no
94.	(ɔ)set(s)ie	yes	yes	yes	yes
95.	ɔseyɛ	yes	no	no	no
96.	asɛyɛde	yes	no	no	no
97.	sigya(w)	yes	yes	no	yes
98.	osisan	yes	yes	yes	yes
99.	sohɔsan	yes	no	no	no
100.	sɔba/ nsosɔmba	yes	no	yes	yes
101.	nsɔhwɛ	yes	no	yes	yes
102.	sɔhwɛ	no	yes	yes	no
103.	ɔsɔhwɛ	no	yes	no	no
104.	sonnyade	yes	no	no	no
105.	ɔsrabɛhwɛ	yes	no	no	no
106.	ɔsrahwɛfoɔ	no	no	yes	no
107.	nsrahwɛ	yes	no	yes	no
108.	ɔsrahwɛ	no	no	yes	no
109.	ɔsrɛma	yes	yes	yes	no
110.	sufrɛ	no	yes	no	yes
111.	suma	no	no	no	no
112.	(o)suahu(nu)	yes	yes	yes	yes
113.	suasen	yes	yes	yes	no

114.	osuayi	yes	yes	no	no
115.	nsuaayie	no	yes	no	no
116.	(o)susuka	yes	yes	yes	yes
117.	(o)susukyerɛ	yes	no	yes	yes
118.	ntekam(u)	yes	yes	yes	no
119.	tekɔ	yes	no	no	no
120.	ɔtekum	yes	no	yes	no
121.	t(s)ema	no	no	no	yes
122.	ntiafunu	yes	no	no	no
123.	otintinkum	yes	no	no	no
124.	otintinnye	yes	yes	yes	no
125.	ɔtogu	yes	yes	yes	no
126.	ntɔntɔ	yes	yes	yes	no
127.	tokyen(e)/ totwene	no	no	no	yes
128.	ɔtratwa	yes	no	yes	no
129.	atubɔ	yes	yes	yes	no
130.	atubra	yes	yes	yes	no
131.	otugya	yes	yes	yes	no
132.	atugya	no	no	yes	no
133.	(o)tukɔ(r)	yes	yes	no	yes
134.	(o)tukorɔ	no	yes	yes	no
135.	(e)tukyin	yes	no	no	yes
136.	atutena	yes	yes	yes	no
137.	atwagu(o)	yes	yes	yes	no
138.	ntwahohyia	yes	no	no	no
139.	twahwɛ	yes	no	no	no
140.	atwahwe	yes	yes	yes	no
141.	twaka	yes	yes	yes	no
142.	twawe	yes	no	no	no
143.	ntwakae	yes	yes	yes	yes
144.	atwasi	yes	yes	yes	no
145.	atwataa	yes	no	no	no
146.	ntwatoso	yes	yes	yes	no
147.	ntwayere(e)	yes	yes	yes	yes
148.	atwaye	yes	no	no	no
149.	ntwekɔ	yes	yes	no	no
150.	twesan	no	no	no	yes
151.	waewe	yes	yes	yes	no
152.	ɔwetare	yes	yes	yes	no
153.	ɔworowe	yes	yes	yes	no
154.	ɔyarewu(o)	yes	yes	yes	no
155.	ɔyɛkyerɛ	yes	yes	yes	yes
156.	ɔyɛnya	yes	yes	yes	no
157.	ɔyɛtia/ɔyɛtsia	yes	no	no	yes
158.	nyifi(ri)m’	yes	yes	yes	yes

159.	oyikɔ	yes	no	no	no
160.	(o)yikyerɛ	yes	yes	yes	yes
161.	nyikyerɛ	no	no	no	yes
162.	oyima	yes	yes	yes	yes

While one cannot draw firm conclusions about familiarity of SVNs solely from written sources, particularly without having author input with regard to intentionality and reasons for "omissions" and inclusions, we are able to, at the very least, get a view into representativeness of SVNs in some major works.

3.2 GENERALIZATIONS ABOUT FL-ISVN IN AKAN

One of the conclusions drawn about FL-ISVN in Akan is that nominalization is based upon salient distinct event types. That is to say, only events, situations and concepts in existence or, 'salient,' within the speech community or sub-community need SVCs or corresponding nouns to describe them.

Relator Nouns, Postpositions, Demonstratives and Direct Objects are evaluated by native speakers as semantically integrated parts of the SVN. This is exemplified in *fa...to...ho* versus *fa...to* nominalization. Consistently, although respondents were asked to give only the meaning of the separate individual verbs from which *mfatoho* is derived, they regularly gave the composite meaning. While this may be dismissed as a fluke, a clear pattern emerged when we look at other SVNs wherein respondents consistently did the same thing.

While verbal elements of FL-ISVCs are made contiguous when nominalized, but this is not always the case as evident in the instances of *mpaemuka*. *Mpaemuka* 'open confession' has an intervening DO between V1 and V2 meaning that here, they are not contiguous.

ISVCs typically contain 2 verbal elements in contrast with CSCs which can contain 2 or more with no upward bound. Like other types of idioms, *huri...si, foro...siane* as well as other FL-ISVCs have both literal and idiomatic interpretations available. In the case of *huri...si* the meaning can be simply 'jumping up and down in place' or the idiomatic 'rejoicing'. Similarly, FL-ISVC, *foro...sian(e)* 'to circulate' seems to have two meanings: one a literal compositional meaning of 'climbing and descending' another, a non-compositional meaning of 'to circulate' as in how blood in the body circulates. The lessons we can glean from such forms are that in Akan FL-ISVCs, which are treated here as lexicalized idioms, like idioms elsewhere in the language and cross-linguistically, exist alongside the literal non-idiomatic forms from which they are derived. Thus there is a semantic divergence wherein, although they retain the same syntactic form, the semantics cause one to be compositional while the other idiomatic one is non-compositional.

The main way that verbs can be morphologically marked for number is by means of reduplication. *Gye...di,* for example, cannot be subject to either partial or total reduplication and still retain their idiomatic meaning. Similarly, on the basis of the large majority of FL-ISVCs, FL-ISVCs prototypically show morphological inflexibility with little exception.

FL-ISVCs are typically collocationally closed or collocationally limited because, usually, no synonym or antonym can replace either element while still retaining the idiomatic meaning. According to The World Atlas of Language Structures Online, Akan is listed as “strong prefixing” in reference to the category “Prefixing vs. Suffixing in Inflectional Morphology” (Dryer and Haspelmath 2012). While derivational morphology is missing from the list of linguistic characteristics of Akan, the current study shows that Akan is also strongly prefixing in terms of derivational morphology as well.

Due to high levels of semantic integration, respondents are able to agree on the definition of the whole more than the individual parts due to prototypical non-compositionality of FL-ISVC structures.

In *ko...gu*, because *ko* means ‘fight’, *gu*, in this particular context, simply carries the connotation that action delineated by the first verb was not carried out successfully. This means that semantic integration can occur to the point that the meaning of one verb in the SVC/SVN is no longer readily interpretable outside of the context of the entire unit.

Otintinkum is an example of an entire SVN that can be fronted as illustrated. Typically, in Akan, the entire SVN cannot be clefted but only V1. Further research is required to ascertain the nature of SVN behavior in predicate clefting, relativization, etc.

FL-IVCs can be used as lexicalized idioms and, as such, evaluative criteria applied to other idioms may be relevant to FL-ISVCs/FL-ISVNs in Akan. Secondarily, FL-ISVCs show idiomaticity and they nominalize in a particular way. It will be shown in chapters four and five that PL-ISVCs are

more like collocations and, in the comparatively fewer cases when they do nominalize, they do so in a particular way and CSCs are like frozen sentences that nominalize somewhat haphazardly, but also in their own particular way.

ENDNOTES

[1] N stands for any nasal without a pre-existing place of articulation.

[2] Dialectal differences in spelling and pronunciation such as that between *mmɔtohɔ* (Asante and Akuapem Twi) and *mbɔtohɔ* (Fante and Akan Standard Orthography) were glossed over as irrelevant to the analysis at hand.

[3] For a fuller discussion of Sesotho noun classes, please see Demuth (2000) and Doke and Mofokeng (1957).

[4] One Akuapem speaker, while born at Akropong, self-identified as an Asante due to matrilineal descent and his mother being an Asante.

[5] The intervening -*n*- is again thought to be a phonological phenomenon conditioned by the initial C1 nasal.

[6] *Akɔaba* is more commonly and more colloquially written as *akwaaba*.

[7] (Duah 2012: Personal Communication).

[8] Here we follow Osam *et al.* (2011) in categorizing cliticized –*m* as a true postposition which has grammaticized (cliticized in this case) to the point of no longer being a noun. In this analysis, full *mu* which can head a noun phrase would be categorized as RN while cliticized –*m* which cannot head a noun phrase would be analyzed as a PP, having undergone divergence and having moved further along the cline of grammaticalization from N > RN > PP. –*M* in *nkabom(u)* is seen as being such an instance of PP.

[9] (Duah 2012: Personal Communication).

[10] (Duah 2012: Personal Communication).

[11] It should be noted that certain instances of derivational morphology are prototypically prefixing and suffixing in Akan such as that which pertains to human beings with *ɔ-...-ni* or *ɔ-...-fo* as prototypical for the singular and *a-...-fo* or *N-...-fo* for the plural. Here, we are focusing on abstract nouns as derived from Serial Verb Constructions rather than on the latter (which indeed may be more productive, but this is beyond the scope of this thesis). An example par excellence of dialectal variation in regard to suffixing in abstract nouns is *nnɔbaeɛ* (Asante), *nnɔbae* (Akuapem) and *ndɔbaa* (Fante). While Akuapem and Fante are not typically known for their nominal suffixes, we see here that, in this case, each dialect does have nominal suffixing options available to it.

[12] It should be noted here that 'nothing' and 'vain' are not verbs.

[13] There is also a Fante version *dadwen* which is used by some speakers as in "*Asɛm no ayɛ me dadwen."* meaning 'the issue has caused me to meditate on it at length.' (Osam 2012: Personal Communication)

[14] Based on *aso tsei* 'ear hear'. Another form is *setsei* 'say hear' meaning obedient. (Osam 2012: Personal Communication)

[15] (Osam 2012: Personal Communication)

[16] (Osam 2012: Personal Communication)

[17] (Osam 2012: Personal Communication)

[18] There is another form which may be related to this one, *kɔsanba* 'reincarnated child'. The *ba* may refer to 'child' or 'come' as they share the same phonological form. Another similar form was discussed in chapter 1, (16) *ɔkɔbae* where the *ba* indisputably refers to the verb 'come' as it is marked for

COMPL aspect. It is also worthy of note that Agyekum (2003) uses *kɔsanba* as the metalanguage terminology for 'recursive' to indicate something that goes and comes back.

[19] Osam also gives *kɔsosan* as an alternate rendering of this concept. (Osam 2012: Personal Communication)

[20] While there is also the form *soso* 'gather collect' which is used only in reduplication this does not appear to be the meaning which holds in *sohɔsan.*

[21] *-foɔ* is the standard singular suffix when the stem verb denotes a habitual action or action done professionally.

[22] According to Osam, there's also *tse* 'feel' ma 'give' as in *maame no wɔ tsema* 'the woman has sympathy' (Osam 2012).

[23] Although Fante speakers made up 12% of respondents, it has come to our attention that *suma* may be better for Fante speakers than for speakers of other Akan dialects.

[24] Martin's personalized orthography and treatment of the completive aspect COMPL as do insertion are both rejected outright. Her claim to do-insertion appears to be on the basis of the homophonous sound of COMPL in Asante Twi which is not homophonous in Akuapem or Fante. As a thorough reason for the rejection of her argument is beyond the scope of this thesis, we will simply give examples in a non-standard Asante Twi orthography and do not take into account other Akan languages where COMPL does not phonologically resemble *-yɛ*. Thus, we drop the do-insertion argument from the literal translation and glosses.

[25] *tɔ gu* in Fante could mean to limp very badly: *Ɔ́tɔ́ gù ne nán do.*

[26] For a fuller discussion, see Osam *et al.* (2011).

[27] The Fante name for the Book of Revelation is *nyikyerɛ*. (Osam 2012: Personal Communication)

[28] Christaller (1933) focuses on Akuapem Twi but has entries in Asante and Fante, Education Department of Ghana (1971) has Asante and Akuapem while Boadi (2005) has Asante data. Osam (1994) has Fante data. Additionally Bannerman *et al.* (2011) has Fante data exclusively. Where an individual dialects have optional elements that distinguish them from Akan, these are represented in parentheses (e.g. *(w)* in *gya(w)* which distinguishes Akuapem and Fante from Asante and *(ɛ)* in *owuyare(ɛ)* which is a characteristic of Asante dialect.)

CHAPTER FOUR

NOMINALIZATION OF PARTIAL LEXICALIZED-INTEGRATED SERIAL VERB CONSTRUCTIONS (PL-ISVCs) IN AKAN

4.0 INTRODUCTION

In this chapter, we will provide an overview and analysis of nominalization of Partial Lexicalized-Integrated Serial Verb Constructions (PL-ISVCs) in Akan. PL-ISVCs, because of being less semantically integrated and not highly lexicalized, are expected to behave differently from FL-ISVCs when nominalized. By and large, this prediction was borne out in the data. In this chapter, therefore, we will analyze data from questionnaires distributed, interviews and from pre-existing written sources to demonstrate the behavior of PL-ISVCs when nominalized. Further, we will look at significant data in establishing patterns of prototypical behavior for PL-ISVC nominalization and the degree to which PL-ISVCs can be nominalized in Akan.

4.1 SEMANTIC INTEGRATION AND AKAN PL-ISVC NOMINALIZATION

Our initial prediction was that different types of SVCs would nominalize differently if at all. By and large, this prediction was borne out in questionnaire data returned. It was expected that Full Lexicalized ISVCs would have nominalized forms. It was expected that PL-ISVCs would typically not have SVN counterparts. The difference is because FL-ISVCs have become semantically integrated to the point that they form one single abstract notion.

PL-ISVCs, on the other hand, remain two verbs denoting two related but distinct notions that are connected by culturo-linguistic convention. PL-ISVCs are expected to show the following characteristics:

- Usually fully compositional
- Usually flexible to semi-flexible (productive)
- Usually collocationally open to limited
- Usually non-familiar to partially familiar (somewhat institutionalized) (Barkema 1996)

For the most part, tables in the questionnaire distributed to P1 respondents were broken down based on degree of semantic integration. Although data from written sources and questionnaire data pointed to prototypical PL-ISVCs not having SVN counterparts, we will begin with looking at the exceptions to this rule: Nominalized PL-ISVCs attested in written sources and/or provided in questionnaire data. Again, a terminological distinction is made between P1 questionnaire participants (a total of 75) and questionnaire respondents (those who actually responded to individual questionnaire items as opposed to leaving the item in question blank). For a few of the questionable items that came up in P1 research, these were presented in P2 focus group interviews where a total of twenty-five (25) elders were surveyed for their judgments on the data.

4.2 SURVEY OF PARTIAL LEXICALIZED-INTEGRATED SERIAL VERB CONSTRUCTIONS IN AKAN

4.2.1 Nominalized PL-ISVCs

Osam describes PL-ISVCs as

> cases where speakers productively put certain verbs together to express unitary concepts...Being less integrated implies that the verb combination is not highly lexicalized. In a way, in these verb combinations, we can almost see the separate parts of the event. For example, if we take tow...bɔ 'throw at' we can see the act of 'throwing' and that of 'hitting'. (Osam 1994:206)

As we saw in the previous chapter, FL-ISVCs, due to their high level of semantic integration, become non-compositional and highly idiomatic unitary events or abstract notions. In contrast, PL-ISVCs, while still viewed as unitary events, retain their compositionality both prior to and after nominalization in the comparatively few instances found that do have attested nominalized forms.

The unitary nature of PL-ISVCs is demonstrated in Osam (1994) by illustrating how the entire PL-ISVC complex can be questioned as in the following example where *tow...bɔ* is seen as being one entire purposive action:

1. a. Kofi yɛ-ɛ Esi dɛn?
   Kofi do-COMPL Esi what
   'What did Kofi do to Esi?'

   b. ɔ-tow-w bobaa bɔ-ɔ no
   3SG SUBJ-throw-COMPL stone hit-COMPL 3SG OBJ
   'He threw a stone at (to hit) her.' (Osam 1994:200)

This is contrasted with non-purposive action which is manifested in two separate clauses delineated by a complementizer and is not viewed as a unitary event by native speakers as illustrated below:

2. Kofi tow-w bobaa ma ɔ-kɔ-bɔ-ɔ Esi
   Kofi throw-COMPL stone COMP 3SG-go-hit-COMPL Esi
   'Kofi threw a stone and it hit Esi.' (Osam 1994:200)

For the most part, when we look at PL-ISVCs, although we are looking at unitary events, these events (or states) are comprised of separate verbs that, when glossed, could be expressed as linked with the conjunction AND (i.e. throwing and hitting) or the infinitive TO (i.e. throwing to hit).[1]

The first PL-ISVN we will look at is *(a)didimee* 'the act of eating and becoming full'. *(A)didimee* is an exemplary PL-ISVN in terms of compositionality with both *didi* 'eat' and *mee* 'being full/satiated' featuring in the composite meaning of the SVN. Here, flexibility in terms of reduplication exists since *di* is reduplicated as *didi* which makes the verb intransitive and also marks iterativity of the activity of eating which could be argued to connote multiple events.[2] According to Boadi (2005:613), *mee* is available for specification for plural via reduplication as *meemee*. Further, we see continued evidence of iconicity in the form of temporal sequencing effect as shown in Figure 2 of Chapter 1, Section 1.3.2.1. Thus, in keeping with the actual temporal order of events in the real world, the PL-ISVC cannot be *mee...didi* or 'being full' before *didi* 'eating'. This sequencing is retained at the level of PL-ISVC and upon nominalization. Thus we see iconicity, or faithfulness to the actual order of events in the real world, as the primary factor in morphosyntactic ordering of verbal elements in Akan PL-ISVC nominalization as well as FL-ISVC nominalization.

3. ø/a/e d(z)id(z)i mee
+NOM eat to be full
SVN: (a)didimee ‘the act of eating and becoming full’

The next PL-ISVC is equally as compositional as it can, again be understood as simply *foro...sian(e)* ‘climbing and descending’. *Foro...siane* was discussed in Chapter 3 as an FL-ISVC. In this case, we are looking at its “literal counterfeit form” which is not idiomatic, but which simply means climbing and descending and, therefore seems to pattern as a PL-ISVC. Here too, we have a case of both a literal meaning (PL-ISVC) and idiomatic meaning (FL-ISVC). In the idiomatic extension as discussed in Chapter 3, *foro...sian(e)* can be interpreted as good blood circulation through the body as a marker of good health. Here we are dealing with what is referred to as the literal ‘counterfeit form’ by Barkema (1996:140) in his schemata of idiomaticity. According to Barkema

> Many idiomatic expressions have equivalents in the form of a ‘counterfeit form’. Such a form has the same syntactic form and contains the same lexical expression, but, because of the way in which it is used, has a meaning that is the combinatorial result of the meanings of the lexical items in the construction.

In its PL-ISVC configuration, Boadi gives reduplicated forms of both *foro* as *foforo* (Boadi 2005:608) and *siane* as *siansiane* (Boadi 2005:617). When each of these is reduplicated, each one is expected to hold in the PL-ISVC structure without any significant change of meaning apart from denoting repetition of each or both actions.

4. a foro sian(e)
+NOM climb descend
SVN: aforosian(e) ‘ascending and descending’

The next PL-ISVC is *fua...hwe*, which is nominalized as *mfua(n)hwe(ɛ)* ‘holding someone while flogging’. *Mfua(n)hwe(ɛ)*, in either case, is viewed as fully compositional. One analysis would be viewing the intervening N as a marker of nominalization. When there are two markers of nominalization in the same SVN, typically they have the same phonological form. A possibility is that N comes from an elided conjunction. In such a case the original form in each case would be:

5. Wu na gya adeɛ ⇨ wu n’gya adeɛ
   Die CONJ leave thing
   ‘Inheritance’

6. Fua na hwe ⇨fua n’hwe
   Hold CONJ flog

If this is actually the case we would be mistaken to include the form amongst SVNs due to an intervening conjunction separating the clauses. A third analysis, and the one advanced in this thesis, is that, as shown in chapter three, example (24), the nasal may actually be phonologically conditioned and semantically null. This was the pattern shown, particularly by Fante speakers interviewed in Phase Two (P2) of research, in examples such as *ngyentom* from *gye...to...mu*, *ntwantodo* from *twa...to...so*, *mbɔntohɔ* from *bɔ...to...hɔ*.

Interestingly enough, Boadi (2005) has *mfuahweɛ* without the intervening N +NOM. Boadi’s version retains all compositionality of a PL-ISVC, but patterns after the base template form that we saw typical of FL-ISVCs (i.e. without any intervening elements). Boadi defines *mfuahweɛ* as:

7. (ed.) sɛ wɔsɔ obi mu boro
(noun) when 3PL.SUBJ-hold someone inside beat

anaa hwe no; di mfuahweɛ
DISJ flog 3SG.OBJ; do holding-flogging

(=sɔ obi mu hwe no anaa bo
(=hold someone inside flog 3SG.OBJ DISJ beat

no)
3SG.OBJ)

'when they hold someone and beat or flog him/her; engage in holding-and-flogging (=hold someone and flog beat him/her' (Boadi 2005:374)

Here we see that the meanings of both of the component verbs surface in the PL-ISVN form. Also, in defining *mfua(n)hwe(ɛ)*, Boadi affirms the collocational openness of *mfua(n)hwe(ɛ)* in his definition of the term by using synonyms *sɔ...mu* 'hold' for *fua* 'hold' and *boro/bo* 'beat' for *hwe* 'flog'. This collocational openness in terms of considerations of idiomaticity lends weight to our categorization of *mfua(n)hwe(ɛ)* as a PL-ISVN.

8. N fua (N) hwe (ɛ)
+NOM grasp beat
SVN: mfua(n)hwe(ɛ) 'grasping and beating'

Because of the questionability of *mfua(n)hwe(ɛ)*, particularly in terms of the intervening nasal and the familiarity of the item, *fua...hwe* was included in P2 of research carried out amongst Fante, Asante and Akuapem elders. Out of the 25 P2 participants, only one (5.3% of the total), a Kumasi Asante Twi speaker produced the form *mfuahwe*. It should be noted that this speaker produced the form found in Boadi (2005:374) with no intervening nasal. Fante speakers, for a total of 31.6%, indicated that *mfuanhwe* is not possible in Fante. Rather, the Fantes gave the form *mpatakita/mpatakuta* as

being the Fante version of ‘grasping and beating’. Koforidua speakers, for a total of 36.8% of total speakers, also indicated that *mfuanhwe* is not Asante and rather offered the form *mpoatwa* ‘grasping and beating’. All other respondents said either that there is no nominal form (21.1% or 4 respondents) or that they were not sure (5.3% or 1 respondent).

The next PL-ISVN is *ahurufi*. Similar to previous examples, compositionality is also retained in PL-ISVN *ahurufi*. As such, *huru(w)* ‘jump’ and *fi* ‘from, leave’ both retain their meanings when nominalization occurs and these meanings surface in the composite whole: *ahurufi* ‘jumping out’.

9. a huru(w) fi
+NOM jump from/leave
SVN: ahurufi ‘jumping out’

In this sense, one can still see the separate parts of the event: that of jumping and leaving. An example of *ahurufi* used in context is shown below:

10. Wodi (dan no mu) ahurufi
3PL.SUBJ-do (building DEF inside) jumping-out
‘They jump forth (out of the house) one after the other’
(Christaller 1933:197)

Ahurufi is seen as entirely compositional because the meanings of each verb manifest in the PL-ISVN in contrast with largely non-compositional FL-ISVCs where the meanings of neither or, at best, only one verb surfaces in the SVN. While FL-ISVCs are seen as lexicalized idioms, PL-ISVCs are seen as lexicalized collocations. This evinces the bi-event nature of PL-ISVCs. Lexicalized collocation means that while the two verbs are institutionally used together, they are done so without much idiomaticity, semantic integration or the degree of lexicalization found in FL-ISVCs. Thus, each verb retains its individual essence in the SVC/SVN structure.

While the most prototypical examples of PL-ISVCs are not expected to nominalize to the degree of FL-ISVCs, *ahurufi* provides one of several exceptions to that expectation. In terms of flexibility, as a PL-ISVC, it is argued that *huru(w)* can be inflected for plural by the process of reduplication. As we saw in the case of FL-ISVCs, typically when reduplication occurred, it led to a loss of the idiomatic composite meaning of the serial verbs combined. Here, however, because we are dealing with an entirely compositional structure, reduplication can occur freely without any loss of idiomatic meaning since there is no idiomatic meaning to lose in the first place. In other words, when there is no idiom to begin with, there is no danger of losing an idiomatic sense, leaving the component serial verbs free to reduplicate or undergo any other processes of morphological or morphosyntactic flexibility typically ruled out by prototypical FL-ISVCs. Finally, in terms of collocability, as a PL-ISVC, it is expected that synonyms or antonyms of the component verbs would be perfectly acceptable. Thus, *huru(w)...fi* fits the mold of PL-ISVC in relation to lack of the idiomaticity we saw in the case of FL-ISVCs. Because the majority of PL-ISVCs cannot be nominalized, *ahurufi* and other nominalizable PL-ISVCs are not seen as being very prototypical of the category as a whole.

The following PL-ISVN, *ohuse*, in terms of compositionality, simply means ‘an affair seen and told’. When tested with P2 speakers, only Akuapem speakers (22% of total respondents) and one Kumasi Asante speaker (5.6%) found *ohuse* to be acceptable. All Koforidua Asante speakers (38.9% of total respondents) found *ohuse* to be unacceptable, preferring the form *ohuka* instead. Fante speakers (22.2% of total) found *ohuse* to be unacceptable and

proposed *hukaka* instead. One Kumasi Asante speaker found *huse* to be the most acceptable form. The acceptability of synonyms and antonyms is evidence of open collocationality expected for PL-ISVCs/PL-ISVNs.

11. o hu se
+NOM see say
SVN: ohuse ‘an affair seen and told’

The next nominalized PL-ISVN we will examine is *hwiegu(o)*. In relation to compositionality, *hwiegu(o)* is wholly compositional with the verbs *hwie* ‘pour’ and *gu* ‘spill’ both surfacing in the composite meaning of the PL-ISVC and its corresponding SVN.

12. ø hwie gu
+NOM pour spill
SVN: hwiegu(o) ‘pouring away’

Here, similar to the case of *foro...sian(e)*, we argue that *hwie...gu* has both a PL-ISVC form and an idiomatic FL-ISVC form. The PL-ISVC and the FL-ISVC versions are argued to be separate and distinct forms. In the PL-ISVC form it simply means ‘pouring out’ as defined in all three major corpuses consulted. Boadi (2005) even gives a collocationally limited alternative of *sɔne...gu* with V1 replace by a synonym and defines *hwiegu(o)* as the following

13. (nneyɛɛ) sɛ wɔsɔne anaa wɔhwie gu
(action) COND 3PL.SUBJ-trickle DISJ 3PL.SUBJ-pour spill

fam
ground

‘(action) when [something is] trickled or poured out on the ground’
(Boadi 2005:319).

However as an idiomatic FL-ISVN, Boadi gives an extended definition:

14. mogya hwieguo (=nipakum)
blood pouring (=nipakum)
'bloodshed (=killing of persons)' (Boadi 2005:319)

Here, then, we see that when *hwiegu(o)* is used in a different context, it is no longer literal and fully compositional, but rather an idiom for the killing/death of persons. Thus, here we make the case for two separate instances of *hwie...gu*: one an idiom and one a non-idiom (simple collocation). Another example of *hwie...gu* as an FL-ISVC may be found in a patriotic song about Ghana: *Yɛn Ara Asase Ni* 'This is our land'. Two lines of the song appear below:

15. Mogya na nananom hwie gui
blood FOC ancestors pour spill-COMPL

nya de too hɔ ma yɛn.
obtain take throw-COMPL DEM give 3PL.OBJ
'Blood that our ancestors shed to acquire it (land) and preserve it for us.'

Here, *hwie...gu* is not a nominal, it is the idiomatic version of the SVC (i.e. an FL-ISVC). In the example above, it is not seen as literal that ancestors poured their blood out in the way one pours water out of a jar for the purpose of acquiring land. It is rather an idiomatic usage here to mean that the forefathers of Ghanaians died to liberate Ghana.[3] Thus, we are arguing that *hwiegu(o)* (non-idiomatic, literal 'pouring out') the PL-ISVN and *(mogya) hwiegu(o)* (idiomatic) the FL-ISVN have disparate uses: one literal and one idiomatic.

Hwie...gu was also one of the items on the questionnaire distributed. Questionnaire results were consistent with expectations in that very few P1 respondents were able to produce any SVN form when given the PL-ISVC *hwie...gu*. In fact, the majority response of *hwiegu(o)* received only 12.7% out

of 75 total questionnaire participants. In these instances, respondents actually included *mogya* giving the form as *mogya hwieguo*. As shown above in (14), when used with *mogya*, the SVC takes on an idiomatic usage and cannot be viewed as a simple wholly compositional PL-ISVC anymore. The majority of P1 respondents (38.2%) stated that there is no SVN derivable from *hwie...gu* while 34.5% were not sure. 26.7% of all participants abstained from the questionnaire item altogether.

Similarly, only 13.8% of P1 respondents gave the expected 'pouring out' as the meaning of *hwiegu(o)*. The majority of respondents, 48.3%, gave the answer of 'none' indicating that *hwie...gu* has no SVN counterpart. The second highest number of respondents at 31% indicated that they were not sure whether or not an SVN form existed. 46 participants, or 61.3% of all participants in the survey, abstained from the question altogether.

However, when participants were given the SVN and asked to judge the acceptability of the form, P1 respondents seemed to be split as to whether the SVN is acceptable with 45% of actual respondents finding *hwiegu(o)* to be unacceptable. On the other hand 40% of respondents found *hwiegu(o)* to be acceptable. Other respondents were not sure. An additional 20% of all participants abstained from the item altogether. Although not grouped together for the purpose of statistical accuracy, within this study, abstention is viewed as an answer of 'not sure'.

Those who judged *hwiegu(o)* to be unacceptable were given an opportunity to put forth their own form that they thought would be acceptable in the language. While this was not applicable for those who judged *hwiegu(o)*

to be acceptable, just a few respondents, 20.5% total, came up with any alternate form whatsoever.

In our analysis, the majority of respondents dealt with *hwiegu(o)* as a non-familiar form. Of the definitions given for *hwiegu(o),* the majority of those who gave any answer, 13.8%, dealt with it as compositional SVN with the same meaning as the component verbs from which it is derived.

The next PL-ISVN is *akyetɔn* derived from PL-ISVC *kye...tɔn* 'to catch and sell'.[4] Here again we see both verbs retaining their meaning both in the SVC structure and in the nominalized structure. As mentioned previously, a characteristic of PL-ISVC nominalization is that it can essentially be glossed as V1 AND V1 (indicating coordination) or V1 TO[5] V2 (indicating intentionality). In relation to flexibility, *kye* can be reduplicated as *kyekye* and *tɔn* can be reduplicated as *tontɔn* without any significant change in meaning of V1, V2 or the composite structure in the PL-ISVC. As far as collocability, *kye* can be replaced by *kyere* as expected in a PL-ISVC which is less rigid and more collocationally open than prototypical instances of FL-ISVNs as covered in chapter three, section 3.2.3.

16.

a	kye	tɔn
+NOM	catch	sell

SVN: akyetɔn 'catching and selling'

The next SVN is *siansiampuro* 'repeated stumbling descending a mountain'. It comes from verbs *siansian(e)* 'repeatedly descend' and *puro(w)* 'stumble'. Interestingly, it is the reduplicated form, *siansian(e),* that is attested in Christaller (1933) rather than the non-reduplicated form. Christaller (1933) has a note that *siansiampuro* can also be used idiomatically although he does

not provide an example and none of the other corpuses document the SVN form whatsoever. In the case of such an idiomatic usage, *siansiampuro* as a PL-ISVN would mark another case of a literal counterfeit form complementing an idiomatic meaning similar to the case of *foro...siane* above.

17. ø siansian puro(w)
+NOM repeatedly descend stumble
SVN: siansiampuro ‘repeated stumbling descending a mountain’

The next PL-ISVN is *ɔsoware* ‘a big and tall person’. This SVN is particularly interesting in that it is derived from stative verbal adjectives[6] rather than from action verbs[7] . Thus, we see that SVNs cannot be subsumed under the umbrella of action nominals, since one or even both verbs in the SVN may be stative verbs rather than action verbs. However, we also have a case where we cannot speak of iconicity in any appreciable manner as, here, the verbs in question do not relate to actions that happen in the real world, but rather to states of being. Interestingly enough, this PL-ISVC patterns and nominalizes as if it were locked in an iconic type of sequencing. For example:

18. a. ɔso ware
3SG.SUBJ-big tall
‘He’s big [and] tall.’

b. ʔɔware so
3SG.SUBJ-tall big

c. ɔso na ɔware
3SG.SUBJ-big CONJ 3SG.SUBJ-tall
‘He’s big and tall.’

d. ʔɔware na ɔso
3SG.SUBJ-tall CONJ 3SG.SUBJ-big
‘He’s tall and he’s big.’

While action verbs, when in SVC structures reflect temporal sequencing in the real world, *ɔso ware* reflects states, not action/events. Nevertheless, the verbal

elements tend to show a particular order similar to that shown by SVCs subjected to iconic ordering. This harkens back to the concept of base template forms upon which new SVNs are modeled. In other words, the base template form represents the coding of morphosyntactic information such as ordering of SVC/SVN components. It is interesting to note that, similarly, in English, one can say a 'big and tall men's shop' but you can't say a 'tall and big men's shop' without changing the connotation to one of simply describing the dimensions of the shop rather than the men. In English, typically a different interpretation can be given to the expression while in Akan the resulting expression is questionable at best. Here, then, we see that the morphosyntactic base template which deals with the ordering of elements is, in a way, fused to the SVC/SVN form and is as much a part of the SVC as the verbal elements, affixes, relator nouns, *etc*.

Also, while *so...ware* is wholly compositional, it is collocationally closed because synonyms and antonyms cannot replace either V1 or V2 while retaining the SVC structure. Rather, a coordinating structure would have to be appealed to in order to bring in other verbs to get the composite meaning. In *so...ware* flexibility is allowed for duplication as *soso* 'to be big (of more than one person)' and *woware* 'to be tall (of more than one person)' may be reduplicated without changing their meanings nor that of the composite structure. Although reduplicated forms in such instances may not be likely used by speakers or contexts for possible usage may be restricted, in contrast to FL-ISVCs, their production would not seem to be ungrammatical.

19. ɔ so ware
+NOM big tall
SVN: ɔsoware ‘a big and tall person’

The next PL-ISVN is *ɔsoakyini* ‘the act of carrying around’ which is derived from PL-ISVC *soa...kyini*. In terms of compositionality, as expected, the meanings of both of the verbs from which the PL-ISVN is derived surface in the composite meaning. In defining *ɔsoakyini*, Boadi (2005) uses synonyms *de...nenam* ‘take walk (repeatedly)’ indicating a collocationally open expression with slots open for replacement. In terms of flexibility, both *soa* and *kyini* can be reduplicated as *soasoa* and *kyinkyini*, respectively without changes in the meaning of the PL-ISVC. Again, however, reduplicated forms, may not be likely to be used by speakers or, if used, may only be used in restricted contexts. Nevertheless, the resulting expressions would not be ungrammatical or cause a change in meaning/loss of idiomatic meaning as was shown to be the case in prototypical FL-ISVC nominalization.

20. ɔ soa kyini
+NOM carry move around
SVN: ɔsoakyini ‘the act of carrying around’

Ntodi(i)/ntɔdie/ntɔdiiɛ ‘things bought and eaten’ or ‘the act of buying and eating food’ may be subject to morphological flexibility in both PL-ISVC form and in PL-ISVN form as *totɔ X di* and *ntotɔdi(e)* (Duah 2012),[8] respectively. Because of institutionalization, it is expected that collocability will be limited, but not ruling out potential alternate PL-ISVC forms:

21. a. watɔ aduane adi
3SG.SUBJ-PERF-buy food PERF-eat
‘He has bought food to eat’

b.	watɔ	nam	awe
	3SG.SUBJ-PERF-buy	meat	PERF-chew
	'He has bought meat to eat'		

c.	watɔ	nkwan	anom
	3SG.SUBJ-PERF-buy	soup	PERF-drink
	'He has bought soup to eat'		

Above, we see that the DO position of V1 selectively collocates with its own V2 expressing the Akan conceptualization of how various foodstuffs are consumed which would all typically be glossed as 'eat' in colloquial English. V1 could also be conceivably replaced with an antonym such as:

22. a.	wawia		aduane	adi
	3SG.SUBJ-PERF-steal		food	PERF-eat
	'He has stolen food and eaten it'			

Thus, *ntodi(i)/ntɔdie/ntɔdiiɛ* is seen as collocationally open.

23.	N	tɔ	di	(iɛ)
	+NOM	buy	eat	+NOM
	SVN: ntodi(iɛ) 'things bought and eaten'			

Tɔnkomda is another relatively unique SVN form in contrast with more common forms in which the verbs are contiguous upon nominalization that we have looked at up to this point. Here, we have the DO being incorporated into the SVN. This form is non-compositional at the level of SVN. However, the constituent verbs are not semantically integrated at the level of SVC. As an SVN, the composite meaning of 'sleeping sickness' is derived for two near-synonyms for sleeping; *tɔ nkom* 'doze' and *da* 'sleep'.[9]

24.	ø	tɔ	nkom	da
	+NOM	fall	asleep	sleep
	SVN: tɔnkomda 'sleeping sickness'			

Awu(n)nyade(ɛ) 'inheritance' is derived from *wu...gya(w)..(a)de(ɛ).* It is defined in Christaller as *ade a obi awu de agyaw wo* 'a thing that someone who

has died leaves you'. *Wu...gya(w)..(a)de(ɛ)* 'inheritance' is compositional with both verbs *wu* 'die' and *gya(w)* 'leave' and noun *(a)de(ɛ)* all retaining their essential individual meanings when used together. *Wu...gya(w)..(a)de(ɛ)* as a PL-ISVC is flexible and collocationally limited as *wu* 'die' could be replaced by a euphemism for death without a loss of meaning in the larger structure. As such, non-compositionality within the entire SV complex only occurs after nominalization. One aspect of *awu(n)nyade(ɛ)* that deserves attention is the seeming infix of the value N, where N stands for any nasal. In chapter three, we dealt with other seeming "infixes" as phonologically conditioned insertion in the environment of a C1 nasal and preceding nasalized vowel which occurs immediately after C1. However this environment is not present in the case of *awu(n)nyade(ɛ).* Thus, there are a few possibilities for what this is; 1) One is a conjunction *na* 'and' which is truncated to leave only the nasal. 2) Another possibility is that N is a prefixal nominalization marker which attaches to *gya* and also assimilates to its place of articulation. In this case, we lean away from categorizing the intervening N as a nominalization marker because in other cases where there is a secondary marker of nominalization V2, it typically has the same phonological form as the nominalization marker on V1. Here, however, regardless of the nominalization marker on V1, we see that in *awu(n)nyade(ɛ)* the infix, N, is invariant. SVC *wu...gya(w)...(a)de(ɛ)* was included in P2 focus group interviews and there was some degree of variance with particular reference to the "infix" which did not always break down neatly into clear dialectal variation. In fact 35% of total respondents produced the SVN form *awugyadeɛ* (6 Koforidua Asante Twi speakers and 2 Kumasi Asante

Twi speakers), 20% produced *awugyade* (3 Akuapem Twi speakers 1 Fante speaker), 15% produced *awunnyandze* (3 Fante speakers), 10% produced *awunnyade* (2 Akuapem Twi speakers) and 10% produced *awunyadeɛ* (2 Kumasi Asante Twi speakers). Finally, 5% produced *awunnyadeɛ* (1 Koforidua Asante Twi speaker) and 5% produced *awugyadeɛ/owugyadeɛ* (1 Kumasi Asante Twi speaker). Thus we see probably the largest amount of variation encountered in P2 data which is not neatly segmented into clear dialectal differences.

25.	a	wu	N	gya	(a)de(ɛ)
	+NOM	die	?	leave	thing
	SVN: awunnyade(ɛ) ‘inheritance’				

Owunyan(e) and *(o)wusɔr(eɛ)* ‘resurrection’ are examples of a collocationally limited pair where the V2 slot is open for insertion by a synonym. As seen prominently in dialectal variants of the Bible, *owunyan(e)* and *(o)wusɔr(eɛ)* appear to be used interchangeably.[10] Both SVCs are compositional with the individual verbs describing what is meant by the composite meaning, more or less.

26.	a.	o	wu	nyane
		+NOM	die	wake
		SVN: owunyane ‘resurrection’		
	b.	o	wu	sɔre
		+NOM	die	get up
		SVN: owusɔre ‘resurrection’		

The next PL-ISVC *yɛ...ma* ‘do for’ or ‘do on behalf of’ is included here amongst PL-ISVCs rather than FL-ISVCs because it is not non-compositional like FL-ISVCs introduced in chapter three. It rather includes *yɛ* ‘do’ which retains its meaning and what may be termed a grammaticalized verb; a verb

which has grammaticalized to the point of serving a functional purpose although not to the point that it no longer shows verb-like characteristics. *Yɛ...ma* is given in several examples by Osam (1994) and Agyeman (2002) in response to Lord's (1989) assertion that *ma* in the medial position is a "preposition introducing Recipient and/or Benefactive noun phrases" (Lord 1989:89). According to Agyeman (2002), following Osam's line of argument,

> '[M]a' here remains fully verbal in form. It takes the full spectre [*sic*] of verbal affixes, and partakes in the same construction type as the full verb. Its semantic structure seems to a large extent common to the concrete give-case. The only difference is that it is only extended to allow for acts, and not only physical objects to be transferred to the benefit of a 'recipient'. (Agyeman 2002:74)

We will not rehash the entire debate about *ma* as it is beyond the scope of this thesis. However, we will state that such instances of *ma* as benefactive verb, *ma* as causative verb, *de* as instrumental verb, *etc*. while having taken on a grammaticalized function do not collocate with the other verb to the point of non-compositionality. The other verb retains its meaning as does the grammaticalized verb retain its grammaticalized functional meaning. A significant note with grammaticalized verbs is that they will collocate with most verbs in the language. Therefore *yɛ...ma* is substantively different from, say, *ɔyɛkyerɛ* found in example (154) of chapter three or any other non-compositional FL-ISVCs which do not include such grammaticalized verbs. We will offer some examples of the PL-ISVC *yɛ...ma* used in context showing its full verbal form.

27. Papa no re-yɛ adwuma a-ma Kofi.
Father DET PROG-do work CONS-give K.
'The father is working for Kofi.' (Agyeman 2002:73)

28. Ɔ-yɛ adwuma ma no.
he-do work give him
'He works for him.' (Osam 1994:227)

29. Araba a-n-yɛ asɔr a-m-ma Kofi
Araba COMPL-NEG-make prayer COMPL-NEG-give K.
'Araba did not prayed for Kofi.' (Osam 1994:229)

30. ɔ yɛ ma
+NOM do give
SVN: ɔyɛma 'doing for another'

Significantly, *ɔyɛmafo* 'agent, attorney' (similar to the more common *odimafo*) is attested in Christaller (1933) but not *ɔyɛma*. Also only 3.6% of P1 respondents were able to produce *ɔyɛmafo* when given the PL-ISVC *yɛ...ma*. In the questionnaire, the majority (33.9%) of respondents either stated that there is no SVN counterpart of *yɛ...ma* or that they were not sure (30.4%), yet the highest percentage that we encountered in our study of PL-ISVC nominalization, 23.2%, gave *ɔyɛma* as a possible SVN.

However, when asked the meaning of *yɛ...ma*, the responses were even more sparse with 41.7% of total P1 respondents indicating that they were not sure, 30.6% indicating that there is no meaning and a total of 52% of all participants abstaining from the item altogether.

On the converse side, when participants were actually provided with a hypothetical SVN form *ɔyɛma*, 43.1% of all respondents indicated that they found it to be acceptable; the only time in the questionnaire that respondents gave a majority 'acceptable' answer for a putative PL-ISVN.

For those who did not find *ɔyɛma* to be acceptable, only one respondent ventured to give an SVN form that he or she felt was better. The majority of respondents, 46.4%, were not sure and 10.7% said that there was none.

In looking at PL-ISVCs, *yiri...sram...so* was probably one of the most borderline in terms of categorizing. Initially *nyirisramso* was categorized in our preliminary collection of data as an FL-ISVC simply due to its formal utilization of a typical FL-ISVN base template form. However, when we look at other characteristics, most notably compositionality, we find that *nyirisramso(ɔ)* is fully compositional as is expected for PL-ISVCs. In relation to collocability, *sram* 'overflow' can be replaced with *boro* 'surpass'. Also in terms of flexibility, *yiri* can be reduplicated with *yiyiri*[11] and *sram* can be reduplicated with *sramsram* with no significant change in the composite meaning of the PL-ISVC. Thus, based on idiomaticity characteristics, *yiri...sram...so* is grouped with PL-ISVCs in spite of having an outward appearance of an FL-ISVC when nominalized.

31. N yiri sram so
+NOM flood (rise of water) flood top
SVN: nyirisramsoɔ 'inundation (rising and overflowing)'

To conclude this section, we were able to identify the 17 following PL-ISVNs in Akan in the four primary written sources consulted in the study:

Table 4: PL-ISVN representation in 4 major corpuses

	SVN	Christaller (1933)	Education Department of Ghana (1971)	Boadi (2005)	(Bannerman *et al.* 2011)
1.	(a/e)d(z)id(z)imee	yes	no	no	yes
2.	aforosian(e)	yes	yes	yes	no
3.	mfuanhwe	yes	no	no	no
4.	mfuahweɛ	no	no	yes	no
5.	ahurufi	yes	no	no	no
6.	ohuse	yes	no	no	no
7.	hwiegu(o)	yes	yes	yes	no
8.	akyetɔn	yes	no	yes	no

9.	siansiampuro	yes	no	no	no
10.	ɔsoware	yes	no	no	no
11.	ɔsoakyini	yes	yes	yes	no
12.	ntod(z)i(i)	yes	yes	no	yes
13.	ntɔdie	no	no	yes	no
14.	ntɔdiiɛ	no	yes	no	no
15.	tɔnkomda	yes	yes	no	no
16.	tɔnkoada	no	no	yes	no
17.	awunnyade(ɛ)/ ewungyadze	yes	yes	yes	yes
18.	ɔwunyan(e)	yes	no	no	yes
19.	(ɔ)wusɔ(ɛ)r(eɛ)	yes	yes	yes	yes
20.	ɔyɛma	no	no	yes	no
21.	nyirisramso(ɔ)	yes	yes	yes	no

4.3 GENERALIZATIONS ABOUT PL-ISVC NOMINALIZATION IN AKAN

Instances of PL-ISVC nominalization in Akan show a pattern. Some of the characteristics of PL-ISVNs are that they tend to either have attested flexible alternations themselves or be derived from flexible PL-ISVCs. Some FL-ISVCs/FL-ISVNs have literal counterparts as discussed by Barkema (1996) in relation to other types of idioms. Such an example is *hwiegu(o)* the PL-ISVN and *hwiegu(o)* the FL-ISVN which have disparate uses: one literal and one idiomatic. A similar case is *aforosian(e)* with glosses of ‘circulation (of blood)’ and literally ‘climbing and descending’.

Another generalization is that PL-ISVCs are in keeping with the actual temporal order of events in the real world. An example of this is *(a)didimee*, which cannot be *mee...didi* or ‘being full’ before *didi* ‘eating’. Iconicity in the form of temporal sequencing order, or faithfulness to the actual order of events in the real world, is the primary factor in morphosyntactic ordering of verbal

elements in Akan PL-ISVC nominalization as well as FL-ISVC nominalization.

PL-ISVN also may have two markers of nominalization within the SVN. When there are two markers of nominalization in the same SVN, typically they have the same phonological form. An example of this is *mfua(n)hwe(ɛ)*. In *mfua(n)hwe(ɛ)*, a similar argument is made to that of chapter three's examples such as *ntwantodo* and *mfantoho* where the "infix" is attributed to insertion based on particular phonological conditions of nasalization. In this line of argument *awunnyade(ɛ)* remains somewhat of an anomaly. If treated as a nominalization marker, the affix on *wu* is *a* +NOM while the affix of nominalization on *nya* is N +NOM. A possibility is that the N "infix" in *mfua(n)hwe(ɛ)* and *awunnyade(ɛ)* comes from an elided conjunction. In both (8) and (25) these "infixes" may simply be intervening nominalization markers occurring between V1 and V2, breaking up contiguity. A third possibility, more in line with the semantically null phonological explanation would be that in *awu(n)nyade(ɛ)*, for those speakers who have the inserted nasal, they are actually producing /ũ/, a nasal vowel, rather than /u/. If this is the case, then the vowel itself would provide the phonological conditions provided in other instances by nasalization effect on the vowel by C1 [+nasal]. Verification of this analysis would require further research and possible spectrographic phonetic analysis to determine whether /u/ or /ũ/ is actually being produced.

Another generalization is that SVNs cannot be subsumed under the category of Action Verb Nominalization since, in the case of *ɔsoware* 'a big

and tall person', both verbal elements may be stative verbal adjectives rather than action verbs. Stative SVNs cannot be said to display temporal sequencing phenomena in any appreciable manner as, here, the verbs in question do not relate to actions that happen in the real world, but rather to states of being. Although this is the case, verbal adjectives must occur in a particular order, mirroring the effects of temporal sequencing iconicity in SVC form as well as in SVN form as shown in example (19).

Collocation may occur between the DO of V1 selectively collocating with its own V2 expressing the Akan conceptualization of how various foodstuffs are consumed which would all typically be glossed as 'eat' in colloquial English. This was shown in this chapter in examples (21a-c). Thus, it may be argued that collocation within SVCs may extend to other elements within the construction even, at times, to the exclusion of one of the verbs.

Ntodi(i)/ntɔdie/ntɔdiiɛ is perhaps the strongest case in Akan for a distinction between institutionalization and semantic integration theoretically and empirically. In *ntodi(i)/ntɔdie/ntɔdiiɛ* we find that we are dealing with a highly institutionalized form due to sociolinguistic factors and the reality of members of the speech community. However, this has not led to an increase in semantic integration to the point that the meaning of either of the two verbs are lost either in the PL-ISVC or in the PL-ISVN as was the case in the more non-compositional FL-ISVCs. In *ntodi(i)/ntɔdie/ntɔdiiɛ* each originating verb keeps its original meaning.

In the next chapter, Chapter 5, we will take a look at the final type of SVC nominalization; that of Chaining Serial Nominalization (CSNs) derived from Chaining Serial Constructions (CSCs).

ENDNOTES

[1] For the sake of clarity, it is important to note that AND and TO are only relevant for the English glosses and NOT for Akan. As discussed in chapter one, Section 1.2.3.6, the conjunction insertion test shows that insertion of a conjunction in an Akan PL-ISVC leads to a distortion of meaning and/or an ungrammatical construction.

[2] Also in nominalization alone, di must undergo reduplication (e.g. *adidie*) (Osam 2012: Personal Communication).

[3] Perhaps some died by gunshot wounds, cannons, languishing in jails, hanging etc. and ways other than blood actually being shed, but counted in the concept of *mogyahwiegu(o).*

[4] Used of the catching and selling of persons into enslavement. *Kye* 'catch' has a homophone *kye* 'fry' which could be construed in an SVN as 'frying and selling' though, such an SVN was not encountered in any of the written sources consulted.

[5] Here we note that this may be marked in Akan with either *na* or *ma*, but of course not an infinitive as in English, although the infinitive provides the best gloss for English.

[6] See Chinebuah *et al.* (1976:22) for this terminology applied to stative Akan verbs.

[7] See Appah (2005,2005) for a thorough discussion of action nominals in Akan.

[8] Personal Communication.

[9] *Tɔ nko* or *tɔ nkom*, is defined by Christaller (1933) as ‘to fall or drop asleep, to doze, nod, be drowsy, sleepy’.

[10] (Osam 2012: Personal Communication)

[11] *Yiyiri* could be found in normal language usage such as *osuo atɔ ama asubɔntene nyinaa ayiyiri* ‘rain has fallen causing all the rivers to overflow’. While actual real-life instances of multiple water bodies overflowing do not occur often, when they do occur, such an example as the one given is thought to be acceptable.

CHAPTER FIVE

NOMINALIZATION OF CLAUSE CHAINING SERIAL CONSTRUCTIONS (CSCs) IN AKAN

5.0 INTRODUCTION

In this chapter, we will provide an overview and analysis of nominalization of Clause-Chaining also known as Chaining Serial Constructions (CCs or CSCs) in Akan. Unlike both FL-ISVCs and PL-ISVCs covered in chapters three and four, respectively, CCs are not semantically integrated nor are they lexicalized. According to Hellan following the terminology introduced by Osam (1994)

> In Clause Chaining, the number of VPs in the sequence has no upward bound, each verb has its full independent meaning, and linear sequence reflects temporal sequence, each VP expressing an event distinct from its successor. (Hellan *et al.*:1)

Chaining Serial Constructions tend to be full sentences and phrases that are suddenly "frozen" into a nominal. These nominals tend to be toponyms, anthroponyms, and various *denotata* and *designata (Morris 1971).* At times, they encompass allusions to proverbs. The main consideration is that they are not semantically integrated and therefore there is no special semantic connection between the verbal and other SVC elements. This is because each verb represents a separate event without collocationality or idiomaticity factoring into the equation.

In this chapter, we will look at attested Chaining Serial Nominalizations (CSNs) as well as questionnaire participants' responses to them when given the verbal elements of the CSC.

5.1 NOMINALIZED CSCs IN AKAN

In compiling a list of CSCs in Akan, the primary source consulted was Obeng (2001) as a thorough and comprehensive comparative treatise on names and naming systems throughout Africa with specific focus on Akan. It was found that many of the anthroponyms documented in Obeng (2001) are, in fact, Chaining Serial Nominals. In other words they were made up of CSC sentences and phrases that had been frozen with their entire syntactic structure intact including Tense/Aspect/Mood (TAM) markers, negation, motional verbal prefixes, *etc*.

The first CSC to be addressed is *bisa...ma* as extracted from CSN *Abisansuamansa* 'liberal, generous, bountiful, munificent'.[1]

1. a bisa nsu a ma nsa
   +NOM ask water +NOM give liquor
   SVN: abisa-nsu-ama-nsa 'liberal, generous, bountiful, munificent' (Christaller 1933:23)

Forty-nine percent of respondents indicated they were 'not sure' of any CSN that could be derived from *bisa...ma* while 27.5% of total P1 respondents stated that no SVN could be derived from it. *Abisansuamansa* is certainly a nominalized instance of CSC, however, CSNs are not easy to produce when simply given verbal elements. Certain characteristics that distinguish CSNs from other SVNs is that CSNs tend to retain more finite characteristics than other SVNs such as Tense/Aspect/Mood (TAM) markers, polarity markers and, of course DOs, RNs and/or PPs. A similar type of construction in English would be 'Her knowing math well helped' (Givon 2001b:26). In the English case, while we are obviously not dealing with a CSN, the noun, although it

acquires nominal aspects such as being possessed, many finite (verbal) characteristics are retained such as the adverb ‘well’.

As expected, when asked the meaning of the CSN derived from *bisa...ma*, no respondents were able to produce the gloss of *abisansuamansa* and none were able to produce the CSN.

The next CSC *brɛ...hunu* was extracted from CSN *Brɛkyirihunuade(ɛ)*, a praise name for the Supreme Being.

2. ø brɛ kyiri hunu adeɛ
+NOM bring behind see thing
SVN: brɛkyirihunuade(ɛ) ‘the All-knowing’ (Christaller 1933:48)

Again, we had absolutely no respondents able to produce the CSN *Brɛkyirihunuade(ɛ)*. We analyze this as the result of 1) Participants not having all elements of the CSC (*i.e.* DO1 and DO2) 2) Lack of prior knowledge of the CSN (familiarity as a factor) 3) Influence of the existence of a familiar nominal that, while not an SVN, uses similar sounding elements in compounding 4) Lack of semantic integration between the verbal elements. The majority of respondents, 41.8% selected *ɔbrɛhunu* with a majority, again, giving the meaning of *ɔbrɛhunu* as ‘toil for nothing/labor in vain’.

However, there was no respondent who was able to give a composite meaning of ‘the All-knowing’ or anything remotely close to it.

Consistent with the pattern for CSCs/CSNs, a majority totaling 57.4% were ‘not sure’ of the verbs from which *Brɛkyirihunuade(ɛ)* was derived.

When asked about the meanings of the individual verbal components of *Brɛkyirihunuade(ɛ)*, none of the respondents were able to produce the meaning ‘bring’.

However the 11 respondents, the equivalent of 40.7%, were able to correctly identify *hunu* as ‘see’ although the majority, 48.1% were ‘not sure’.

As we observed, respondents were more apt to give a familiar non-SVN, *ɔbrɛhunu*, composed of *brɛ* ‘be tired’ and *hunu* ‘empty, vain’, rather than positing the less familiar SVN *Brɛkyirihunuade(ɛ)* which is a nominalized CSC. This shows that it is relevant to demarcate differences between nominalization of FL-ISVCs, PL-ISVCs and, finally, CSCs.

The next CSC inquired about in the questionnaires was *da...brɛ*, extracted from CSN *daasebrɛ* ‘Ever generous’[2]. Although the nominal form is similar to what we saw in FL-ISVCs (with the exception of verbs being contiguous for the most part), we will see that V1 and V2 are not semantically integrated.

3. ø da ase brɛ
+NOM lay under tire
SVN: daasebrɛ ‘ever generous’ (Obeng 2001:81)

Sixty-eight percent of total P1 respondents gave the SVN as *dabrɛ*, apparently recognizing the SVC’s nominalized form.

However, we have an instance of homophone/homonym interference with 68.2% of them giving its meaning as ‘sleeping/resting place’ or some variation of it. While *brɛ* ‘be tired’ is a verb, *berɛ* ‘place/manner’ is not. Thus, the *dabrɛ* produced by respondents is rather an instance of V-N compounding rather than a case of SVN.

The next CSC included in the questionnaire was *di...boro*, extracted from *adi-aboro-wo-kora* ‘fungus’.

4. a di a boro wo kora
+NOM eat +NOM beat 2SG.POSS calabash
SVN: adi-aboro-wo-kora ‘fungi’ (Christaller 1933)

When the verbal elements of the CSN were given to participants, absolutely none of the participants were able to reverse-engineer *di...boro* back to the SVN from which it was extracted. Similar to what we observed for PL-ISVNs, the overwhelmingly dominant answers were ‘not sure’ with 49% of P1 respondents closely followed by ‘none’ with 27.5% in second place. No other response was even able to break into double-digits and the CSN form that we were looking for did not surface in any of the results whatsoever.

When asked the meaning of the nominalized form of *di...boro*, 43.3% answered ‘not sure’ while 36.7% responded ‘none’. Remarkably 60% of the 75 total P1 participants refrained from answering the item.

The next CSC *fa...hwɛ* was extracted from CSN survival anthroponym *Fawanihwɛ* ‘Just look at it (Just look on; don't celebrate yet because s/he may not survive)’.

5. ø fa w’ani hwɛ
+NOM take your eye look
SVN: fawanihwɛ ‘Just look at it (Just look on; don’t celebrate yet because he/she may not survive)’ (Obeng 2001:103)

The majority of respondents were not sure of any SVN that had verbs *fa...hwɛ* in it at 58.3% while 31.3% of respondents indicated that there is none. Significantly, not a single participant was able to produce *fawanihwɛ*.

When asked the meaning of a nominalized form of *fa...hwɛ*, not a single participant was able to give the attested meaning of *fawanihwɛ* as a survival anthroponym. The majority result was 58.6% who were not sure and 31.0% who said that there is no meaning.

When given the SVN, *fawanihwɛ*, 48.1% gave all constituent parts: *fa...w'ani...hwɛ*. In contrast, 33.3% only gave the verbal elements *fa...hwɛ*.

When asked the meanings of the individual verbs, only a literal non-idiomatic meaning was given by 84.8% of respondents.

The same thing was the case where 89.5% of respondents simply gave a literal meaning of *hwɛ* 'look/see/watch' rather than any composite meaning as we saw in FL-ISVCs.

The next CSC, *hu...bɔ*, form the components of the CSN *ahuabɔbirim* 'One-at-whose-sight-you-tremble'.

6. a hu a bɔ birim
+NOM see +NOM strike tremble
SVN: ahu-abɔ-birim 'One-at-whose-sight-one trembles' (Obeng 2001:78)

True to the pattern of all CSCs discussed thus far, with the exception of *ntensere*, absolutely no respondents were able to produce *ahuabɔbirim* from *hu...bɔ*. Further, 49.0% of respondents indicated that they were 'not sure' of any SVN that could be formed from *hu...bɔ* while 29.4% of respondents indicated that there is 'none'.

Similar numbers were reported for the meaning of a nominalized form of an SVN derived from *hu...bɔ* with 44.1% indicating that they were not sure and 23.5% indicating that there is 'none'. The responses such as 'scaring' indicate that the respondents were attempting to come up with an ISVC-type of meaning for *hu...bɔ* based on homophone *bɔ...hu* 'strike/cause fear' rather than attempting to add DOs in order to derive a CSN. From this general pattern, we can observe that respondents in the survey tend to view ISVNs in general and FL-ISVNs in particular, as more prototypical of SVN in Akan than instances of

CSN. This is likely because CSNs are not very ‘nominal’ in the first place in retaining erstwhile markers of TAM and polarity. According to Nordlinger and Sadler “In many languages dependent nominals and nominal modifiers may also be inflected for tense, aspect and mood interpreted with respect to the clausal predication” (2004:597). This is particularly the case in languages that typically use non-finite structures such as Chamicuro and Sirionó. In such languages these nominal TAM markers “contribute syntactic tense, aspect and mood features to the clause, but do not themselves have syntactically active TAM features” (Nordlinger and Sadler 2004:598). While this is not exactly the case in Akan, which does have finite clauses, it makes the point that TAM markers can be encoded through nominalization.

The similarity, however, is that CSNs are, in many ways, more verbal than nominal. With regard to this point, Obeng (2001) regularly transliterates the prefix *ɔ* +NOM when it occurs in CSNs as the 3SG.SUBJ pronoun ‘he/she’. We do not follow him in this as it is apparent in our extensive study of FL-ISVNs and PL-ISVNs that *ɔ* +NOM is derived from Noun Class 1 of the now-decayed pre-existing noun class system articulated by Osam (1993,1994). In the case of *ahuabɔbirim*, however, Obeng (2001:78) transliterates the first /a/ as a nominalization marker *a* +NOM while glossing the second as PERF, a perfective marker. Thus, for Obeng, there is a fine line of distinction between the two, although each marker seems to play the same role in relation to V1 as to V2. Because Obeng’s reasons for making the distinction are not made explicit, we lean towards transliterating both the same way rather than claiming one is +NOM and the other is PERF without any independent evidence for

such a distinction. We hesitate to categorize /a/ as PERF because even though *ahuabɔbirim* is derived from an SVC, it is no longer a verb, *per se*. In our analysis, /a/ is similarly derived from a PERF but is now in complementary distribution with the standard marker of nominalization, effectively taking its place since two separate markers of perfective and nominalization cannot co-occur. However, we do not rule out the possibility that /a/ could serve a dual role of both being a perfective marker and a nominalization marker at the same time; a "perfective nominalization marker" of sorts. At this point, however, lacking independent evidence for either analysis, for now, we will leave this as an area which still requires further research. Here, we treat /a/ as a marker of nominalization which is simultaneously applied to V1 and V2 in SVN and which is derived from PERF in both instances. In the way of cross-linguistic evidence for this type of analysis, it is worth noting that there is a similar identity between the perfective marker in Yorùbá negation /ì/ and the nominalizing marker of /ì/ in nominals derived from verbal sources.

When asked to produce the verbs from which the SVN, *ahuabɔbirim*, is comprised, 32.7% gave *hu...bɔ...birim*, 23.1% gave *ahu...abɔ...birim* and 17.3% simply gave *hu...bɔ*.

No respondents gave a composite meaning for the verbs from which *ahuabɔbirim* is derived. In fact, an overwhelming 81.8% of respondents simply gave a literal meaning of V1, hu 'see'. To make the contrast more clear, in chapter three, Section 3.2.3, when respondents were asked to give the meaning of the individual verb *gye* in *gyedi(e)*, the majority of respondents 45.2% gave the composite meaning as 'believe/have faith' compared to 38.7% of

respondents who gave the literal meaning of ‘receive/take’. Here, in CSC nominalization, 0% of respondents gave a composite meaning, because at the level of individual verbs, there is no semantic integration that ties V1 and V2 together. This leaves the option of simply giving the literal meaning of the individual verbs which we are seeing is the pattern time and time again when respondents decompose CSNs.

A different picture, however, was presented when asked of the meaning of *bɔ*. The majority of respondents (29.4%) in this case gave the meaning as ‘frighten’[3] or some close synonym in English. This is indeed a composite meaning, but not from a composite with V1. Rather, it is between V2, *bɔ*, and its nominal adjective (NA), *birim*. Christaller (1933) defines *bɔ birim* as ‘startle, start up with fright (esp. from sleep)’. Thus, as reflected in the responses to the questionnaire item, a verb and its nominal adjective can show idiomaticity and semantic integration effects to the exclusion of the other verb in the SVC.

The next CSN given was *ɔkafrafra* ‘fighter of multitudes’, attested as a political anthroponym.

7.	ɔ	ka	frafra
	+NOM	touch	mix

SVN: ɔkafrafra ‘fighter of multitudes’ (Obeng 2001:75)

Here, the primary responses for P1 were ‘not sure’ at 37.7% and ‘none’ at 20.8%. Thus to return to the idiomaticity characteristics discussed earlier, both the SVC and the SVN seem to be highly unfamiliar on the basis of questionnaire responses.

When asked the meaning of *ɔkafrafra*, absolutely none of the respondents were able to deduce the SVN form from the SVC elements. Based on questionnaire responses, therefore, *ɔkafrafra* appears to be highly unfamiliar. There is no semantic integration or other special relationship between *ka* and *frafra*, thus it is included amongst CSCs. This may beg the question of "What differentiates CSNs from FL-ISVNs?" At the end of the nominalization process, both are non-compositional since *ɔkafrafra* 'fighter of multitudes' is not readily deducible from the component parts *ka* 'touch' and *frafra* 'mix'. The answer lies in semantic integration.

In the case of *ka...frafra*, absolutely 0% of P1 respondents were able to deduce 'fighter of multitudes' from any SVN that could be derived from it. This is because there is no semantic integration in the minds of speakers that readily links the two verbs. We simply have a string of two verbs which occur in a Clause Chaining configuration which, when nominalized, are instantaneously applied as a referent for a real world entity.

When given the CSN and asked the verbs from which it is derived, 52% of total P1 respondents produced *ka...frafra* while 28% of total P1 respondents produced *ka...fra*, the non-reduplicated form.

In this case respondents simply gave literal and separate meanings for each verb without any semantic integration effects as we consistently saw for FL-ISVCs. Examples included 'say' at 41.7% of total P1 respondents, 'stir' with 16.7%, 'drive' with 8.3% and 'bite' and 'touch' at 4.2%. Others indicated that they were 'not sure'.

Similarly, when asked the meaning of *frafra,* only literal meanings of the verb were available, most prominently ‘mix’ with 80.6% of total P1 respondents.

The next CSC to be examined is *ka...kɔdu(ru)* extracted from CSN *kahyɛnkɔdu(ru).*

8. ø ka hyɛn kɔdu(ru)
   +NOM drive vehicle go arrive
   SVN: ka-hyɛn-kɔ-du(ru) ‘May darkness not catch up with you!’ (Obeng 2001:61)

True to the developing pattern, when presented with the verbal components of *kahyɛnkɔdu* absolutely no respondents whatsoever were able to produce the CSN when given the verbal elements.

The meaning of *kahyɛnkɔdu* comes from a fuller proverb:

9. Kahyɛn kɔdu ɛmma esum nto
   Drive-car go-arrive NEG-let darkness NEG-encounter

   wo kwan mu.
   2SG.OBJ road inside.
   ‘May darkness not catch up with you!’[4] (2001:61)

However, when only given the verbal elements *ka...kɔdu,* none of the respondents were able to give a meaning remotely approaching that of the attested CSN which is a proverbial name. Again, the highest percentage response was ‘not sure’ with 44.8% of total P1 respondents with ‘none’ following in second place with 31%.

When asked the verbs from which *kahyɛnkɔdu* is derived 51.9% of total P1 respondents chose *ka...hyɛn...kɔ...duru,* paralleling such responses for FL-ISVCs which included DOs, RNs and PP.

However, when asked the meaning of the verbs, all of the responses were literal with the largest percentage of responses coming as ‘drive’ at 54.5%, without any inclination towards a composite meaning as we saw in the case of FL-ISVCs. Thus, while respondents observably view all elements of the CSN as part and parcel of the SVC from which it is derived, this did not translate to them seeing the SVC as a composite whole with regard to meaning.

The same thing was the case for *kɔdu(ru)* where the majority of responses went to the, quite literal, ‘go arrive/reach’ with 56.3%.

The next case of SVN is *akoama* ‘doubling (used only in times of war)’.

10. a ko a ma
+NOM fight +NOM give
SVN: akoama ‘doubling (used only in times of war)’ (Christaller 1933:241)

It is given as a synonym of *mpem-anim* which is defined as ‘doubling, reduplication; double amount of a debt’. The restricted domain of the terms usage may have had an effect in its apparent obsolescence over time. *Akoama* has each verb marked for nominalization as typically seen in CSC nominalization. While there is non-compositionality at the level of SVN, there is no known semantic integration at the SVC level as CSCs typically include instantaneous nominalization of an entire sentence wholesale.

The next CSN which appeared in the questionnaire was *(ɔ)koforobo(ɔ)* ‘one who fights on rocky terrain’.

11. ɔ ko foro boɔ
+NOM fight climb rock
SVN: ɔkoforoboɔ ‘one who fights on rocky terrain’ (Obeng 2001:79)

The CSC verbs *ko...foro* were extracted from the CSN in order to see if participants would be able to produce the CSN *(ɔ)koforobo(ɔ)* from the verbal elements. 2% of total P1 respondents or 1 single respondent was able to produce *koforoboɔ*. The majority of respondents indicated that they were 'not sure' with a total of 49% of total P1 respondents and 18.4% responded that there is 'none'. As we saw in the case of relator nouns and direct objects with regard to FL-ISVCs, typically when the RN or DO is missing, respondents are not able to produce the SVN. So how, therefore, was the 1 respondent able to come up with *koforoboɔ* despite the effects of 1) the SVN in question being a CSN and 2) the DO being left out? The answer may be in a methodological concern whereby early in the questionnaire, participants are asked to give an SVN derived from *ko...foro* while later in the questionnaire they are given the CSN *(ɔ)koforobo(ɔ)* and asked to judge it for acceptability. This left the door open to respondents taking the item found later in the questionnaire and applying it to the item encountered earlier, perhaps skewing the more naturally produced results of the earlier item. Only 1 respondent in this case may have done this and because the questionnaire was done anonymously, there is no way to know for sure at this point. Another possibility is that this one respondents happened to know the SVN *(ɔ)koforobo(ɔ)* and was uninfluenced by the item appearing later in the questionnaire.

When asked the meaning of an SVN derived from *ko...foro* 48.1% of total P1 respondents were 'not sure' while 22.2% said there is 'none'. Although we had one respondent produce *koforoboɔ* none were able to give the expected meaning of 'one who fights on rocky terrain'.

When inquired about the verbs from which *ɔkoforoboɔ* is derived, 36.7% of total P1 respondents chose *ko...foro* while 28.6% chose *ko...foro...boɔ*.

Thus 85.7% of total P1 respondents gave the simple meaning of *ko* as 'fight' while 87.1% gave the meaning of *foro* as 'climb'.

The next CSN, *ɔkokyereahene*, is derived from CSC verbal elements *ko...kyere*.

12. ɔ ko kyere ahene
+NOM fight catch chiefs
SVN: ɔkokyereahene 'one who catches chiefs' (Obeng 2001:79)

As is the pattern for CSCs, no respondents were able to produce the CSN form from simply the verbal elements of the CSC. True to form, the majority response was 43.5% indicating they were 'not sure' and 32.6% indicating that there was 'none'.

Similar responses were logged when asked for the meaning of the CSN with 46.4% indicating that they were 'not sure' and 28.6% indicating that there is 'none'. Because there is no semantic integration evident between V1 and V2, each verb is taken at its literal face value. Thus, two (2) respondents gave a PL-ISVC type of nominalization meaning where each verb retains its own meaning both prior to and post-nominalization: 'fighting to catch'.

When asked to give the verbs from which *ɔkokyereahene* is derived, 37.5% of respondents indicated that they were not sure. The second position, usually occupied by the answer 'none', was taken by *ko...kyere* at 31.3%. Also, not characteristically higher-ranked were responses which featured the DO, *ahene*.

Again, only literal meanings were given since there is no semantic integration between *ko* and *kyere*. Thus, the meaning of *ko* was given from a majority of 61.3% of respondents.

Also, in contrast with *kyere...ahene*, *bɔ...birim* was shown to be semantically integrated to the point of collocationality, there is no such semantic integration between *kyere* and *ahene*, leaving only a literal, relatively one-dimensional meaning for *kyere* 'catch'

The verbal elements of the next CSC, *nya...kɔse* are also extracted from *Nyaamanekɔse* 'one called upon in times of trouble'.

13. ø nya amane kɔse
+NOM obtain problem go say
SVN: nya-amane-kɔse 'one called upon in times of trouble' (Christaller 1933:355)

We see that when given *nya...kɔse*, none of the respondents were able to produce the CSN. Of the 4.2% of total P1 respondents who attempted to give any response whatsoever, they attempted to give responses resembling an FL-ISVC type of nominal. Neither added the additional DO necessary to produce the full sentential CSN. The majority indicated that they were 'not sure' (63.8%) and the second greatest amount indicated that there was 'none' (31.9%).

When asked to give the meaning of any nominal derivable from *nya...kɔse*, only one respondent ventured to give the answer of 'counsellor'. The majority of participants abstained from the item at 50 participants (66.7% of the total). Of those who responded, 56.0% of total P1 respondents said 'not sure' and 40% said 'none'.

The next CSC *pɛ...yɛ* was extracted from CSN anthroponym *Pɛwoayɛdɛn* ‘Why should (I) look for you?’

14. ø pɛ wo a yɛ dɛn
+NOM look for you PERF do what
SVN: pɛwoayɛdɛn ‘why should (I) look for you?’ (Obeng 2001:100)

Consistent with other results for CSCs, respondents attempted to give an ISVN type of construction rather than considering the more articulated CSN constructions. In other words, although CSNs contain serial verbs, based on responses, they do not appear to be “prototypical” instances of SVNs. Rather, they tend to pattern as sentential nominalization requiring the respondent to happen to know the entire source sentence rather than simply the verbal elements. Thus, when given the verbal elements, it is very difficult for speakers to come up with the nominalized sentence on the basis of V1 and V2 alone. Respondents attempted to give a case of nominalized V-ADV compound *pɛyɛ* (31.4%) rather than trying to derive a CSN from the verbs given. Even still, the majority response was ‘not sure’ with 39.2% of all respondents.

Although the majority gave the answer of ‘not sure’ when asked of the meaning of the nominalized form of *pɛ...yɛ*, answers such as ‘perfection/completion’, ‘equality’ and ‘correctness’ are derived from the senses of the ADV *pɛ*.

When asked about the verbs from which *Pɛwoayɛdɛn* is derived, 52.2% of respondents were not sure, while 23.9% of respondents produced *pɛ...yɛ* as a response.

When asked the meaning of the individual verbs, again the majority response was ‘not sure’ at 50.0%. Only 21.4% of the total number of

respondents were able to produce ‘look for/search’. None of the responses went beyond a literal meaning of the individual verb to any type of composite meaning as we saw with FL-ISVC nominalization.

The same was true of the meanings given for *yɛ* with 56.0% of respondents indicating that they were ‘not sure’ and 32.0% giving the simple literal answer of ‘do’.

The next CSC is *te...sere*, which is derived from the proverbial name *ntensere* ‘Don’t laugh when you hear (of my misfortune)’.

15. n te n sere
NEG hear NEG laugh
SVN: ntensere ‘do not laugh when you hear (of my misfortune)’
(Obeng 2001:58)

Ntensere is interesting in that it features negation on both verbs in the CSC complex. Thus, although there is an *n* +NOM prefix which exists in Akan, the *n* +NEG in *ntensere* is not seen as a marker of nominalization but rather a marker of negation. We make the argument here that there is a separate slot for the marker of nominalization and a separate slot for TAM and polarity when retained in CSC nominalization. Further, when TAM/polarity is realized on the V1 in nominalization, nominalization markers are suppressed and are only realized as ø +NOM. Thus, not only are the affix of nominalization and that of TAM and polarity in separate slots, they are also in complementary distribution in Akan. Examples of TAM and polarity markers retained in nominalization are found in cases such as *ɔbaeankorɔ* ‘one who came and did not go’ where the initial marker of nominalization is *ɔ* +NOM while *a* +COMPL and *n* +NEG are preserved on the V2. Other similar examples include *ɔseranyɔ* ‘promise breaker’, *ɔserantɛɛ* ‘disobedient child/person’,

osusuamfahɔ ‘a thought or plan which could not be carried out’, *adi-amma-wo-ba* ‘a species of yam’, *ahunaniankansa* ‘lattice window/venetian blinds’.[5] We note here that the *-r-* in *ɔserantɛɛ* and *ɔseranyɔ* is likely attributed to the phenomenon of intrusive-r. Intrusive-r is a case of epenthesis. In non-rhotic dialects of British English, for example, such an r-insertion rule is seen as an over generalization that affects words ending in non-high vowels when that word is followed by another word beginning with a vowel sound (see Broadbent 1991; Gick 1999). In other words, a rhotic is used rather than a semi-vowel/glide or glottal stop in this particular phonologically conditioning environment. This appears to hold for the Akan case as well in these two specific examples where *se* ‘to say’ and *anteɛ* ‘did not listen’/*anyɔ* ‘did not do’ are subject to such an intrusive-r insertion, effectively separating the final and initial vowel of the respective morphemes in the SVN.

Although the majority of 41.2% of total P1 respondents indicated that they were ‘not sure’ of an SVN that could be derived from *te...sere* and 21.6% stated that there is none, 27.5% of respondents were able to produce the anticipated form *ntensere*. This is vastly different from the 0% of respondents we have seen from the previous responses. This could be attributed to a variety of factors such as 1) Lack of DOs or other SVC elements, thus, making the CSN form superficially similar to more common FL-ISVC type forms 2) Familiarity of the respondents with the CSC and/or CSN 3) Influence from later in the questionnaire where *ntensere* was provided and respondents were asked to provide the verbs from which it is derived.

When asked about the meaning of *ntensere*, however, only 6.5% of total P1 respondents were able to give an approximation of the composite meaning of 'don't tease'. The number one and two majority responses were 'not sure' at 35.5% and 'none' at 19.4%. This leads us to observe that even though 14 respondents were able to provide the SVN form *ntensere,* only two were familiar with or able to figure out the meaning of the SVN.

On the other hand, an interesting phenomenon occurred when participants were asked to provide the verbs from which *ntensere* is derived, 38.0%, provided *nte...nsere* while 32.0% provided *te...sere*. Thus, for majority of respondents, the negation is seen as a part of the SVC and not just the verbal elements.

When asked about the meaning of the individual verbs from which *ntensere* is derived, the top two answers were 'hear' at 40% and 'don't listen/hear' with 28.6%. Thus, for the most part, those who indicated that *ntensere* is derived from *nte...nsere* including negation reflected this in their definitions.

A similar split was observed in the case of the V2 whereby 57.1% of respondents gave the meaning as 'laugh' and 22.9% gave the meaning as 'don't laugh'. In *ntensere*, we see one of the characteristic features of CSN in that polarity from the finite expression is retained in nominalization. As we have also demonstrated, TAM may also be retained in nominalization in CSN. Thus along the continuum of finite – non-finite expressions as discussed in Givón (2001b:26), CSNs appear to be less 'nominal' and more finite than, FL-ISVCs, for example, which tend to shed off finite-like TAM and polarity.

To...pem was extracted from the praise name for a Saturday-born male: *Atoapem* ‘an unsurpassable point or thing’.

16. a to a pem
+NOM encounter +NOM collide
SVN: atoapem ‘an unsurpassable point or thing’ (Gyekye 1987:221-2)

When provided with *to...pem*, 54.2% of respondents indicated they were not sure of a nominal that could be derived from it. Meanwhile, 25.0% stated that there is no such nominal, writing ‘none’. By contrast, only 14.6% responded with *atoapem* or some variation of it.

Out of the 7 respondents (14.6% of total respondents), only 3 were aware of its meaning as an appellation of a Saturday-born male. Further, although appellation is the type of anthroponym it is, its actual meaning was not given. On the subject of the meaning of *Atoapem*, Gyekye (1987) writes:

> I accept Ɔkyeame Akuffo Boafo of Akropong-Akuapem's interpretation (interview: 8 July 1974) that the word is *atoapem*, a word that cannot be rendered straightforwardly in English. Etymologically, the word consists of two parts, *ato* and *apem*. *Ato* means to come to, to reach; and *apem* means the end or cutoff point, the stop point of anything or any action. *Atoapem*, then, means “that which is reached finally,” “that beyond which you cannot go,” “an unsurpassable point or thing.” Christaller (Dictionary, p. 384) says *apem* means (among other things) to reach; he translates the sentence *asɛm apem* as “it has come to an end.” Thus the temporal word *daa-apem* (or *daapem*, as it is usually written) means “the end of the days.” As applied to Onyame [...], the word *atoapem* may correctly be translated as Ultimate or Final; that beyond which nothing else is, perhaps implying that beyond which nothing greater is. (Gyekye 1987:221-2).

While we follow Gyekye’s final gloss as ‘an unsurpassable point or thing’, what is not clear is the verbal meaning given to *ato* and the nominal meaning given to *apem*. Similar to our above discussion of *ahuabɔbirim*, we would prefer a unitary treatment of the nominalization marker on V1 and V2 in the

absence of independent evidence calling for the two to be distinctly analyzed. Thus we render the basic meaning of *to* as ‘encounter’ and *pem* as ‘collide’, treating /*a*-/ as the marker of nominalization applied simultaneously on each when nominalization occurs and derived from PERF from the finite SVC. In the questionnaire item, 62.5% of respondents were ‘not sure’ of the meaning of a nominalized form of *to...pem* while 25.0% asserted that there is ‘none’.

When asked of the verbs from which *atoapem* is derived, 35.3% produced *to...pem*, while 21.6% produced *ato...apem*, retaining the erstwhile perfective marker.

When asked the meanings of the individual verbs from which *atoapem* is derived, 50% of respondents chose the meaning of *to* as ‘throw’. This is more in line with Danquah’s (1968:47, 200) definition of *atoapem* as ‘ever-ready shooter’, which Gyekye (1987:221) attributes to Danquah’s reading of the name as its Asante Twi dialectal variant, *Atoapoma*. As mentioned above, however, we follow Gyekye’s interpretation over Danquah’s. Notably, 23.3% of P1 respondents indicated that they were ‘not sure’ and 10% gave the meaning as ‘meet/reach/encounter’.

When asked the meaning of *pem*, 26.9% were ‘not sure’, 15.4% translated it as ‘against’ and 11.5% gave the meaning as ‘crash/collide’. An additional 15.4% were influenced by the homophone *apem* translating to ‘thousand’, which is not viewed as a viable answer to the item. While 15.4% chose ‘against’, a preposition in English, for our purposes, we preferred the meaning of ‘crash/collide’ as this interpretation better preserves the actual verbal meaning of *pem* in Akan.

Atotogyawe is only attested in Christaller (1933) but not in Education Department of Ghana (1971), Boadi (2005) or Obeng (2001). However, upon cross-referencing with Agyekum (1996) the word was found under euphemisms for epilepsy. Therefore, though the term seems to be restricted in its domain, it is, however, judged to be familiar despite being non-attested in the two more recent primary corpuses consulted. *Atotogyawe* is seen as being highly idiomatic and non-compositional however there is no semantic integration at the level of SVC. According to Agyekum (1996:176) *atoto-gya-we* is literally 'he who roasts fire to chew'. He gives the following etymological explanation: "Among the Akan it happens that epileptic patients normally fall down while sitting by the fire. They are normally found with some burns, hence the term *atotogyawe* (see Warren 1976)" (Agyekum 1996:176). *Toto...gya...we* is inflexible and collocationally closed. *Toto...gya...we* has characteristics of CSC nominalization such as the intervening DO and the lack of a concrete relation between *toto...we* as an abstract term in and of itself.

17. a toto gya we
    +NOM roast (repeatedly) fire chew
    SVN: atotogyawe 'epilepsy' (Agyekum 1996:176)

The next CSC *worɔ...fa* was found in CSN *ɔworɔkawafabatire* 'One who does the impossible' (The Awesome).[6]

18. ɔ worɔ kawa fa batire
    +NOM remove ring pass shoulder
    SVN: ɔ-worɔ-kawa-fa-batire 'one who does the impossible' (Obeng 2001:75)

Consistent with the pattern developed thus far, no respondents were able to come up with the full CSN when simply given the verbal elements *worɔ...fa*.

Similarly, the majority of respondents (57.7%) were not sure of the meaning of any CSN derived from *worɔ...fa* while 38.5% asserted that there is no meaning of such a CSN.

The majority of respondents indicated they were not sure of the verbs from which *ɔworɔkawafabatire* is derived. Interestingly enough, similar to FL-ISVCs we had 26.1% of total P1 respondents choose just the verbs *worɔ...fa*, while 15.2% selected every part of the SVC: *worɔ...kawa...fa...batire*. The distinction which is different from the semantically integrated FL-ISVCs is when it came to providing the meanings of the individual verbs, none of the respondents gave a composite idiomatic whole answer as we saw for FL-ISVCs. In fact, the majority of respondents indicated that they were 'not sure' with 43.5% of the total number of respondents.

The majority of total P1 respondents, 51.9% gave a literal meaning of *worɔ*, but not a composite meaning of *worɔ...fa*. This is because, unlike FL-ISVCs, there is no idiomatic composite meaning comprised by the two verbal elements. Non-compositionality is only achieved at the level of nominalization when the nominal becomes a referent.

Similarly, only literal meanings of *fa* are given by respondents with the 24% of total P1 respondents giving 'take' as the meaning of *fa*.

Awuakyɛ ‘one who dies on behalf of another’ is derived from the CSC *wu...kyɛ.* As has been seen of other instances of CSC nominalization, both V1 and V2 have nominalization markers.

19. a wu a kyɛ
+NOM die +NOM give as gift
SVN: awuakyɛ ‘one who dies on behalf of another’ (Obeng 2001:53)

When given the SVN form *awuakyɛ* ‘one who dies on behalf of another’, 40% of respondents were able to ascertain the verbs from which the SVN is derived: *wu...kyɛ*.

Of those who endeavored to answer, none of the respondents gave the composite meaning of the two verbs together, likely due to the lack of familiarity with the SVC itself. 41.2% gave the meaning of die for *wu*, while only 19.4% were able to produce a meaning of ‘give as gift’ for *kyɛ*. These findings, as well as the SVN form itself with nominalization markers on each verb pattern more after typical CSC nominalization.

To conclude this section, we treated the 18 following CSNs in Akan in the four primary written sources consulted throughout the study. In addition Obeng (2001) was consulted which focuses specifically with anthroponyms which, together with toponyms, form the bulk of CSNs in Akan.

Table 5: CSN representation in 5 major corpuses

	SVN	Chris-taller (1933)	EDG (1971)	Obeng (2001)	Boadi (2005)	Banner man (2011)
1.	abisa-nsu-ama-nsa	yes	yes	no	yes	no
2.	brɛkyirihunuade(ɛ)	yes	no	no	no	yes
3.	daasebrɛ	yes	yes	yes	yes	no
4.	adi-aboro-wo-kora	yes	no	no	no	no
5.	fawanihwɛ	no	no	yes	no	no
6.	ahu-abɔ-birim	no	no	yes	no	no
7.	ɔkafrafra	no	no	yes	no	no
8.	ka-hyɛn-kɔ-du(ru)	no	no	yes	no	no
9.	akoama	yes	no	no	no	no
10.	ɔkoforoboɔ	no	no	yes	no	no
11.	ɔkokyereahene	no	no	yes	no	no
12.	nya-amane-kɔse	yes	no	no	no	no
13.	pɛwoayɛdɛn	no	no	yes	no	no
14.	ntensere	no	no	yes	no	no
15.	atoapem	no	no	yes	no	yes
16.	atotogyawe (Agyekum 1996:176)	yes	no	no	no	no
17.	ɔ-worɔ-kawa-fa-batire	no	no	yes	no	no
18.	awuakyɛ	no	no	yes	no	no

5.2 GENERALIZATIONS ABOUT CSC NOMINALIZATION IN AKAN

CSCs can nominalize in Akan in a type of sentential nominalization. As such, CSCs are closer to the finite end of the non-finite – finite continuum, retaining aspects of TAM and polarity when nominalized. Traditional nominalization markers such as *a* +NOM, *ɔ* +NOM and *n* +NOM are in complementary distribution with TAM and NEG when formally retained in CSN. The erstwhile TAM and NEG markers rather displace the NOM markers.

CSCs nominalize somewhat haphazardly in the sense that some sentences, expressions and proverbs may make their way to become CSNs,

others may not. We also demonstrated that CSNs are typically what may be referred to as “frozen” Chaining Serial Constructions which have become referents to real world entities. Based on questionnaire responses, there is also a lack of familiarity with CSC/CSN forms causing respondents not to be able to “reverse-engineer” the CSN from the CSC. Consistently, the majority of respondents indicated that they are not sure of CSNs that could be derived from verbal elements of CSCs provided while others stated outright that there is none.

CSCs undergo instantaneous nominalization. We use the term instantaneously to differentiate between the process that FL-ISVCs undergo whereby they go from separate events, to collocations to lexicalized idioms and the process of CSNs. In the case of CSNs, there is no process where the verbs and/or other elements become semantically integrated; they simply comprise verbal components of a Clause Chaining sentence or phrase that is used as *denotatum* or *designatum*. As is the pattern for CSNs derived from CSCs, it seems speakers would have to already be familiar with the existence of a CSN in order to be able to produce it on the basis of a CSC. This is due to the relatively random nature of the CSC itself in that there is no collocation in place that one could use to intuit what another verb would be as was the case in PL-ISVCs. Further, there is no idiomaticity in place in the sense of the four idiomaticity factors seen in the case of FL-ISVCs. What we observe in CSNs is rather a “random” sentence, proverb, phrase or expression which happens to contain Clause Chaining which is instantaneously transformed into a nominal referent for any given person, place or thing in the real world.

For CSCs, there is no semantic integration at the CSC level and that non-compositionality comes in at the level of CSN. This is attributed as the reason why no composite meanings of V1+V2 were given as we saw in FL-ISVCs/FL-ISVNs. Rather, only literal meanings were given for the verbal elements of CSCs rather than combined idiomatic meanings. SVC semantic integration, therefore, seems to provide a "roadmap" to what the SVN form will be. When there is less semantic integration, there tends to be correspondingly less familiarity with the SVC form and, therefore, less ability of respondents to ascertain the correct SVN form.

In certain instances of CSC nominalization, there can be a separate collocation between V2 and the NA even when there is no semantic integration as in the case of *ahuabɔbirim*.

CSNs can also be interrogatives as in the case of *pɛwoɑyɛdɛn*. Thus, we see any sentence or question can be nominalized on demand either in full or abbreviated form as necessary for the speech community's requirement for a referential expression for a real world entity. Such referential expressions are idiosyncratic in meaning and their presence in the language is highly unpredictable.

In terms of issues that presented themselves during the course of the study, a main source of challenges was that of homophone interference as seen in case of CSCs *da...brɛ* and *brɛ...hunu*. Some of the challenges encountered in the study were attributed to:

1) Participants not having all elements of the CSC (i.e. DO, RN, etc.)
2) Lack of prior knowledge of the CSN (familiarity as a factor)

3) Influence of the existence of a familiar nominal that, while not an SVN, uses similar sounding elements in compounding
4) Lack of a semantic integration "roadmap" between the verbal elements leading to the common SVN form.

The primary methodological concern was that of intra-questionnaire influence whereby respondents may be asked to make a judgment about the correctness of a known incorrect/unattested form. The respondents may have then been influenced by seeing the incorrect form in applying it to another questionnaire item.

ENDNOTES

[1] Literally ‘ask-for-water-give-liquor’ or ‘one who gives wine when asked for water’.

[2] Literally ‘thanked until exhaustion’.

[3] For our purposes, generally, exact synonyms in the English glosses were grouped together, thus ‘frighten’ and ‘scare’, for example would be collapsed under one in order to get an accurate assessment of how respondents were looking at the meanings of the Akan verbs.

[4] With the connotation of ‘May a bad omen befall my enemy for his action toward me’.

[5] Due to the mixed aspects here, these are not regarded as true examples of SVNs like *ntensere* although they illustrate the point of complementary distribution made here. *Amma-m’ani-anwu* ‘species of yam’, *amma-annwo-koraa* ‘a quarrelsome person’, *ankoanna* ‘to be warlike (lit. if hasn’t fought, is sleepless)’ are seen as true examples of CSNs. It should be noticed that no other standard marker of nominalization such as *ɔ* +NOM, *a* +NOM, *n* +NOM can be present when TAM and polarity appear on V1.

[6] Literally ‘removes ring via shoulder’.

CHAPTER SIX

CONCLUSIONS AND LINGUISTICALLY SIGNIFICANT GENERALIZATIONS

6.1 STATISTICALLY/LINGUISTICALLY SIGNIFICANT GENERALIZATIONS

In looking at nominalization on the basis of semantic integration, we initially consulted the only known list SVCs categorized in this way in Osam (1994). While other authors use the concepts of semantic integration (see Agyeman 2002; Andenes *et al.* 2002; Hellan *et al.* 2003; Hellan and Dakubu 2010), they provide relatively few examples of such SVCs rather than a comprehensive list of them. We were initially struck by the fact that no nominalized form was found in written corpuses for any of the 28 PL-ISVCs given by Osam (1994:206-8) while all FL-ISVCs given generally have well-known nominal counterparts. When these PL-ISVCs were presented in P1 questionnaires, typically the majority response from speakers was that there was either no nominal form or that they were not sure whether a form existed or not. Of the speakers who felt that any of them could be nominalized, the highest percentage for any one item tended to not cross the threshold of 25% in terms of judgment of goodness as an SVN. Because of this, especially in contrast with FL-ISVCs, all of which had readily identifiable SVN counterparts, our initial hypothesis was that no PL-ISVCs would be nominalizable while all FL-ISVCs would be able to be nominalized. Upon consulting our four primary written corpuses, we further identified 690 putative

PL-ISVCs in total. Of these, we were able to identify the 17 PL-ISVNs discussed above. This is a total of 2.46% out of the 690 putative PL-ISVCs identified. This is in contrast to the initial 164 FL-ISVCs identified of which *ka...gu* and *bɔ...to...so* were found to either not have attested SVNs in written sources and/or to be unfamiliar to P1 and P2 speakers surveyed. Upon refinement of the FL-ISVC list, the list was whittled down to 146 distinct FL-ISVCs. This means 98.63% (144 out of 146) of FL-ISVCs identified were found to have SVN counterparts in contrast to 2.46% of PL-ISVCs which were found to have SVN counterparts. Thus, while our original hypothesis that PL-ISVCs cannot be nominalized and all FL-ISVCs can be nominalized was not borne out by the data, it appears that there is, nevertheless, a stark contrast between FL-ISVC nominalization and PL-ISVC nominalization in Akan.

With regard to CSC nominalization, questionnaire responses indicate that there tends to be a lack of familiarity with CSC/CSN forms causing respondents not to be able to "reverse-engineer" the CSN from the CSC. Consistently, the majority of respondents indicated that they are not sure of CSNs that could be derived from verbal elements of CSCs provided while others stated outright that there is none. Conversely, speakers tended to have comparative trouble in decomposing CSNs to find the CSCs from which they were derived.

Some of the major findings were the following: In certain instances of FL-ISVC nominalization the meaning of individual verbs is dependent on the SVC structure as a whole. It was viewed as a testament to the high level of semantic integration that respondents are able to agree on the definition of the

whole more than the individual parts due to prototypical non-compositionality of the FL-ISVC structure.

When faced with unfamiliar forms such as *mmɔtoso,* respondents seemed to either consciously or subconsciously replace the meaning of the unfamiliar *mmɔtoso* with the more familiar *mmɔtohɔ* on the basis of empirical experience with the latter and/or lack thereof for the former.

Semantic integration was found to extend beyond the verbal elements of the SVC to demonstratives, direct objects, (cliticized) postpositions and relator nouns when they occur as parts of the SVC. This phenomenon is similar to that of idioms and collocations which tend to require all elements of the idiom to be understood and intelligible.

The verbal elements in FL-ISVN instances tend to be contiguous in contrast with other SVNs like *mpaemuka* and *mfuanhwe*[1] which have intervening elements.

The case of *mpaemuka* in Akan demonstrates that the DO can remain in its prenominalized position indicating that Bodomo's observations are not universal. While the facts of Dàgáárè are not overtly stated to be universal, this counterexample from Akan may have implications towards Bodomo's use of contiguity as the basis of a theoretic analysis that complex predicates undergo operations as a single unit cross-linguistically. Contiguity, while common in FL-ISVC nominalization in serializing languages, is not the absolute rule for all of them as illustrated here by the case of *mpaemuka*.

Consistently, although respondents were asked to give only the meaning of the separate individual verbs from which an SVN is derived, they

regularly gave the composite meaning which demonstrates the tight semantic integration of the SVC components in the minds of speakers.

In cases of high semantic integration/lexicalization, it seems that the individual verb is difficult or impossible to interpret outside of the context of the other elements the verb collocates with.

There tends to be a malleability of base templates for nominalization in Akan. There are well-attested word formation rules that Akan and all other natural languages follow which show that for any given language with productive nominalization, nominalization follows regular rules of word formation established within the language.

Some FL-ISVCs/FL-ISVNs have literal counterfeit forms as discussed by Barkema (1996) in relation to other types of idioms. Such an example is *hwiegu(o)* the PL-ISVN and *hwiegu(o)* the FL-ISVN which have disparate uses: one literal and one idiomatic. A similar case is *aforosian(e)* with glosses of 'circulation (of blood)' and literally 'climbing and descending'.

PL-ISVCs are in keeping with the actual temporal order of events in the real world. An example of this is *(a)didimee*, which cannot be *mee...didi* or 'being full' before *didi* 'eating'. Iconicity in the form of temporal sequencing order, or faithfulness to the actual order of events in the real world, is the primary factor in morphosyntactic ordering of verbal elements in Akan PL-ISVC nominalization as well as FL-ISVC nominalization.

PL-ISVN also may have two markers of nominalization within the SVN. When there are two markers of nominalization in the same SVN, typically they have the same phonological form. An example of this is *mfua(n)hwe(ɛ)*. In *mfua(n)hwe(ɛ)*, a similar argument is made to that of chapter

three's examples such as *ntwantodo* and *mfantoho* where the "infix" is attributed to insertion based on particular phonological conditions of nasalization. Another case of epenthesis is the *-r-* in *ɔserantɛɛ* and *ɔseranyɔ* which is likely attributed to the phenomenon of intrusive-r.

SVNs cannot be subsumed under the category of Action Verb Nominalization since, in the case of *ɔsoware* 'a big and tall person', both verbal elements may be stative verbal adjectives rather than action verbs.

Stative SVNs cannot be said to display temporal sequencing phenomena in any appreciable manner as, here, the verbs in question do not relate to actions that happen in the real world, but rather to states of being. Although this is the case, verbal adjectives must occur in a particular order, patterning along the lines of the effects of temporal sequencing iconicity in SVC form as well as in SVN form.

Collocation may occur between the DO of V1 selectively collocating with its own V2. Thus, it may be argued that collocation within SVCs may extend to other elements within the construction even, at times, to the exclusion of one of the verbs.

CSCs are closer to the finite end of the non-finite – finite continuum, retaining aspects of TAM and polarity when nominalized. Traditional nominalization markers such as *a* +NOM, *ɔ* +NOM and *n* +NOM are in complementary distribution with TAM and NEG when formally retained in CSN. The erstwhile TAM and NEG markers rather displace the NOM markers.

CSNs are typically what may be referred to as "frozen" Chaining Serial Constructions which have become referents to real world entities. In the case of CSNs, there is no process where the verbs and/or other elements become

semantically integrated; they simply comprise verbal components of a Clause Chaining sentence or phrase that is used as *denotatum* or *designatum*.

It seems speakers would have to already be familiar with the existence of a CSN in order to be able to produce it on the basis of a CSC. This is due to the relatively random nature of the CSC itself in that there is no collocation in place that one could use to intuit what another verb would be as was the case in PL-ISVCs. Similarly, there is no idiomaticity in place in the sense of the four idiomaticity factors seen in the case of FL-ISVCs.

There is no semantic integration at the CSC level and that non-compositionality comes in only after nominalization. This is attributed as the reason why no composite meanings of V1+V2 were given as we saw in FL-ISVCs/FL-ISVNs. Only literal meanings were given for the verbal elements of CSCs rather than combined idiomatic meanings.

Semantic integration seems to provide a "roadmap" to what the SVN form will be. When there is less semantic integration and subsequent lexicalization, there tends to be correspondingly less familiarity with the SVC form and, therefore, less ability of respondents to ascertain the correct SVN form.

There can be a separate collocation between V2 and the Nominal Adjective even when there is no semantic integration as in the case of *ahuabɔbirim*.

CSNs can be interrogatives as in the case of *pɛwoayɛdɛn*. It appears that any sentence or question can be nominalized on demand either in full or abbreviated form as necessary for the speech community's requirement for a referential expression for a real world entity.

CSN referential expressions are idiosyncratic in meaning and their presence in the language is highly unpredictable.

6.2 METHODOLOGICAL CONCLUSIONS

Initially the primary work consulted in the attempt to find lists of FL-ISVCs, PL-ISVCs and CSCs was Osam (1994). While Osam (1994) may not have captured all the prototypical cases of SVCs in Akan, the work did provide the several ideas for the categorization of SVCs in Akan. Of these ideas, semantic integration as a basis for categorization seemed to point to more linguistically significant directions for Akan SVC nominalization. Semantic integration also seemed to be able to capture the most data in a meaningful way for the purposes of the typological and primarily descriptive goals set forth in this thesis.

While Osam (1994) does not provide all the prototypical cases of SVCs in Akan, the examples found in Osam tended to show a high degree of categorial prototype effects with regard to nominalization behavior and idiomaticity characteristics. From this initial list observations were made and the first hypotheses were developed; namely that all FL-ISVCs could be nominalized, no PL-ISVCs could be nominalized and CSCs are nominalized haphazardly. As mentioned in section 6.1 we were forced to withdraw absolutes such as all and none, however SVCs, by and large, patterned in ways consistent with those predicted.

The next step taken was to obtain native speaker judgments on the list of SVCs and to determine whether they could be nominalized. Questionnaires were developed with the goal of eliciting the most relevant data from subjects.

At this point, a decision had to be made whether to strive for breadth or depth. Essentially, this boiled down to creating a very short questionnaire in attempts to get as many respondents as possible for sheer number or to developing a more comprehensive questionnaire for the purposes of getting native speaker judgments of as much data as possible. The latter decision was chosen. Each respondent was therefore asked to provide data for 231 variables in the case of phase one (P1). This elicited 17,325 items from the 75 respondents in P1. While this approach provided a wealth of in-depth data, it may have had a role in scaring off other less dedicated survey participants as many only completed the first page before abandoning the questionnaire. We estimate that for P1 at least 500 questionnaires were distributed. If, hypothetically, the length of the questionnaire was shortened and all 500 questionnaires were returned, to get as many as the 17,325 items we would have to have only asked about 35 items on the questionnaire (roughly what was found on the first page). In P2, 25 elders were presented with 114 variables eliciting 2,850 items of data. Thus, in total, we received roughly 20,175 items, give or take. In our estimation, while the length of the questionnaire seemed to play a role in the amount of participants willing to return a completed questionnaire, the focus on amount of data rather than number of people gave us a more comprehensive view of patterns of serial verb nominalization in Akan.

Because questionnaire responses were to be written, our initial focus was upon finding relatively large concentrations of literate Akan speakers. As such, for P1, questionnaires were distributed primarily at Winneba (University of Education-Winneba) 17.9%, Accra (University of Ghana- Legon) 48.1% and Cape Coast (University of Cape Coast) 37.3%. However, this led to a

preponderance of data from youth and, as mentioned, only took into account those who were literate. Therefore a second phase was implemented focusing on non-literate elders from the three major literary dialects. The rationale for the implementation of the second phase was that elders may not only have a different perspective, particularly in the area of familiarity, but that non-literate elders may, in fact, have a deeper understanding of Akan. This is because, in many cases, this may be their only language and the language that they have used for their entire lives in various contexts, including for work. For P2, twenty-eight percent (28%) of the respondents (7 individuals in total) were from Koforidua (Asante Twi - Sukwaw, Bɛtom, Odwaa and Sorodae communities), twenty-four percent (24%) (6 individuals) were from Akuapem-Akropong (Akuapem Twi - Aboaasa community), twenty-four percent 24% (6 individuals) were from Iture (Fante), twenty percent (20%) (5 individuals) were from Kumasi (Asante Twi – Suame) and four percent (4%) (1 individual) were from Ekumfi Otuam (Fante). Of the Akropong Akuapem Twi speakers, one (1) was born in Akropong of an Asante mother and thus spoke both Akuapem and Asante and was interviewed separately in Accra.

In terms of issues that presented themselves during the course of the study, a main source of challenges was that of homophone interference, particularly in the case of CSC nominalization as discussed in chapter five. Indeed, several “mistakes” were made as a result of substituting the homophonous counterpart, typically from another part of speech, with the verb as seen in the case of SVC *fa...hyɛ*. Some of the challenges encountered were attributed to:

1) Participants not having all elements of the CSC (i.e. DO, RN, etc.)

2) Lack of prior knowledge of the CSN (familiarity as a factor)
3) Influence of the existence of a familiar nominal that, while not an SVN, uses similar sounding elements in compounding
4) Lack of a semantic integration "roadmap" between the verbal elements leading to the common SVN form.

The primary methodological concern was that of intra-questionnaire influence whereby respondents may be asked to make a judgment about the correctness of a known incorrect/unattested form. The respondents may have then been influenced by seeing the incorrect form later in the questionnaire and then applying it to another questionnaire item found earlier. These types of errors were confined to small numbers of participants and most commonly came from those who did not even give the effort to complete the entire questionnaire. By and large, the majority produced expected results. In cases where participants did not complete the questionnaire, a decision was made to require at least 50% of the questionnaire to be complete.

While it was a concern that some individuals in the P2 focus group would dominate the setting and variability of answers would be decreased, it was found that, for the most part, even among speakers of the same dialect, individuals were not hesitant to diverge from what others said. One of the significant differences in the implementation of P1 (written) and P2 (oral) was the feedback speakers gave to each other in P2. Interestingly, in the focus groups one of the Fante speakers initially felt that *koroyɛ* was more Fante than *nkabom'*. However the input of another speaker which highlighted a connotational distinction that *koroyɛ* refers more to unity of thought while *nkabom'* can refer to physical unity without the implication of each person

being on the same page. The original speaker who proposed *koroyɛ*, in turn, saw the logic of the second participant's argument and agreed that this was indeed the case. This was a type of clarification that only became possible in the oral interview style of P2 focus groups which was absent in the primarily written P1 questionnaires. Thus, inter-respondent feedback during interviews played a part in getting some degree of refinement and agreement amongst speakers.

6.2.1 The Role of Identity in Native Speaker Judgments

The case of *koroyɛ* mentioned in section 6.2 brings up the role of identity in native speaker judgments of goodness of example. Recall that one speaker initially, while familiar with *nkabom*, felt that *koroyɛ* was more Fante than *nkabom'* due to the fact that *koroyɛ* is more specific to Fante while *nkabom'* is seen interdialectally including amongst Asante Twi speakers and Akuapem Twi speakers.

A similar scenario was found amongst Akuapem-Akropong speakers who felt that the nominal *nnyetomu* sounded to them like the Akyem dialect of Akan. Thus, while possibly familiar with the form, the respondents' own dialect and identity played a role in judging items given. In other words, the feeling was that while a form may be familiar within other dialects of Akan, it was judged to not be so in the dialect in question. While Fante speakers appeared to be split between *ngyentom'* and *ngyetom'*, one of the Kumasi speakers produced *nnyentom(u)*. Although the Kumasi speaker produced the form, he noted that it "doesn't sound Twi" to him. This also highlighted a difference between the Koforidua Asante speakers who stated that no nominal

is possible for *gye...to...mu* and the Kumasi Asante speakers who produced three varieties of forms.

With regard to nominalization, it was also found that across dialects, to get a certain meaning, some SVCs had to remain finite, while others could be nominalized. One such instance was in the case of *yi…ma.* Amongst the majority of Akuapem Twi speakers, once *yi...ma* is nominalized, it can only carry the meaning of donation. Similarly, Fante speakers stated that to get the meaning of betrayal, it has to remain in its finite form. One Akuapem speaker, also a speaker of Asante Twi, found *yima* to be fine with either the meaning 'betrayal' or 'donation'. This was also seen when a distinction was made by one of the Fante participants who stated that *mfantoho* with prefix carries the meaning of example whereas *fatoho* carries the meaning of comparison.

In short, nuances of the role of identity in familiarity judgment came to the fore in P2 in ways not possible in P1.

6.2.2 The Role of Attitudes/Perception in Nominalization

Another factor in responses obtained may have also been speaker attitudes. This came out particularly in the case of *fa...firi*. Part of the issue seemed to stem from the idea that it is more socially/morally correct to *fa...kyɛ* 'forgive (completely)' than to *fa...firi* 'forgive (but with conditionality which may be brought back up later)'.

A similar case may be seen in the case of a Fante speaker who could only have *Ɔkyɛso* in the context of a praise name for the Supreme Being and not as 'a gift for several' or anyone who 'is generous towards all'. The respondent in question seemed to find it sacrilegious to refer to an ordinary

human being as *Ɔkyɛso*. Another respondent had the opinion that as long as one doesn't show favoritism and provides for all they could be *ɔkyɛsoe* and that the term does not apply only to the Supreme Being.

This brings up the idea that attitudes and perceptions towards particular words may play a role in what a speaker deems to be acceptable or familiar.

6.3 THEORETICAL IMPLICATIONS AND CONCLUSIONS

The distinctions between how FL-ISVCs, PL-ISVCs and CSCs nominalize show the reality of categories based on semantic integration through observable behavior borne out in data. These categories harken back to our discussion of cognitive economy as an intrinsic psychological motivation for the natural development of categorization. It seems that part of the native speaker's knowledge of Akan is how to make nouns from serial verbs with the production of such nouns or lack of production of nouns being based on degrees of semantic integration. We recall that according to Rosch, "To categorize a stimulus means to consider it, for purposes of that categorization, not only equivalent to other stimuli in the same category but also different from stimuli not in that category" (Rosch 1978:28-9). We find that FL-ISVCs pattern together, PL-ISVCs pattern together and CSCs pattern together when subjected to nominalization. In this sense, the current thesis serves as a type of extended test for observable linguistic behavior of Akan serial verbs. We mentioned that there appears to be a cline or scale of lessening conceptual distance as shown in Figure 5 from separate sentences all the way to FL-ISVCs. New ISVCs may be created by movement along the cline or by analogy

with forms that have moved along the cline on the basis of word formation rules and base template forms. According to Rosch "a driving force behind categorization is on the basis of recognized or attributed similarity or dissimilarity. This is often accomplished through analogy. Through such analogies, the organism creates categories that work to its advantage such as knowing 'as many properties as possible from knowing any one property'" (Rosch 1978:28-9). In the current study, the most relevant property in SVC nominalization is that of semantic integration and lexicalization.

This finding is consistent with prototype theory in that it was noted that a central purpose of categorization is:

> […] to reduce the infinite differences among stimuli to behaviorally and cognitively usable proportions. It is to the organism's advantage not to differentiate one stimulus from others when that differentiation is irrelevant to the purposes at hand." (Rosch 1978:28-9)

This is found in the Idealized Cognitive Model with Family Resemblances involving resemblances among models in each of the three relevant categories delineated. For Rosch, categorization, in any natural context, is wedded to the function for which it is intended. In the case of this thesis, the function is to understand how and why nominalization of serial verb constructions takes place as it does in Akan.

A contribution to the theoretical aspect of Akan SVN was in the extension of the concept introduced by Osam that FL-ISVCs function as lexicalized idioms. In doing so, we adopted criteria of evaluating idioms on the basis of degrees of idiomaticity. Secondly we applied criteria of analyzing PL-ISVN on the basis of collocationality.

An original observation was also made that higher degrees of semantic integration is concurrent with lower degrees of iconicity. It was also found that

although ISVCs are seen as unitary events, they show linear ordering harkening back to earlier stages through which prototypical ISVCs have come; namely from CSC to PL-ISVC to FL-ISVC.

With regard to the age old debate of whether nominals are based on syntax or whether they are part of the lexicon, we found that CSNs are more syntactic while ISVNs are based more on morphosyntax and semantic considerations.

Finally, with regard to fuzzy boundaries, we found in this study that 1.37% of FL-ISVCs identified in the study could not be nominalized while approximately 2.46% of PL-ISVCs identified could be nominalized. These relatively statistically insignificant figures can be accounted for within prototype theory as those forms which are located at the fuzzy boundaries that show the least prototype effects with regard to expected nominalization behavior. Thus, again, the utility of PT appears to be borne out by the data at hand.

6.4 FUTURE RESEARCH DIRECTIONS

There are many directions to which the current study of SVC nominalization in Akan could be taken. One such direction is comparing serial verb nominalization with other types of nominalization in Akan including V-N, V-A, etc. Such a comparison could possibly solidify our knowledge of how collocations nominalize across syntactic categories in Akan to see similarities and differences.

Another issue requiring further research is the origin and nature of prefixes used for nominalization in Akan. In reference to the origin of prefixes,

one place of contention is in SVNs without overt prefixes currently and whether prefixes were lost due to decay of the former noun class system in Akan or whether there was a null prefix as found in some Bantu languages. Another area requiring further research is whether there is an identity between the Past Perfect and the nominalizing prefix /a-/ in Akan.

Another area requiring further research is an extension of the current study to look at nominalizing suffixes particular to human beings with *ɔ-...-ni* or *ɔ-...-fo* as prototypical for the singular and *a-...-fo* or *N-...-fo* for the plural. An additional area of interest is the nature of SVNs identified in contexts such as predicate clefting structures and relativization.

An area which, similarly, could be treated in future research is in the development of tests to determine true instances of SVC nominalization as opposed to homophones/homonyms from other parts of speech. This is particularly the case in examples like *kasakoa* 'idiom' where both *kasa* 'language' and *kasa* 'speak' exist. The development of sound tests could help us more precisely separate true cases of SVN as opposed to V-N compounding.

Another area of interest would be in testing strictly novel SVN forms from metalanguage works for idiomaticity characteristics, collocationality, semantic integration and lexicalization with native speakers.

An area requiring further research is in FL-ISVCs and PL-ISVCs with intervening nasal elements between V1 and V2. In the current study, we leaned towards an analysis that dealt with the intervening element as phonologically conditioned in a nasal environment. While this may be the case verification of this analysis would require further research and possible spectrographic

phonetic analysis to determine whether, in all instances, there is indeed a nasal environment which can trigger such cases of epenthesis.

Finally, as collocationality was dealt with in this thesis, a future direction would be towards a comprehensive work whereby collocationality is tested throughout the lexicon of Akan with specific focus on SVCs.

While the current study has produced interesting linguistically significant generalizations, methodological conclusions and findings with theoretical implications, there is much work left to be done on Serial Verb Nominalization in general and on SVN in Akan specifically. Although we feel as though we have just scratched the surface in this intriguing field of research, at the same time, we feel as though we have made a significant contribution to our understanding of how serial verbs nominalization works in Akan.

ENDNOTES

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[1] The intervening -*n*- is again thought to be a phonological phenomenon conditioned by the initial C1 nasal or nasal vowel.

APPENDIX ONE

QUESTIONNAIRE

This questionnaire is for the purposes of academic research into language.
Answers provided will be held in strict confidence.

This questionnaire is to establish categorization of serial verbs. This questionnaire (1) asks you to provide corresponding noun forms for serial verb forms and (2) secondly you are asked to provide verb forms for nouns along with English translations. Finally (3) you are asked to judge correctness of noun forms.

1. Gender: Male……Female……
2. Age Group: 0-20 …… 21-40 …… 41-60 …… 60+ ……
3. Occupation: …….....
4. Highest Academic Qualification: JHS…… SS…… Bachelors…… Masters …… Doctorate ……. Other (Please Specify) ……..
5. Place/Institution: ……..……
6. Are you a native speaker of Akan? (Please specify dialect(s)) Twi …… Fante …… Akuapem …… Other (Please specify): ……..
7. If you are not a native speaker, what is your native language? ……
8. Do you speak other languages? If so please list them …….

A. Please make a noun out of the following serial verbs. Also give the meaning of the noun. If there is no corresponding noun form, please write <u>NONE</u>. If you are not sure, please write <u>NOT SURE</u>.

VERB FORMS	CORRESPONDING NOUN FORM	MEANING OF NOUN
yi ma		
gye di		
ko gu		
su frɛ		
bɔ to so		
fa kyɛ		
bɔ gu		
ka gu		
gye to mu		
bɔ to hɔ		
twa to so		
sɔ hwɛ		
ka kyerɛ		

ka bɔ mu		
su ma		
yɛ tia		
to twene /to kyene		
fa to ho		

B. Please make a noun out of the following serial verbs. Also give the meaning of the noun. If there is no corresponding noun form, please write <u>NONE</u>. If you are not sure, please write <u>NOT SURE</u>.

VERB FORMS	**CORRESPONDING NOUN FORM**	**MEANING OF NOUN**
to bɔ		
fa hyɛ		
hwie gu		
pia bɔ		
tow wɔ		
fa gu		
noa ma		
fa soma		
ma hwe ase		
fa yɛ		
yɛ ma		
fa brɛ		
ma kɔ		
fa ma		
fa sie		
fa to		

C. Please make a noun out of the following serial verbs. Also give the meaning of the noun. If there is no corresponding noun form, please write <u>NONE</u>. If you are not sure, please write <u>NOT SURE.</u>

VERB FORMS	**CORRESPONDING NOUN FORM**	**MEANING OF NOUN**
di boro		
ka frafra		
pam sɛn		
ko foro		
ka kɔdu		
bisa ma		
da brɛ		
worɔ fa		
brɛ hunu		
nya kɔse		
te sere		
hu bɔ		
ko kyere		
pɛ yɛ		

fa hwɛ		
to pem		

A. Please provide the serial verbs from which these nouns are derived and the meanings of the individual verbs. If there is no corresponding verb form, please write <u>NONE</u>. If you are not sure, please write <u>NOT SURE</u>.

NOUN FORM	**VERB FORMS**	**MEANING OF EACH VERB**
oyima		
gyidie		
nkoguo		
sufrɛ		
mmɔtoso		
fakyɛ		
mmɔguo		
mmɔtohɔ		
ntwatoso		
nsɔhwɛ		
ɔkakyerɛ		
nkabom(u)		
ɔyɛtia		
mfatoho		
awuakyɛ		

B. Please indicate acceptability of the following noun forms by writing <u>A</u> for <u>ACCEPTABLE</u> or <u>U</u> for <u>UNACCEPTABLE</u> in the ACCEPTABILITY column. If not acceptable, please write the correct form below in the far right column. If there is no acceptable form, please write NONE. If you are not sure, please write NOT SURE.

NOUN FORM	**ACCEPTABILITY**	**CORRECT FORM**
ntobɔ		
mfahyɛ		
hwiegu		
mpiabɔ		
ntowɔ		
mfagu		
nnoama		
mfasoma		
ntowɔ		
ɔmahwease		
ɔfayɛ		
ɔyɛma		
mfahyɛ		
ɔmakɔ		
ɔfama		
ɔfasie		
mfato		

C. Please provide the serial verbs from which these nouns are derived and the meanings of the individual verbs. If there is no corresponding verb form, please write <u>NONE</u>. If you are not sure, please write <u>NOT SURE</u>.

NOUN FORM	VERB FORMS	MEANING OF EACH VERB
kahyɛnkɔdu		
fameyɛ		
kɔkɔboa		
ntensere		
koankobi		
ɔworɔkawafabatire		
brɛkyirihunuadeɛ		
ɔseadeɔyɔ		
ɔkafrafra		
ɔkoforoboɔ		
ahuabɔbirim		
akokyereahene		
pɛwoayɛdɛn		
fawanihwɛ		
sankɔtie		
atoapem		

Meda ase. Thank you for your time and consideration in filling out this questionnaire.

Please return this questionnaire to the person who gave it to you or send to:

Department of Linguistics
c/o Obadele Kambon
University of Ghana-Legon
Legon, Accra, Ghana, West Africa

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