

## NATURAL SEMANTIC METALANGUAGE OF AKAN

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### Abstract

The Natural Semantic Metalanguage (NSM) approach to language studies has been applied to languages such as English, French, Russian, Malay, Spanish, Italian, Arabic, Japanese, Chinese, and Korean. The indigenous languages in Africa that have gained scholarly attention in NSM studies are Ewe, Fulfulde, Amharic, Likpe, Wolof, Giryama, and Igala. Akan, the most widely spoken language in Ghana, has not been explored. This paper explores the extent to which the translation equivalents of the set of semantic primes are expressible in Akan, with special reference to the Asante Twi dialect. Sentences or sentence fragments that exemplify the allowable grammatical contexts of the NSM primes were used as data. The claim in NSM research is that semantic primes are universal or near-universal meanings that can be expressed as lexical units or morphemes in every language. We found that in Akan, almost all the lexical equivalents correspond in a straightforward manner with the English primes and their syntactic frames. However, the semantic prime *MOMENT* seems problematic to posit and thus, needs further investigation. The set of NSM semantic primes in the Asante dialect of Akan can serve as a valuable tool for descriptive linguists, especially semanticists, to analyze Akan culture-specific meanings and test their semantic equivalence with the corresponding vocabulary in English and other languages.

**Keywords:** *semantic primes, meaning, lexical semantics, Akan, translation, NSM*

Wɔ de Natural Semantic Metalanguage (NSM) adesua a ye nhyehyemu wɔ kasa hudoo pii te see Brɔfo kasa, French kasa, Russia kasa, Malay kasa, Spanish kasa, Italy kasa, Arabic kasa, Japanese kasa, Chinese kasa, ene Korea kasa. Wɔ abibriman mu, wɔ de NSM a ye hyehyemu wɔ mmusuakuo mu kasa hodoo bi te see Ewe, Fulfulde, Amharic, Likpe, Wolof, Giryama, ene Igala. Nanso, wɔ Akan kasa a nnipa dodoɔ pii ka wɔ Ghanaman no mu dee, saa nhyehyemu wei enko so, be si nne. Saa *krataa* yi ye hyehyemu a ehye se nea wɔ ka wɔ Brɔfo Kasa mu se “*semantic primes*” no wɔ nkyereasea koro no a wɔ Akan kasa mu, me kyere Asante Twi. Ye de nsemfua a ede Akan kasa mmra so na eye ngyenasoo. NSM nhyehyemu fa pim ne se, nea wɔ ka wɔ Brɔfo kasa mu se “*semantic prime*” no, wɔ nkyereasea wɔ kasahodoo a ewo wiase afana nyinaa, na kasahodoo no ara wɔ nsem a wɔ de gyina ho ma nea wɔ ka wɔ Brɔfokasa mu se “*primes*” no ho. Yen nhyehyemu no kyere se, nsem ne msemfua wɔ Akan kasa mu wɔ kyereasee koro no ara wɔ Brɔfo kasa mu efa nea wɔ ka wɔ Brɔfo kasa mu se “*primes*” ene “*syntactic frames*” no ho. Nea ebe hia nhyehyemu paa ene se nea ye be kyere saa “*prime*” yi a wɔ ka wɔ Brɔfo kasa mu se *MOMENT* wɔ Akan kasa mu. Yen nhyehyemu yi be boa won a wɔ ye nhyehyemu fa kasahodoo ho, se nea wɔ be tu mi a ye mpensenpensemu afa Akan kasa ho, ne titriw ne se ne wɔ be kyere Akan nsemfua wɔ Brɔfo kasa ne kasahodoo pii mu.

### 1. Introduction

The Natural Semantic Metalanguage (NSM) was developed by a group of researchers led by Anna Wierzbicka and Cliff Goddard. The basic premise of NSM is that all languages share a set of irreducible and indefinable core meanings which can be used to describe languages. Over the past five decades, NSM researchers have employed universal or near-universal concepts to capture culture-embedded meanings and complex lexical meanings from many domains, and also to describe culture-specific norms, values, and speech behaviours (Wierzbicka, 1972, 2021; Goddard & Wierzbicka, 1994, 2014). These universal or near-universal concepts are known as “*semantic primes*”. The choice of the expression “*semantic primes*” suggests that they form a controlled vocabulary of conceptually simple and intuitively intelligible meanings (Wierzbicka, 1996). That is to say, they cannot be further explicated without resulting in circular and obscure definitions.

The primes are currently a set of 65 cross-translatable words which include ‘good’, ‘bad’, ‘big’, ‘small’, ‘do’, ‘happen’, ‘want’, ‘feel’, ‘know’, ‘say’, and ‘think’ (Goddard, 2017). With these semantic primes, one can formulate precise and non-Anglocentric linguistic analyses or communicate about many topics without using Anglocentric cultural terms because the primes have translation equivalents in all languages of the world (Goddard & Wierzbicka, 2002; Goddard, 2008a; Goddard, 2018). Many studies have shown how one can identify the semantic primes of a language while others have focused on the issues related to eliciting them during fieldwork (see Wierzbicka, 1994; Goddard, 2002, 2008b, 2011; Peeters et al., 2006; Goddard & Wierzbicka, 2014).

Previous NSM studies have shown the cross-translatability of the semantic primes in languages such as French, Finnish, Russian, Malay, Spanish, East Cree, Polish, Danish, Italian, Koromu, Arabic, Japanese, Chinese, Vietnamese, Korean, and Denesúliné (see e.g. Priestly, 2002; Ye, 2004; Yoon, 2008; Levisen, 2013; Holden, 2019). Among the many indigenous languages in Africa, the NSM framework has been somehow applied to Amharic (Afroasiatic), Fulfulde, Likpe, Wolof, Giryama, and Igala (Niger-Congo) (see Ameka & Breedveld, 2004; Amberber, 2008; Ameka, 2015; Krijtenburg & de Volder, 2015; Brise, 2017). Ewe, a Kwa (Niger-Congo) language is the only Ghanaian language that has gained substantial scholarly attention in NSM studies (see e.g. Ameka, 1994, 2017)<sup>1</sup>. Akan, one the most widely spoken languages in Ghana, has not been explored. The present paper fills this gap in the literature by presenting a broad overview of the combinatorial properties of the NSM primes in Akan.

Akan belongs to the Kwa sub-group of the Niger-Congo language family. It is made up of two major dialects, namely Twi and Fante. There are other dialects of Akan including Kwawu, Akwamu, Bono, Akyem, and Wassa, however, only the Twi and Fante dialects have gained literary status (Abakah, 2005a). These dialects are taught as a subject in educational institutions from elementary to university level. Akan is spoken in different socio-economic, cultural, entertainment and religious contexts (Dolphyne, 1988; Marfo, 2005). The Akan speaking people are mainly found in the Ashanti, Eastern, Central, Western, Western North, Bono East, Ahafo, Brong Ahafo, and Oti regions of Ghana (Agyekum, 2016; Amfo et al, 2018). It is worth mentioning, however, that in present-day Ghana, Akans can be found in almost all the sixteen regions of Ghana due to migration and/or inter-ethnic marriages with an appreciable percentage of the population learning to speak Akan as a second language.

Owusu (2014) reports that the language is currently spoken by about 47.5% of the Ghanaian population, which includes both L1 and L2 speakers. The language is one of the lingua franca in Accra, the capital city of Ghana, although the Ga language is indigenous to the region. Thompson and Anderson (2019) attribute this phenomenon to the cosmopolitan nature of the country's capital. It should be mentioned however, that the variety spoken in the country capital has been described as a koine (Yankson, 2018). Moreover, research shows that in Ghana, Akan is the most frequently used indigenous Ghanaian language in traditional media such as radio and television, and on social media platforms (Thompson, 2019).

This paper aims to provide an inventory of the Akan equivalents of the current version of the NSM semantic primes. This is needed to ensure that (1) complex meanings in Akan can be intelligibly rendered in terms of simpler ones when necessary and (2) Akan communicative norms can be described in a way that makes the descriptions easily comprehensible to cultural insiders and cultural outsiders alike. Studies show that Akan culture-specific terms, such as *ɔkyeame*, *apuu*, *kwasea*, *sebe*, and *tweaa* do not directly match the meaning of their common English translation forms as they vary in certain respects (Gyekye, 1996; Thompson, 2019, 2020). With Akan semantic primes in hand, one can capture the semantic content of such terms to make explicit their lexical meanings in ways which are more consistent with Akan cultural norms and values.

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<sup>1</sup> Lexical equivalents of English primes in Ewe and the non-African languages mentioned above can be found on the NSM Homepage <https://intranet.secure.griffith.edu.au/schools-departments/natural-semantic-metalanguage>.

Additionally, in a cross-linguistic semantic analysis, one can test the semantic equivalence of such culture-specific terms with their corresponding terms in other languages.

This paper, to the best of the authors' knowledge, is the first study of semantic primes in Akan. Therefore, the paper not only serves as a springboard for any future study on Akan that uses the NSM approach as a methodological tool but also for any research that involves the use of Akan semantic primes in a cross-linguistic semantic analysis. In a broad sense, the NSM of Akan will be of interest to descriptive linguists, especially semanticists and Africanists. It aspires to contribute to Akan research in areas such as lexical semantics, linguistic typology, ethnography, lexicography, ethnopragsmatics, and language documentation.

The rest of the paper is organized as follows. The Akan language is introduced with some of its relevant linguistic features in Section 2. Section 3 briefly describes the methodology. In Section 4, the Akan equivalents of the semantic primes grouped into related categories are examined. These categories include substantives, determiners, quantifiers, speech, and evaluators. Section 5 concludes the paper.

## 2. Overview of some Linguistic Features of Akan

Akan has 14 phonemic consonants and other phonetic consonants which result from phonological processes such as labialization, palatalization, and labial-palatalization, some of which are dialect specific (Dolphyne, 1988; Abakah, 2004). The phonemic consonants include [p/, /b/, /t/, /d/, /k/, /g/, /m/, /n/, /l/, /f/, /s/, /h/, /j/, /w/]. There are 9 distinct vowels in Akan which include [i, ɪ, e, ɛ, a, u, ʊ, o, ɔ] (Dolphyne, 1988). Mid vowels do not have nasalized counterparts. Every vowel is specified for the feature [ATR], and all vowels in a word agree in ATR specification, with a few exceptions to this rule (Dolphyne, 1988; Owusu, 2014). The language has three basic types of syllables: V, CV, and C, the most common being the V and CV syllable structures (Dolphyne, 1988; Abakah, 2005a; Genzel, 2013). Onset consonants are not required, and consonants can be syllabic: syllabic consonants include nasals and the rhotic.

As a register tone language, Akan makes a distinction between contrastive high [ˀ] and low [ˁ] tone and allotone downstep high [!ˀ] (Dolphyne, 1988; Abakah, 2005b). Therefore, two words, which are phonetically similar would have different semantic properties depending on the tone of each syllable (Owusu, 2015). Some examples are *ɔ̀bɔ̀fɔ̀* 'hunter' and *ɔ̀bɔ̀fɔ̀* 'creator'; *pàpà* 'father' and *pápá* 'good'; *dá* 'day' and *dà* 'never'. The tone has both lexical and grammatical functions. Certain grammatical categories can also be distinguished by their tone. These include the distinction between the main clause and an adverbial clause, the habitual and optative forms of verbs, as well as interrogative and non-interrogative sentences, to mention a few (see Dolphyne, 1988; Abakah, 2010).

The basic word order for the language is SVO. In a transitive construction, the subject and the object arguments are phonologically realized as full NP or pronominal elements as in (1). However, inanimate arguments tend to have a null pronominal realization at the object position as in (2).

1. *Ama tɔ-ɔ ɔkraman nanso Kofi a-fa no*  
 Ama buy-PST dog but Kofi PERF-take it  
 'Ama bought a dog, but Kofi has taken it.'

2. *Ama tɔ-ɔ ɔkraman nanso Kofi a-fa*  
 Ama buy-PST dog but Kofi PERF-take Ø  
 'Ama bought a dog, but Kofi has taken it.'

In a ditransitive construction, according to Osam (2016), the direct object NP at the immediate postverbal position is always semantically the goal, while the theme (indirect object) occurs after the goal. A change in the order of the object arguments results in ungrammatical structures such as (3b).

3. a. *Ama ma-a Kofi ataadeɛ*  
 Ama give-PST Kofi shirt  
 ‘Ama gave Kofi a shirt.’  
 b. \**Ama ma-a ataadeɛ Kofi*  
 Ama give-PST shirt Kofi  
 ‘Ama gave a shirt to Kofi.’

In the NP structure in Akan, the nominal head precedes the determiner and other modifying elements within the structure. Consider example (4).

4. *Abofra kese no*  
 Child big DET  
 ‘The fat child’

Although determiners and demonstratives occur in the post modifying position in Akan, the morpheme *saa* which forms part of the circumfix-like demonstrative *saa NP no* ‘that NP’ always occurs at the pre-modifying position. Apart from this morpheme, only possessive pronouns and possessors are allowed at the pre-modifying position. In terms of the syntactic agreement, the nominal head agrees in number with the adjective modifier. The following is an example.

5. *n-taadeɛ a-keseɛ*  
 PL-dress PL-big  
 ‘big dresses’

### 3. Methodology

In NSM research, semantic primes need to be elicited only in allowable grammatical contexts (known as NSM syntax) and not just any sentence (Wierzbicka, 1996; Goddard, 2016; Goddard, 2018). There is a list of 150 canonical contexts which is meant to help elicit primes. The canonical contexts are sentences or sentence fragments that exemplify the syntactic frames of the prime. These sentences can be slightly modified in ways such as replacing the noun in a context with something that is more culturally appropriate in the language being investigated. Note that the equivalent of a semantic prime may not be of the same part of speech as in other languages. The claim is that it is the meaning of a prime and not its grammatical category that is universal. Also, the equivalent of a prime should not necessarily be a single word lexical unit. It can be a bound morpheme or even a phraseme so long as it expresses the required meaning. A prime can be one among several senses of a polysemous lexical form in a language, and these polysemic meanings may not be the same in other languages. According to Goddard (2008), “when exponents of a given prime have different polysemic extensions (as they frequently do), there is a match-up between lexical units, but not between whole lexemes” (p. 5).

In this study, we elicited the primes by reviewing and translating the list of NSM canonical contexts. In some instances, we modified the canonical sentences by replacing some phrases or words. For example, we replaced ‘same person’ with ‘same cloth’. Considering that some of the primes are polysemous (i.e. have several meanings), it was necessary for the authors to add similar test sentences to illustrate the other senses of the prime in Akan. The primes were summarized in Table 2. Note that not all the equivalents of the semantic primes in Table 2 are analysed in this paper because in some cases, the identification of the equivalents is straightforward and does not need extensive analysis. In other cases, the combinatorial properties of such primes can be seen in the analysis of other primes.

As indicated in Section 1, Akan has two major dialects, Twi and Fante. The Twi dialect is made up of the Asante and Akwapem sub-dialects. In the sections that follow, we focus mainly on the Asante dialect of Akan (Asante Twi). This is necessary for the present study because of the significant differences in the semantic systems of the Twi dialects and the Fante dialect<sup>2</sup>. To present a detailed analysis on the NSM of Akan, one has to independently argue for the various

<sup>2</sup> We are grateful to one of the reviewers for pointing this out.

equivalents of the semantic primes for the different dialects. Table 1 roughly presents some examples of the equivalents of the semantic primes in the Asante Twi, Akuapem Twi, and Fante dialects of Akan.

Table 1: Dialectal variations in Akan semantic primes – some examples

Prime	Asante Twi	Akuapem Twi	Fante
‘thing’	<i>adeɛ</i>	<i>ade</i>	<i>adze</i>
‘this’	<i>wei</i>	<i>eyi</i> (PRONOUN) <i>yi</i> (DETERMINER)	<i>oyi</i> (PRONOUN) <i>yi</i> (DETERMINER)
‘one’	<i>baako</i>	<i>biako</i>	<i>ekor</i>
‘two’	<i>mmienu</i>	<i>abien</i>	<i>ebien</i>
‘big’	<i>kɛsɛɛ</i>	<i>kese</i>	<i>kese</i>
‘time’	<i>berɛ</i>	<i>bere</i>	<i>ber</i>
‘far’	<i>akyire</i>	<i>akyiri</i>	<i>ekyir</i>
‘truth’	<i>nokorɛ</i>	<i>nokware</i>	<i>nokwar</i>

#### 4. Semantic Primes in Asante Twi

Generally, semantic primes exist as the meanings of “lexical units”, which refers to “pairings of a single specifiable sense with a lexical form” (Goddard, 2008 p. 5). Lexical units with similar primitive meanings can be aligned to obtain matching semantic primes across different languages. As mentioned earlier, NSM researchers posit that semantic primes have equivalents in almost all human languages. Apart from eliciting primes, the three key properties of the lexical system of a language that is of concern in NSM research are “allosemy”, “polysemy”, and “portmanteau exponents”. As can be seen in Table 2, the equivalents of the primes are usually words, but they can also be bound morphemes (e.g. *n-* ‘not’) or phrasemes (e.g. *te sɛɛ* ‘like’).

Also, some primes have allosems (that is, multiple exponents that denote the same meaning, and are used in different contexts (e.g. *aha ~ baabi* ‘place’). The multiple equivalents for a prime are often a result of complementary grammatical or lexical-combinatorial contexts, although there can be slight unconditioned variation (Holden, 2019). As demonstrated in Table 2, allosems are indicated with [~]. Furthermore, the Asante Twi equivalents of some of the semantic primes can be polysemous. That is, they can have other meanings in addition to the semantically primitive meaning (e.g. *ho* ‘body’/ ‘self’). It is noteworthy however that in the language, there is no portmanteau exponent (that is, a single word that expresses a combination of semantic primes). In what follows, we demonstrate the translatability of the semantic primes. All examples presented are provided in Asante Twi and written in Akan orthography.

Table 2: Asante Twi and English equivalents of semantic primes

<b>Substantives</b>	<b>mé, wó, òbí, biribì~ àdèé, ñ-nipà, hǒ</b> I, YOU, SOMEONE, SOMETHING~THING, PEOPLE(PL-PERSON), BODY
<b>relational substantives</b>	<b>sù~ àhódó, (è)ǎ</b> KINDS, PARTS
<b>Determiners</b>	<b>wèi, kóró, fófóró</b> THIS, THE SAME, OTHER~ELSE
<b>Quantifiers</b>	<b>bààkó, m̀mienu, bì, nyináá, d̀d̀d̀d̀~ p̀i, k̀k̀f̀á (bí)</b> ONE, TWO, SOME, ALL, MUCH~MANY, LITTLE~FEW
<b>Evaluators</b>	<b>p̀á(p̀á), b̀nè</b> GOOD, BAD

<b>Descriptors</b>	<b>kèséé,</b> <b>kétéwá</b> BIG,              SMALL
<b>mental predicates</b>	<b>nìm,</b> <b>dwéné,</b> <b>pé,</b> <b>m-pé,</b> <b>té,</b> <b>hú,</b> <b>té</b> KNOW, THINK, WANT, DON'T WANT, FEEL, SEE, HEAR
<b>Speech</b>	<b>ká,</b> <b>nsém,</b> <b>nòkóre</b> SAY,      WORDS,      TRUE
<b>actions, events, movement</b>	<b>yé,</b> <b>sí,</b> <b>ká</b> DO, HAPPEN, MOVE
<b>location, existence, specification</b>	<b>wò (bààbí),</b> <b>wò hó,</b> <b>yè (òbí/bìribì)</b> BE (SOMEWHERE), THERE IS, BE (SOMEONE/SOMETHING)
<b>Possession</b>	<b>mé déé</b> (IS) MINE
<b>life and death</b>	<b>tè àsè,</b> <b>wú</b> LIVE (BE ALIVE), DIE
<b>Time</b>	<b>béré,</b> <b>sééséi,</b> <b>ànsá,</b> <b>àkyí,</b> <b>bèrè téntén (bí),</b> WHEN~TIME, NOW, BEFORE, AFTER, A LONG TIME, <b>bèrè tiá (bí),</b> <b>béré kàkrá (bí),</b> <b>ànitwá</b> A SHORT TIME, FOR SOME TIME, MOMENT
<b>Place</b>	<b>(è)hè~àhá,</b> <b>àhá,</b> <b>sóró,</b> <b>àsèé,</b> WHERE~PLACE, HERE, ABOVE, BELOW, <b>àkyiri,</b> <b>béń,</b> <b>̀̀̀kyèè,</b> <b>mú,</b> <b>ká</b> FAR, NEAR, SIDE, INSIDE, TOUCH
<b>logical concepts</b>	<b>N-,</b> <b>ébiá,</b> <b>túmí,</b> <b>èfirí sé,</b> <b>sè</b> NOT, MAYBE, CAN, BECAUSE, IF
<b>intensifier, augmentor</b>	<b>páá,</b> <b>bìò</b> VERY, MORE
<b>Similarity</b>	<b>tè séé</b> LIKE~AS

#### 4.1 Substantives

The pronouns 'I' and 'YOU' in the Asante dialect of Akan are shown below.

	Full Forms	Subject	Object
I	<i>me</i>	me / m-	me
YOU	<i>wo</i>	wo / w-	wo

As personal pronouns, *me* and *wo* can occur in different contexts which include (i) subject and object positions, (ii) nominal coordination, and (iii) possessive constructions.

## (i) Subject and Object Positions

*Subject Position*

6. **Me**-*ba-a*                      *fiε*    *εnε*  
 1SGSUBJ<sup>3</sup>-come-PST    house    today  
 ‘I came home today.’

7. **Wo**-*yε*                      *abofra pa.*  
 2SGSUBJ-Be    child    good  
 ‘You are a good child.’

*Direct Object*

8. *Ama frε-ε*                      **me**  
 Ama call-PST    1SGOBJ  
 ‘Ama called me.’

9. *Papa no hia wo*  
 man                      DET    need    2SGOBJ  
 ‘The man needs you.’

Note that in Akan orthography, the subject pronoun is attached to the verb, but the object pronoun is not.

## (ii) Nominal Coordination

10. **Wo**                      *ne*    **me**  
 2SGSUBJ                      and    1SGOBJ  
 ‘You and I’

## (iii) Possessive Coordination

11. **Me**                      *sika a yera*  
 1SGPOSS    money    PERF    lost  
 ‘My money is lost.’

12. **W'**                      *aduane no wɔ ha*  
 2SGPOSS                      food                      DET    be.at    here  
 ‘Your food is here.’

The pronouns *ME* (/mí/) and *WO* (/wó/) can also occur with the emphatic form *ankasa* ‘self’ to express insistence, as in (13) or the reflexive marker *ho* ‘self’, the agent is the same as the theme of action, as in (14).

13. **Me**                      *ankasa me-kɔ-ɔ hɔ*  
 1SGSBJ self    1SGSBJ-go-PST    there  
 ‘I myself went there.’ / ‘I went there myself.’

14. **Wo**                      *bu wo hɔ*  
 2SGSBJ respect                      2SGPOSS    self  
 ‘You respect yourself.’

As can be seen from the foregoing, *me* and *wo* can function as the subject of a wide range of verbs. In relation to the primes in Table 2, *me* and *wo* can co-occur with the mental predicates,

<sup>3</sup> The abbreviations used in this paper are: 1=First person; 2=Second person; 3=Third person; SG=Singular; CONS=Consecutive marker; OBJ=Object; PL=Plural marker; NEG=Negative marker; SUBJ=Subject; PST=Past tense; COMP=Complementizer; CONJ=Conjunction; PRO=Pronoun; POSS=Possessive; FOC=Focus marker; FUT=Future tense; Q=Question marker; TP=Terminal particle; POST=Postposition; DEF =Definite marker; PREP=Preposition; DET=Determiner; PROG=Progressive aspect; DEM=Demonstrative

*nim* ‘know’, *dwene* ‘think’, *pɛ* ‘want’, *mpɛ* ‘don’t want’, *hu* ‘see’, and *te* ‘hear’. They can also co-occur with the predicates encoding actions and movement, such as *yɛ* ‘do’ and *kekã hõ* ‘move’.

The equivalents for the semantic primes SOMEONE, SOMETHING, and THING are OBI (/òbí/), BIRIBI (/bìrìbì/), and ADEE (/àdìé/), respectively.

15. *Obi*        *fa-a*                *atadeɛ no*  
 Someone take-PST        dress DEF  
 ‘Someone took the dress.’
16. *Kofi*                *yɛ-ɛ*                *biribi*                *bɔne*  
 Kofi                    do-PST                something            bad  
 ‘Kofi did something bad.’
17. *Adeɛ*        *wei*    *yɛ*        *kɛsɛɛ*  
 thing        DET    be        big  
 ‘This thing is big.’

Amfo (2010a: 1795) describes *biribi* ‘something’ as the inanimate equivalent of *obi* ‘someone’. The combination of *adeɛ* ‘thing’ and *bi* ‘some’ results in the form *adeɛ bi* which also means ‘something’, as demonstrated in example 18. The difference between *biribi* and *adeɛ bi* is that the *biribi* is the equivalent of the indefinite pronoun ‘something’ however, *adeɛ bi* is a noun phrase which is made up of the noun head *adeɛ* and the quantifier *bi*. Therefore, the substantives *obi* ‘someone’ and *biribi* ‘something’ cannot co-occur with determiners such as *wei* ‘this’ or *bi* ‘some’ but *adeɛ* ‘thing’ can combine with these determiners. Even though the combination ‘this someone’ is grammatical in NSM and is often used in explications and cultural scripts rendered in English, *obi* ‘someone’ and *wei* ‘this’ [\**obi wei*] cannot co-occur in the Asante dialect of Akan. Thus, *obi* ‘someone’ must be substituted with the allolex *nipa* ‘person’ to get *nipa wei* ‘this person’ (cf. Ameka, 1994; Amberber, 2008).

18. *Adeɛ*        *bi*        *da*        *pono*    *no*        *so*  
 thing        some    sleep    table    DEF    on  
 ‘Something is on the table.’

The prime *biribi* ‘something’ can combine with the evaluators and descriptors to form phrases, such as *biribi pa / bɔne* ‘something good / bad’, with *adeɛ bi* ‘something’ however, the evaluators or descriptors occur immediately after the noun head *adeɛ* as in *adeɛ kɛsɛɛ bi* ‘something big’ and *adeɛ ketewa bi* ‘something small’. In NSM studies, such combinations are not unique to the Akan language, similar substantive phrases have been identified in many other languages (see e.g. Ameka, 1994; Amberber, 2008; Yoon, 2008).

NNIPA (/nnìpà/) is the equivalent of PEOPLE. It is the plural form of *nipa* ‘person’. NNIPA in Akan, just as in languages like English, French and Spanish, denotes human beings (humans) (cf. Peeters et al., 2006). It can occur on its own or with quantifiers such as *mmienu* ‘two’, *dodoɔ~pii* ‘many’, *nyinaa* ‘all’, and *kakra (bi)* ‘few/little’.

19. *N-nipa*        *pii*        *ba-a*                *afahyɛ*    *n-ase*  
 PL-person        many    come-PST        festival    DET-under  
 ‘Many people came to the festival.’
20. *N-nipa*                *nyinaa* *yɛ*        *Onyame*                *m-ma*  
 PL-person                all        be        God                    PL-child  
 ‘All humans are the children of God.’

The equivalent of BODY is HO (/hõ/) in the Asante dialect of Akan. The word HO is polysemous. Apart from referring to body, shown in (21), it also refers to the reflexive marker ‘self’, as demonstrated in (22) (see Ellis & Boadi, 1969; Osam, 2002; Saah, 2018 for a detailed discussion on *ho*).

21. *Kweku*        *sera-a*                *nku*                *wɔ*        *ne*                *ho*  
 Kweku        smear-PST        pomade                be.at    3SGPOSS        body  
 ‘Kweku smeared pomade on his body.’



22. *Ama de ne ho abɔ afɔrɛɛ*  
 Ama use 3SGPOSS self offer sacrifice  
 ‘Ama has offered herself as a sacrifice.’

#### 4.2 Determiners

The prime THIS is realized as WEI (/wéí/), as demonstrated in (23). It takes the plural suffix *-nom* to become *weinom* ‘these’, as in (24). WEI is a determiner in constructions such as *adeɛ wei* ‘this thing’, *berɛ wei* ‘this time’, and *aboa wei* ‘this animal’.

23. *Wei n-yɛ*  
 DEM NEG-good  
 ‘This is not good.’
24. *Weinom yɛ mmofra n-ketewa*  
 DEM be children PL-little  
 ‘These are little children.’

The use of *wei* suggests the noun associated with it is relatively closer at the time of speaking, and the noun is known to both speaker and addressee, as shown in (25).

25. *Maame wei fa-a sika no*  
 woman DET take-PST money DET  
 ‘This woman took the money.’

It can also function as a pronominal argument or complement of the predicates such as *ka* ‘say’, *yɛ* ‘do’, and *hu* ‘see’. Consider example (26).

26. *ɔ-hu-u wei*  
 3SGSUBJ-see-PST DEM  
 ‘He saw this.’

The equivalents of THE SAME and OTHER~ELSE are KORO (/kóró/) and FOFORɔ (/fó!fórɔ/), respectively. The use of KORO denotes similarity or (perceived) lack of difference while FOFORɔ connotes the idea ‘not the same as’. These primes can be combined with substantives such as *obi*, *nnipa*, *biribi*, and *adeɛ*, as in *nnipa koro* ‘the same people’, *adeɛ koro* ‘the same thing’, *obi foforɔ* ‘someone else, or *biribi foforɔ* ‘something else’. Consider examples (27) and (28) below.

27. *Mansa ne Adwoa tɔ-ɔ ntama koro*  
 Mensah CONJ Adwoa buy-PST cloth same  
 ‘Mansa and Adwoa bought the same cloth (= wax print).’
28. *Obi foforɔ na ɔ-yɛ-ɛ*  
 someone else FOC 3SGSUBJ-do-PST  
 ‘Someone else did it.’

In the Asante dialect of Akan, the form *foforɔ* is polysemous. Apart from denoting else~other, it also means ‘new’, as in (29) or ‘different’, as in (30).

29. *Kofi a-tɔ ntoma foforɔ*  
 Kofi PERF-buy cloth new  
 ‘Kofi has bought a new cloth.’
30. *Fa ataadeɛ foforɔ ma me*  
 take dress different give 1SGOBJ  
 ‘Give me a different dress.’

## 4.3 Quantifiers

4.3.1 *Baako* ‘one’ and *mmienu* ‘two’

The equivalents for ONE and TWO are BAAKO (/bààkú/) and MMIENU (/m̀miènú/), respectively. They can occur with substantives such as ‘thing’ - *adeɛ baako* ‘one thing’, and ‘people’ - *nnipa mmienu* ‘two people’ and relational substantives such as ‘part’ - (*ɛ*)*fa baako* ‘one part’ and ‘kind’ - *ahodoɔ mmienu* ‘two kinds’. They can also denote a subset or a subgroup (‘one of’ or ‘two of’), as demonstrated in examples (31) and (32).

31. *Kwasi yera-a ne mpaboa baako.*  
 Kwasi misplace-PST 3SGPOSS shoe one  
 ‘Kwasi misplaced one of his shoes.’

32. *Me sukuu-foɔ no mu mmienu ba-a ha*  
 1SGPOSS student-PL DEF inside two come-PST here  
 ‘Two of my students came here’

4.3.2 *Bi* ‘some’

The equivalent of the prime SOME is BI (/bì/). BI can denote a representative sample of a set, as in (33); signify part of a whole, as in (34); or represents the same /similar kind of an entity, as in (35). As can be seen in (33), *bi* only occurs in a partitive reading context as a subject of a clause in the absence of a noun head, *bi* must be preceded by the prefix *e-*. *Ebi*, therefore, functions as a pronoun which takes its antecedent from the discourse, hence, cannot occur at the beginning of a discourse. Thus, for *ebi* to be used felicitously, there must be some form of antecedent in the preceding discourse because although *ebi* can be used at the beginning of a clause, it cannot be used at the beginning of a discourse (Amfo, 2010a).

33. *Bayere yi mu bi ye, ebi n-ye*  
 yam DET inside some good some NEG-good  
 ‘Some of these yams are good, some are rotten.’

34. *Ma me wo paano no bi*  
 give 1SGOBJ 2SGPOSS bread DET some  
 ‘Give me some of your bread.’

35. *Maame se-e ɔ-pe wo mpaboa no bi*  
 Maame say-PST 3SG-want 2SGPOSS shoes DET some  
 ‘Maame said she wants a pair of shoes like yours.’

4.3.3 *Nyinaa* ‘all’, *dodoɔ~pii* and *kakra* (*bi*)

The equivalent of ALL is NYINAA (/n̄ináá/), MUCH~MANY is DODOɔ~PII (/d̀d̀d̀d̀ɔ́/~p̄íí/) and for LITTLE~FEW is KAKRA (BI) /kàk̀rá (b̀í)/. Unlike in English, each of these semantic primes can occur with both count and mass nouns. The equivalent of much~many, in this case, functions like ‘a lot of’ in English. That is to say that DODOɔ and PII are semantic variants that can be used interchangeably in various contexts. Boadi (2010) classifies all these primes as indefinite quantifiers because they do not show “precise numerical quantities”, even in the case of count nouns (p. 143). They function as post-nominal modifiers, as demonstrated in examples (36) – (40). As shown in example (41), the equivalent of much~many becomes *ahe* when used in a question form. The semantic prime *ahe* denotes ‘how much’/ ‘how many’ (i.e. what is the quantity, price, or number?).

36. *M-mɔfra no nyinaa kɔ-ɔ ho*  
 PL-child DEF all go-PST there  
 ‘All the children went there.’

37. *Akua de nsuo pii gu-u dan no mu*  
 Akua use water much pour-PST room DET inside  
 ‘Akua poured much (a lot of) water into the room.’
38. *Ye wɔ sukuu pii wɔ ɔman yi mu.*  
 1PLSUBJ have school many be.at country DET inside  
 ‘There are many schools in this country.’
39. *Enam dodoɔ n-seɛ nkwan*  
 Meat much NEG-spoil soup  
 ‘Much meat does not spoil the soup.’
40. *Kwasi sɔre gyina-a hɔ sima kakra bi pɛ*  
 Kwasi rise stand-PST FOC minute few some only  
 ‘Kwasi stood up only for some few minutes.’
41. *Asikyire ahe na wo-hia?*  
 sugar much FOC 2SGSUBJ-need  
 ‘How much sugar do you need?’

#### 4.4 Mental Predicates

The equivalent of THINK is DWENE<sup>4</sup> (/dzɛ̃ni/). It often occurs with the postpositional element *ho* – *dwene X ho* ‘think X about’. Just as in English, *dwene* can be combined with other primes as in ‘think about someone/something’ – *dwene obi /adeɛ bi ho*, ‘think about something before / after’ – *dwene ho ansa / akyi*, and ‘think something good/bad’ – *dwene biribi pa / bɔne*. It can also occur with a sentential complement introduced by *sɛ* ‘that’. Consider the following examples.

42. *Me dwene-e ho ansa ...*  
 1SGSUBJ think-PST about before ...  
 ‘I thought about it before ...’
43. *Ɔ-dwene sɛ ne ba no a-da*  
 3SGSUBJ-think COMP 3SGPOSS child DET PERF-sleep  
 ‘She thinks that her child is asleep.’

The semantic primes for WANT, DON’T WANT, SEE, and HEAR are *pɛ* (/pɛ/), *mpɛ* (/mpɛ/), *hu* (/hɛ/), and *te* (/tɛ/), respectively. Like in other languages, the verb *pɛ* ‘want’ in Akan is polysemous and has an additional meaning which can be glossed as ‘like’ or ‘love’ (cf. Goddard, 1994; Gyekye, 1996; Goddard & Peeters, 2006; Peeters et al., 2006). However, the type of complement the verb *pɛ* takes in a sentence distinguishes between the two meanings of ‘like’ and ‘want’ (cf. Goddard & Wierzbicka, 2010). Whereas *pɛ* ‘like’ takes an NP complement, *pɛ*<sup>5</sup> ‘want’ takes a CP complement as illustrated below:

44. *Me-pɛ sɛ me num nsuo*  
 1SGSUBJ-want COMPL 1SGSUBJ drink want  
 ‘I want to drink water’
45. *Me-pɛ nsuo num*  
 1SGSUBJ-like water drink  
 ‘I like to drink water’

<sup>4</sup> The nominal equivalent of *dwene* ‘to think’ is *adwene* ‘mind’.

<sup>5</sup> Although the complement of *like* in English can be a CP (finite and non-finite), the complement of *pɛ* ‘like’ in Akan is always a nominalising NP.

The form *mpɛ* in the Asante dialect of Akan is made up of the negative marker *m-* and the verb *pɛ* ‘want’. Since the negative marker is a bound morpheme, the phrase ‘don’t want’ is written as a single lexical item. Consider the following.

46. *Abena m-pɛ sɛ Kofi bɛ tena fie hɔ*  
 Abena NEG-want COMP Kofi will to.stay house there  
 ‘Abena does not want Kofi to live in the house.’

In NSM studies, it has been identified in some languages, such as Korean, that the equivalent of the prime SEE describes all kinds of visual perception (i.e. ‘see’ and ‘watch’ in English) and HEAR describes all kinds of auditory perception (i.e. ‘hear’ and ‘listen’ in English) (see Yoon, 2008). It has also been identified that other languages such as English, French, and Spanish differentiate between them. Akan, like these languages, makes a distinction: the word for ‘look’ is *hwɛ* and the word for ‘listen’ is *tie*.

In English and in the main Romance languages, Peeters et al. (2006) explain that “HEAR and SEE are in fact included in the definition of *listen* and *look*: someone who *listens to* or *looks at* something (or someone) engages in an activity which could be captured along the lines of ‘doing something because you want to hear or see something’ (p. 105). This explanation holds true for the use of the equivalent of these lexical items in the Asante dialect of Akan. The uses of the primes PE, MPE, HU, and TE are exemplified in examples (47) – (48).

47. *Kweku hu-u obi foforɔ*  
 Kweku see-PST someone else  
 ‘Kweku saw someone else.’
48. *Me-te sɛ obi re-bɔ pono no mu*  
 1SGSUBJ-hear COMP someone PROG-knock door DET inside  
 ‘I can hear someone knocking on the door.’

The equivalent of KNOW is NIM (nìm/). It denotes propositional knowledge of the type know X or know that X (cf. Ameka, 1994; Goddard & Wierzbicka, 2002; Peeters et al., 2006; Amberber, 2008). That is, NIM can take a topic valency, as in (49a) or a sentential complement which is introduced by *sɛ* ‘that’, as in (49b). It also expresses ‘knowing how to do something’, as in (50).

49. a. *Ɔbɔmɔfo no nim biribi fa m-moa no nyinaa ho*  
 hunter DET know something about PL-animal DET all body  
 ‘The hunter knows something about all the animals.’
- b. *Abofra no nim sɛ ne papa kɔ*  
 Child DET know COMP 3SGPOSS father go  
 ‘The child knows that his father has left.’
50. *Akosua nim aduane yɛ<sup>6</sup>*  
 Akosua knows food do  
 ‘Akosua knows how to cook.’

In (50), although the complement of *know* in the English translation is a CP, the complement in Akan is a nominalised NP. Thus, instead of *know* having a single argument as in (b), its argument increases to two, and hence increases its valency.

Vanhove (2008) establishes that there is a semantic association between ‘know’ and ‘see’ in various languages with different grammatical and historical patterns (e.g. Wolof, Russian, and Classical Arabic). Just as in these languages, in Akan, the vision verb *hu* can also mean ‘to know’. In the context “X wants Y to know something/someone”, KNOW is often expressed with the word

<sup>6</sup> *aduane yɛ* is a nominalised NP derived from the verbal form *yɛ aduane* ‘do the work’. Nouns such as *adwuma yɛ* ‘working’, *agoro di* ‘playing’ are derived in a similar manner. These NPs resemble gerunds. The nominalisation process involves moving the patient argument to the pre-verbal position. These verbs therefore lose their ability to take on an agentive argument, leading to a decrease in valency for such verbs.

*hu* ‘see’, as exemplified in (51). As demonstrated in (51a), *hu* ‘see’ is used to express the desire for one to have knowledge of something (or a fact) and in (51b), *nim* ‘know’ is used to show that one has knowledge of the thing (or fact).

51. a. *Me-pe*                      *sɛ*    *n-nipa*                      *nyinaa hu*                      *sɛ*    *adesua*                      *yɛ*  
 1SGSUBJ-want                      COMPPL-person                      all    see                      COMP learning                      good  
 ‘I want everyone to know that education is good.’
- b. *Nnipa*                      *nyinaa nim*                      *sɛ*                      *adesua*                      *yɛ*  
 PL-person                      all    know COMP                      learning                      good  
 ‘Everyone knows that education is good.’

The equivalent of FEEL in the Asante dialect of Akan is TE (/tí/). It is homonymous with the equivalent of the prime HEAR and other words, such as ‘perceive’ (Gyekye, 1996). TE can only be unambiguously rendered as ‘feel’ when (a) it occurs with the word *nka* ‘sensation’, as in (52); (b) it is associated with pain, as in (53); or (c) the locus of perception is identified as inside (or in a part of) one’s body, as in (54). As Ameka (1994) observed in Ewe, in Akan, the equivalent of the canonical sentences “I feel like this” or “I feel good/bad” cannot be rendered without having an NP like “something”. This is evident in example (52). Example (54) can be translated as ‘I hear something’ when the prepositional phrase *wɔ me wedee mu* ‘in my body’ is omitted.

52. *Me-te-nka*                      *bɔne*    *bi*                      *wɔ*    *me*                      *mene-mu*  
 1SGSUBJ-feel-sensation    bad    some    be.at    1SGPOSS                      throat-inside  
 ‘I feel something bad in my throat.’
53. *Ama*                      *n-te*                      *yaw*  
 Ama                      NEG-hear                      pain  
 ‘Ama doesn’t feel pain.’
54. *Me-te*                      *biribi*                      *wɔ*    *me*                      *wedee*    *mu*  
 1SGSUBJ-feel                      something                      be.at    1SGPOSS                      body    inside  
 ‘I feel something in my body.’

#### 4.5 Speech

As shown in (55), the equivalent of the prime SAY in the Asante dialect of Akan is KA (/ká/). KA can be used in a reported speech, as in (56). It can also be used to denote a soliloquy, as in (57). KA is combined with *kyerɛ* ‘show’ to form the compound *ka kyerɛ* which denotes ‘tell’ or ‘inform’ in English (58).

55. *Dɛn*                      *na*                      *ɔ-ka-e?*  
 What                      FOC                      3SG-say-Q  
 ‘What did he say?’
56. *Asaa*                      *ka-a*                      *sɛ*                      *ɔ-bɛ-kɔ*                      *Kumasi*  
 Asaa                      say-PST                      COMP                      3SGSUBJ-FUT-go                      Kumasi  
 ‘Asaa said she will go to Kumasi.’
57. *Sammy*                      *ka-a*                      *biribi*                      *pa*    *kyerɛ-ɛ*                      *ne*                      *ho*  
 Sammy                      say-PST                      something                      good    show-PST                      3SGPOSS                      body  
 ‘Paapa said something good to himself.’
58. *Adu*                      *ka*    *kyerɛ-ɛ*                      *no*    *sɛ ...*  
 Adu                      say    show-PST                      3SG    COMP ...  
 ‘Adu told him that ...’

The prime WORDS is realized in the Asante dialect of Akan as NSEM (/ńsém/). It is the plural form of *asem* ‘word’. NSEM can combine with the determiners, evaluators and quantifiers (obviously, except *baako* ‘one’) listed in Table 2. Consider the following:

59. *Wɔ-kae-e*                      *wo*                      ***n-sem***                      *no*                      *bi*  
 3PLSUBJ-remember-PST    3PLPOSS    PL-word    DET    some  
 ‘They recalled some of your words.’
60. *Wɔ-ka-a*                      ***n-sem***                      *bɔne*                      *fa-a*                      *ne*                      *ho*  
 3PLSUBJ-say-PST    PL-word                      bad    take-PST                      3SGPOSS                      body  
 ‘They said bad words about him.’

The equivalent of TRUE is NOKORÉ (/nòkóré/). It can occur as part of a predicate with the copula verb *ye* ‘be’, as in example (61). It can also be in subject position, as in example (62).

61. *Saa*                      *n-sem*                      *no*                      *ye*                      ***nokore***  
 DEM                      PL-word                      DET    be                      true  
 ‘Those words are true.’
62. ***Nokore***                      *no*                      *bɛ-da adi*  
 Truth                      DET                      FUT-reveal  
 ‘The truth shall be revealed.’

#### 4.6 Actions, Events, Movement

The lexical equivalent of the prime DO is YÉ (/jé/). YÉ can be a predicate to an agent substantive, as in example (63) and can occur with question words such as *den* ‘what’, as illustrated in (64).

63. *Obi*                      *yɛ-ɛ*                      *adeɛ*                      *papa*                      *bi*                      *ma-a*                      *me*  
 someone    do-PST                      thing    good                      some    give-PST                      1SGOBJ  
 ‘Someone did something good for me.’
64. *Den*                      *na*                      *wo-be*                      *yɛ?*  
 what                      FOC                      2SG-FUT                      do  
 ‘What will you do?’

The equivalent of the prime HAPPEN is SI (/sí/). It can occur with a location or time, as in (65) and (66), respectively.

65. *Biribi*                      *si-i*                      *wɔ*                      *aha*  
 something                      happen-PST                      be.at                      here  
 ‘Something happened here.’
66. *Akwanyia*                      *no*                      *si-i*                      *anɔpa*                      *wei*  
 accident                      DEF                      happen-PST                      morning                      DET  
 ‘The accident happened this morning.’

The prime MOVE can be expressed by the base verb *ka* (***ká***) which has KEKA (*kiká*) as its reduplicated counterpart. The reduplicated form mostly occurs with its inherent complement *ho* ‘body’ (i.e. *keka X ho*). This refers to the movement of the entire body, as in the following sentence:

67. *Kumi tumi*                      ***keka***                      *ne*                      *ho*  
 Kumi    able                      move    3SGPOSS                      body  
 ‘Kumi can move his body.’

In Akan, reduplication appears to introduce additional reading to the structure in which it occurs. For instance, example (67) has the reading where Kumi can move his body more than once. This reading, however, is unavailable when the bare form of the verb is used as in (68). (68) has the reading where Kumi can move his body only once. This function of the reduplication resembles that of pluractional markers (cf. Lasersohn, 1995). However, this observation will require further study.

68. *Kumi tumi*                      *ka*                      *ne*                      *ho*  
 Kumi    able                      move    3SGPOSS                      body  
 ‘Kumi can move his body.’

[single movement event]

#### 4.7 Location, Existence, Specification, Possession

The locational BE is realized as  $w\text{ɔ}$  (/wɔ/). The form  $w\text{ɔ}$  is strictly not locative because it can occur in non-locative environments and be translated as ‘have’ and ‘belong to’ (see Ellis & Boadi, 1969 for the three types of  $w\text{ɔ}$ ). The locative  $w\text{ɔ}$  has a comitative option (‘be with someone’) which is realized as  $w\text{ɔ}$  *nkyɛn* ‘be with someone’ (*nkyɛn* ‘side’), as illustrated in example (69).

69. *Me*                     $w\text{ɔ}$     *me*                    *maame*                    *nkyɛn*  
 1SGSUBJ            be.at    1SGPOSS            mother                    side  
 ‘I am with my mother.’

The prime THERE IS is expressed in the Asante dialect of Akan as  $w\text{ɔ}$   $h\text{ɔ}$  (/wɔ́ hɔ́/). This prime has the same form as the prime for the locational BE combining with the locative adverb *hɔ*. The adverbial complement can be replaced by other locative nominals such as *kuro* ‘town’, as in (70). It is used to talk about the existence of people and kinds of people, animals and kinds of animals, things, and kinds of things, among others.

70. *Ahenfie*    *bi*     $w\text{ɔ}$     *kuro*    *no*    *mu*  
 Palace    DET    be.at    town    DET    inside  
 ‘There is a palace in the town.’

The equivalent of BE that denotes specification is expressed by  $y\text{ɛ}$  (/jɛ/) in the Asante dialect of Akan. Consider the following:

71. *Saa*                    *mmre*    *no*                    *na*                    *me*                     $y\text{ɛ}$                     *akwadaa.*                    *Me*  
 DET                    time    DEF    FOC    1SGSUBJ            be                    child.                    1SGSUBJ  
*n-yɛ*                    *akwadaa*                    *bio*  
 NEG-be    child                    again  
 ‘At that time, I was a child. I am not a child anymore.’

72.  $\text{ɔ-pɛ}$                     *sɛ*                     $\text{ɔ-yɛ}$                     *ɔmanpanyin*  
 3SGSUBJ-like            COMP                    3SGSUBJ-be            president  
 ‘She wants to be a president.’

The equivalent of IS MINE is ME DEɛ (/mí díɛ/) and it expresses ownership of physical things. For example:

73. *Nhoma*                    *no*                     $y\text{ɛ}$                     *me*                    *deɛ*  
 Book                    DET    be                    1SGPOSS                    POSSPRO  
 ‘The book is mine.’

#### 4.8 Life and Death

The equivalents of the primes LIVE and DIE are TE ASE (/tì àsì/) and WU (/wù/), respectively. While *wu* ‘die’ is straightforward, it is noteworthy that *te* must always be accompanied by its inherent complement *ase* to express life. Without *ase*, the verb *te* ‘live’ has a ‘residential’ meaning. It occurs with a complement referring to a particular place or area where one resides, as demonstrated in example (74). Consider the use of *te ase* ‘live’ and *wu* ‘die’ in examples (75) and (76), respectively.

74. *Ata*                    *te*                    *Bogoso*  
 Ata                    live                    Bogoso  
 ‘Ata lives in Bogoso.’

75. *Kwame*                    *papa*                    *daso*                    *te*                    *ase*  
 Kwame                    father                    still                    stay                    alive  
 ‘Kwame’s father still lives.’/ ‘Kwame’s father is still alive.’

76. *Okra*                    *no*                    *tumi*                    *wu?*  
 soul                    DEF    able                    die  
 ‘Can the soul die?’

## 4.9 Time

Generally, the word for TIME in the Asante dialect of Akan is BERÉ (plural: *mmeré*). The equivalent of WHEN is BERÉ BEN (/bíré béí/) which literally means ‘which time’. In Akan, just as in English, the prime BERÉ BEN ‘when’ cannot occur with determiners but its allolex BERÉ ‘TIME’ can do so.

77. *Beré ben na asem no si-i?*  
time which FOC issue DET happen-PST  
‘When did the issue happen?’

78. *Beré wei ye bere pa*  
time DET be time good  
‘This is a good time.’

The equivalents of NOW and BEFORE are SEESEI (/séèséi/) and ANSA (/ànsà/), respectively. They can be used as adverbials as shown in examples (79) and (80).

79. *Ye-te Chicago seesei*  
1PLSUBJ-live Chicago now  
‘We live in Chicago now.’

80. *Wɔ-wo-o Yaw ansa wɔ-wo-o Kofi*  
3PLSUBJ-born-PST Yaw before 3PLSUBJ-born-PST Kofi  
‘Yaw was born before Kofi was born.’

The equivalent of the prime AFTER is AKYI (/àtɛí/), as in example (81).

81. *Papa no kasa-eɛ agorɔdi no akyi*  
man DET speak-PST game DET after  
‘The man spoke after the game.’

The word *akyi* is polysemous. Apart from ‘after’ it translates as ‘back’ when one is referring to a part of the body, as in (82), or ‘behind’ when one is referring to the position of an entity relative to another, as seen in (83). Note that this is not peculiar to Akan. Research shows that in a number of languages (genetically related and unrelated), the same linguistic form used for the body part ‘back’ is used for other terms including ‘behind’, after, and beyond (see Heine & Kuteva, 2005). This suggests that cross-linguistically, the polysemous nature of *akyi* is not unusual.

82. *ɔ-de abaa no bɔ-ɔ n-akyi*  
3SGSUBJ-use stick DET hit-PST POSS-back  
‘He hit his back with a stick.’

83. *Akɔdaa no wɔ pono no akyi*  
child DET be.at door DET behind  
‘The child is behind the door’.

The durational expressions, ‘a long time’, ‘a short time’, and ‘for some time’ rely on the lexical forms *tenten* ‘long’ *tia* ‘short’, and *kakra* ‘little’, respectively. The prime A LONG TIME is realized as BERÉ TENTEN (BI) (/bíré tɛ́ntɛ́/), A SHORT TIME as BERÉ TIA (BI) (/bíré tià/), and FOR SOME TIME as BERÉ KAKRA (BI) (/bíré kàkrá/).

84. *Wei si-i bere tenten bi atwam*  
this happen-PST time long some ago  
‘This happened a long time ago.’

85. *Beré tia bi akyi no Ekua gya-e adwuma kɔ-ɔ sukuu*  
time short some after DEF Ekua stop-PST work go-PST school  
‘A short time after, Ekua resigned from the job and went to school.’

86. *O-tu-u kwan bere kakra bi*  
3SGSUBJ-move-PST path time little some  
‘He travelled for some time.’



The prime MOMENT is intended to capture the notion of “instantaneity” (Goddard & Wierzbicka, 2002). In Asante Twi, the word ‘moment’ is expressed in different forms in various contexts. Examples are *berɛ* ‘time’ as in *saa berɛ yi* ‘at this moment’ or *saa berɛ no* ‘at that moment’; *sima* ‘minute’, as in *sima baako* ‘one/a moment’ or ‘*sima kakra* ‘few moments’. Phrases such as *preko pɛ* ‘suddenly / at once’ *amonomu hɔ ara* ‘instantly/ right at the time’ also translated as ‘in a moment’. While there appears not to be a primitive form of the prime moment, we are of the view that the most likely equivalent for MOMENT is ANITWA (/ænítwá/). Our choice of *anitwa* is because it would be the natural expression to use in the NSM canonical context below.

87. *ɛ-si-i* ***anitwa*** *baako mu*  
 3SGSUBJ-happen-PST moment one POST  
 ‘It happened in one moment.’

Although we propose ANITWA for the prime MOMENT, there is a need for further investigation.

#### 4.10 Place

The equivalents of WHERE and PLACE are (ɛ)HE (/èhí/) and AHA (/àhá/), respectively. The form AHA is the same for the equivalent of HERE. Consider the following.

88. *ɛhe na seesei wo-te?*  
 Where FOC now 2SGOBJ-live  
 ‘Where do you live now?’

89. *Wo-te he seesei?*  
 2SGSUBJ-live where now  
 ‘Where do you live now?’

90. *E-n-si-i wɔ ha*  
 3SGSUBJ-NEG-happen-PST be.at here  
 ‘It didn’t happen at this place.’ / ‘It didn’t happen here.’

The prime BAABI (/bèèbí/) ‘place’ is an allolex of AHA (/àhá/). BAABI, but not AHA, can occur with determiners, such as *koro* ‘the same’ and *foforɔ* ‘other’ or quantifiers, such as *baako* ‘one’, *mmienu* ‘two’, and *pɛ* ‘many’. For example:

91. *Ntɔkwa no si-i wɔ baabi foforɔ*  
 Fight DET happen-PST be.at place new  
 ‘The fight occurred at another place.’

The primes FAR and NEAR are realized in the Asante dialect of Akan as AKYIRE (/ætɛiré/) and BEN (/bɛ̃ɪ/), respectively.

92. *Kuma te akyire nanso ɔ-be-ba*  
 Kuma lives far but 3SGSUB-FUT-come  
 ‘Kuma lives far away but he will come.’

93. *Aba fie ben sukuu no*  
 Aba house near school DET  
 Aba’s house is near the school.

The equivalent of SIDE is NKYEN (/ntɛ̃ɪ/). Often, it is used to indicate the location of a person or a thing relative to some other entity.

94. *Ɔkra no da Kojo nkyen*  
 cat DEF lie child side  
 (The cat is lying by Kojo’s side)  
 ‘The cat is lying beside Kojo.’

The equivalent of INSIDE is MU (/mú/). It is also equivalent to the English word ‘in’. Unlike in English and other languages, in Akan, MU does not function as a preposition as it typically occurs after the noun phrase in a clause. Consider example (95). MU can be attached to either a noun or verb in the form *-m*, especially in oral speech, as demonstrated in (96).

95. *Sika no wɔ ɛdan no mu*  
 money DET be.at room DET inside  
 ‘The money is inside the room.’

96. *Aba no da-m*  
 seed DET lie-inside  
 ‘The seed is inside.’

#### 4.11 Logical Concepts

In Akan, negation is marked linguistically with the nasal prefix *N-* which is attached to the verb(s) in a clause (Dolphyne, 1987; Amfo, 2010b). That is, the prime NOT is realized as *N-*.

97. *M-mrantee no bi n-tumi n-kɔ*  
 PL-young.man DEF some NEG-able NEG-go  
 ‘Some of the young men cannot go.’

The equivalent of the logical primes MAYBE and CAN are expressed by *EBIA* (/ébiá/) and *TUMI* (/tùmi/), respectively. *EBIA* is used to express uncertainty about one’s claim and it is often at clause-initial position. *TUMI* in the Asante dialect of Akan can express both ability and possibility. It must occur with a predicate, especially when there is no contextual background to its use. The use of *ebia* and *tumi* can be identified in the following examples.

98. *Ebia o-n-ni hɔ*  
 Maybe 3SGSUBJ-NEG-be there  
 ‘Maybe he is not there.’

99. *Obiara be-tumi a-ye*  
 Everyone FUT-able CONS-do  
 ‘Everyone can do it.’

The prime BECAUSE can be realized as *EFIRI SƐ* (/ɛ̀firi sɛ/). *EFIRI SƐ* ‘because’ is usually used to join two clauses. The reason clause conjoined to another clause by *efire sɛ* always comes after that clause, as demonstrated in example (100). We suggest that the allolex of *EFIRI SƐ* is *NTI*. *NTI* is robustly the rough equivalent of ‘so’ in English. It is often glossed as ‘because’ when it combines with the demonstrative *wei* ‘this’ to form *wei nti* ‘because of this’ or with the question word *den* ‘what’ to form *den nti* ‘because of what?’/‘why?’. The use of *nti* ‘because’ is demonstrated in example (101).

100. *Me boa-a no efiri sɛ ɔ-ye me yɔnko*  
 1SGSUBJ help-PST 3SGOBJ because 3SGSUBJ-be 1SGPOSS friend  
 ‘I helped her because she is my friend.’

101. *Dede pii wɔ hɔ. Wei nti me-n-tumi*  
 noise much be.at there this because 1SGSUBJ-NEG-able  
*a-n-na*  
 PERF-NEG-sleep

‘There was a lot of noise. Because of this, I could not sleep.’

The conditional clause introducer *SƐ* is the equivalent of the prime IF, as illustrated in example (102).

102. *SƐ wo wɔ sika a ma me bi*  
 if 2SGSUBJ have money TP give 1SGOBJ some  
 ‘If you have money, give me some.’

## 4.12 Similarity

The equivalent of the prime LIKE is TE SƐƐ (/tì sé:/). It expresses similarity or likeness, as in (103). Note that *te* in this context is not semantically related to *te* ‘hear’ or ‘feel’, as seen earlier. These forms are homophonous in the Asante dialect of Akan. In NSM, TE SƐƐ can be used to link two substantives, as in (104), and as a two-argument predicate, as in (105).

103. *Kojo nante te sƐƐ ne papa*  
 Kojo walk stay as POSS father  
 ‘Kojo walks like his father walks.’
104. *Nipa wei ye nipa bi te sƐƐ me*  
 person this be person some stay as 1SGOBJ  
 ‘This person is someone like me.’
105. *Ɛ-te sƐƐ ɛwoɔ nanso e-n-ye ɛwoɔ*  
 3SGSUBJ-stay as honey but 3SG-NEG-be honey  
 ‘It is like honey, but it is not honey.’

## 5. Conclusion

We demonstrated the translatability of semantic primes in the Akan language, specifically in the Asante Twi dialect. The majority of the lexical equivalents correspond in a straightforward manner with the English primes and their combinatorial frames. We identified *biribi~adeɛ bi* ‘something’ and *aha~baabi* ‘place’ as some of the allomorphs. Also, we found some primes that are polysemous forms in the language. They include *foforɔ* (else, new, different) and *akyi* (back, behind). Further, we observed that, unlike in other languages, such as Polish and Cantonese NSM, there are no portmanteau expressions in Akan NSM. In a broad sense, Akan has lexical equivalents for almost all the primes. However, the semantic prime MOMENT seems problematic to posit, and thus, needs further investigation.

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