POSTPOSITIONS AND THE VALENCY MARKER IN KRAHN: MONOSEMY VERSUS POLYSEMY [1]

J. M. Bing and J. Duitsman

Descriptions of the morphology of Kru languages often include lists of a number of homophonic morphemes with meanings such as *instrumental, benefactive, distributive*, etc. This paper investigates several of these morphemes in two dialects of Krahn, a Kru Language spoken in Liberia, and shows that cases where there seem to be a number of homophonic morphemes are, in fact, instances of morphemes with abstract meanings that can be made more specific in particular contexts. In establishing the meaning of a word or morpheme, it is preferable to assume monosemy (one form, one meaning) and attempt to disprove it rather than polysemy (multiple meanings).

Les descriptions de la morphologie des langues kru comprennent souvent des listes de morphèmes homophoniques signifiant par exemple *intrumental, benefique, distributif*, etc. Le présent article examine plusieurs de ces morphèmes dans deux dialectes krahn de la langue kru parleé au Libéria. Les auteurs s'efforcent de démontrer qu'un certain nombre de morphèmes apparemment homophoniques sont en fait des morphèmes abstraits qui ont dans un contexte particulier un sens plus spécifique. Tout d'abord on assume un sème unique (une forme, un sens); ce n'est que dans le cas où il sera prouvé qu'il y a plus d'un sème qu'on cherchera à déterminer les différents sèmes ou sens multiples possibles.

This paper explores the question of whether morphemes which have the same phonological form but different translations should be assumed to be the same or different. In cases where the meanings of homophonic morphemes are different, the assumption is often that more than one morpheme exists. This Polysemy Hypothesis is assumed unless there is evidence to the contrary. The opposite hypothesis, the Monosemy Hypothesis, is that one form will have a single meaning unless there is evidence to the contrary. This investigation of a number of morphemes in a West African language suggests that it is preferable to assume and attempt to disprove monosemy rather than to make polysemy the default hypothesis.

The morphemes to be discussed are postpositions and suffixes found in two dialects of Krahn, a Kru language spoken in Liberia, a language called Wobé in Côte d'Ivoire. Two of these morphemes are postpositions realized as the high front vowels [i] or [ɪ]. In §1 we will discuss postpositions in Krahn. We will then describe the postpositions i^2 in the Gbaeson dialect, adopting the Polysemy Hypothesis as the default case. For example, we will assume that there is an INSTRUMENTAL postposition i^2 different from a LOCATIVE postposition i^2. In §3 we will examine similar postpositions in the Gborbo dialect, but in this case, we make the opposite assumption, adopting the Monosemy Hypothesis as the default case. This procedure reveals that the second hypothsis results in an analysis which better accounts for the facts. Finally, we discuss a third morpheme, a verbal suffix **-ɛ**, which, like the postpositions, has a number of different possible translations.

We show that, for this morpheme, the assumption of monosemy also leads to a reasonable analysis of the data.

---

[1]The original question of the 'multipurpose i' in Gbaeson Krahn was raised and discussed by J. Duitsman in an unpublished paper, *Multipurpose i in Gbaeson Krahn*. A response to that paper was made in *Pragmatics and Multipurpose Morphemes in Krahn*, a paper given by J. Bing at the 17th Annual Conference on African Linguistics in Bloomington, Indiana. The present paper was written by J. Bing with the consent of J. Duitsman and it contains data from both papers as well as a number of new ideas. §6 is the work of J. Bing. The central idea of monosemy is extensively argued for by C. Ruhl (1989) and by prior investigators quoted by Ruhl. We would like to thank Frances Ingemann, Lynell Marchese Zogbo, Inge Egner, Charles Ruhl, Russell Schuh, and Paul Newman for suggestions on earlier versions. Much of the data was obtained from Kai Whyee (Gbaeson) and J.D. Slanger (Gborbo). J. Bing's research was assisted by a grant from the Joint Committee on African Studies of the Social Science Research Council and the American Council of Learned Societies with funds provided by the National Endowment for the Humanities and the Ford Foundation.

The Gborbo and Gbaeson dialects of Krahn are similar and mutually intelligible. The tonal systems of Krahn are complex and consist of rising and falling as well as level tones.[3]

In the discussion below, numbers indicate tones, with tone 1 as the highest and tone 4 as the lowest. The vowel systems of both Gbaeson and Gborbo include the vowels with advanced tongue root /**i, e, u, o, a**/, vowels with retracted tongue root /**ɪ, ɛ, ʊ, ɔ**/, and their nasal counterparts. Nasalization of a phonological word is indicated by the symbol /N/ which signals that all sonorants in a word leftward or rightward to a voiceless obstruent or word boundary are nasalized. Clitic mophemes are treated as parts of phonological words.

There are both lexical and phonological differences between the two Krahn dialects. Laterals are more highly labialized in Gbaeson than in Gborbo; Gbaeson words that contain **wl** (such as **wlɔ**^{4} 'town') correspond to Gborbo words with **l** (such as **lɔ**^{4} 'town'). There are also tonal differences. For example, the word **bo**^{3} 'be, behold' in Gbaeson is **mo**^{2} in Gborbo.

The following Gbaeson lines from Duitsman et al. (1981:1) are given in (1) and the corresponding Gborbo lines in (2) illustrate the extent of the differences between the two dialects.[4]

(1) **suaɛN**^{44} **aN**^{4} **nynɛN**^{1} **klaɛ**^{42} **we**^{2} (Gbaeson)
brush 2s teeth morningEMP
'Brush your teeth in the morning.'
ɛ^3 **bo**^{3}**-ɛ**^{4} **nu**^{2} **a**^{4} **bli**^{1} **gbleN**^{2} **see**^{22}
3ns behold-VAL do 1p home attitude since
'It has been our own tradition anyway.'

(2) **suaɛN**^{44} **aaN**^{42} **nynɛN**^{1} **klaɛ**^{42} **we**^{3} (Gborbo)
brush 2s teeth morning EMP
'Brush your teeth in the morning.'
ɛ^3 **mo**^{3}**-ɛ**^{4} **nʊ**^{2} **a**^{4} **bli**^{1} **gbleN**^{3} **see**^{33} **le**^{23}
3ns behold-VAL do 1p home attitude since PAST
'It has been our own tradition anyway.'

1. POSTPOSITIONS IN KRAHN

In Krahn, postpositions such as **kɛn**^{2} 'on', **di**^{1} 'inside', and **sɔn**^{4} 'under' can be roughly defined as the category of words that can take noun phrases as complements and have meanings similar to English prepositions such as **on, to, inside, under, over, behind**, and **against**. The postpositions are underlined in the examples in (3) and (4).

(3) **ɔ**^{2} **po**^{2} **nmii**^{22} **do**^{1} **gbali**^{44} **kɛN**^{2} (Gbaeson)
3s put meat here drier on
'He put meat here on the drier.'

(4) **ɔ**^{2} **nɛ**^{3} **de**^{1} **teble**^{31} **sɔN**^{4} (Gbaeson)
3s be yonder table under
'He is under the table.'

---

[3]Gbaeson tone is described in Duitsman (1978). Gborbo [gbɔbo] tone is discussed in Bing (1993); it is as complex as the Wobé tone described in Bearth & Link (1980). Both negatives and first person pronouns can be signalled by tonal differences on adjacent words. Because nasalization is a suprasegmental, in nasal contexts, clitics and suffixes which are part of the phonological word are also nasal. The clitic postposition **i**^{2} is realized as **iN**^{2} after a nasal verb.

[4]The abbreviations used in the literal translations throughout the paper are: 1s, 2s, 3s, 1p, 2p, 3p - first, second, and third person human singular and plural; 3ns, 3np - third person nonhuman singular and plural; EMP - emphatic; NEG - negative; NOM - nominalizer; PR - progressive; VAL - valence marker which indicates a change in verbal thematic relationships. (This is called a declarative marker in Egner (1989) and discussed in §5.)

As shown in these examples, these postpositions frequently have locative meanings, and can co-occur with the Gbaeson locative words **do**^{1} 'here', and **de**^{1} 'there'. In simple sentences, the postpositional phrase is frequently at the end of the sentence, but it can also occur elsewhere.

In both Gborbo and Gbaeson the postposition **i**^{2} functions in much the same way as other postpositions such as **wɛ**^{3} 'to' or **pʊN**^{2} 'on', as shown in (5) and (6).

(5) **ɛN**^{1} **k**^{w}**oaN**^{33} **mu-ɛ**^{33} **dbʊ**^{3} **i**^{2}
1s husband go-VAL work to
'My husband is going to work.'
ɛN^{1} **k**^{w}**oaN**^{33} **mu-ɛ**^{33} **dbʊ**^{3} **wɛ**^{3}
1s husband go-VAL work to
'My husband is going to work.'

(6) **aN**^{21} **soN**^{3} **nɛ**^{3}**-o**^{2} **bʊ**^{3} **i**^{2} (Gborbo)
1s hand be-here leg against
'My hand is on/against my leg.'
aN^{1} **soN**^{3} **nɛ**^{3}**(d)o**^{2} **bʊ**^{3} **pʊN**^{2}
1s hand be here leg on
'My hand is on my leg.'

Note that in (6) the Gborbo locative word **do**^{2} 'here' has reduced to **o**^{2}.

2. THE POSTPOSITIONS i^{2} IN GBAESON: THE POLYSEMY HYPOTHESIS

Unlike other Krahn locative postpositions, which usually translate consistently into English prepositions, the Gbaeson postposition **i**^{2} translates in a number of apparently different ways. The following sentences exemplify some of the different translations.

(7) Locative 'on' or 'against'
wlu^{1} **nmu**^{2}**do**^{1} **ɔ**^{3} **bʊ**^{2} **i**^{2}
fly bite there 3s leg on
'A fly bit him on the leg.'
wlu^{1} **nmu**^{2}**do**^{1} **ɔ**^{3} **bʊ**^{2}
fly bite there 3s leg
'A fly bit his leg.'
a^{4} **po**^{2} **simɛ**^{42} **de**^{1} **a**^{4} **bli**^{1} **gbo**^{4} **i**^{2}
1p put cement there 1p home house against
'We put the cement there on our house.'
a^{4} **po**^{2} **simɛ**^{42} **de**^{1} **a**^{4} **bli**^{1} **gbo**^{4}
1p put cement there 1p home house
'We put the cement there at our house.'

(8) Distributive 'all over' or 'several places'
ɔ^{2} **wɔlɔ**^{23} **jawɪ**^{33} **i**^{2}
3s wash pot all^over
'He washed the pot all over.'
ɔ^{2} **wɔlɔ**^{23} **jawɪ**^{33}
3s wash pot
'He washed the pot.'
wii^{23} **tba-ɛ**^{23} **ɔ**^{2} **bʊ**^{2} **i**^{2}
thorns pierce-VAL 3s leg several^places
'Thorns pierced his leg in several places.'

wii^{23} **tba-ɛ**^{23} **ɔ**^{2} **bʊ**^{2}
thorns pierce-VAL 3s leg
'Thorns pierced his leg.'
ʊ^{2} **mu**^{2} **de**^{2} **i**^{2}
3p go back distributive
'They went back (scattered) to different places.'
ʊ^{2} **mu**^{2} **de**^{2}
3p go back
'They went back.'

(9) Instrumental 'with'

a. **a**^{4} **dba-ɛ**^{13} **ci**^{4} **pla**^{4} **i**^{2}
1p kill-VAL leopard cutlass with
'We killed the leopard with a cutlass.'

b. **a**^{4} **dba-ɛ**^{13} **ci**^{4} **pla**^{4}
1p kill-VAL leopard cutlass
'We killed the leopard with a cutlass.'

c. **a**^{4} **saN-ɛ**^{44} **bli**^{4} **dbu**^{1} **i**^{2}
1p tie-VAL cow rope with
'We tied the cow with a rope.'

d. **a**^{4} **saN-ɛ**^{44} **bli**^{4} **dbu**^{1}
1p tie-VAL cow rope
'We tied the cow with a rope.'

As shown in (9b) and (9d), in sentences where the relationships between the lexical items is fairly obvious, it is sometimes possible to omit the postposition **i**^{2} without changing the interpretation of the sentence.

In addition to the meanings illustrated in (7)-(9), the postposition **i**^{2} can also be a component of an idiomatic phrasal verb, as shown in (10). The phrasal verb **gblaN**^{2} **i**^{2} means 'scrape.'

(10) Obligatory component of phrasal verb

a^{4} **gblaN**^{2} **palɛ**^{44} **i**^{2}
1p scrape plantain particle
'We scraped the plantain.'
a^{4} **gblaN**^{2}
1p snore
'We snored.'

Presumably, the use of **i**^{2} in phasal verbs is a special case, and will not be discussed further.[5]

If one assumes polysemy, the morphemes illustrated in (7), (8), and (9) must be identified as all different. The postposition **i**^{2} in (7) would assign the thematic role LOCATIVE to its complements, the one in (8) would assign DISTRIBUTIVE and the one in (9) would assign INSTRUMENTAL. Those in phrasal verbs could have derived from any of the other three. Not surprisingly, an original assumption of polysemy can result in a conclusion of polysemy. The apparent differences in meaning suggest no evidence to disprove the hypothesis. Although the conclusion that there are three separate but homophonous postpositions could be correct, there is something potentially circular to this approach.

[5]In Krahn there are many phrasal verbs ending in the postposition **i**^{2} which contrast to verbs with related meanings. Some Gbaeson examples are:

juo^{33} **i**^{2}	'to recognise'	**juo**^{33}	'to know'
po^{2} **i**^{2}	'to drop'	**po**^{2}	'to put, throw'
wan^{2} **i**^{2}	'to flee'	**wan**^{2}	'to fly, jump'

3. THE POSTPOSITIONS i^2 AND i^3 IN GBORBO: THE MONOSEMY HYPOTHESIS

Unlike the Gbaeson dialect, the Gborbo dialect of Krahn has two different postpositions, i^2 and i^3. These two postpositions, however, have more than just two translations. In investigating them, we will assume the proposal of Ruhl (1989). In his investigation of the semantics of verbs in English, Ruhl suggests that in establishing the meaning of any morpheme, one should first assume and attempt to disprove monosemy (one form, one meaning) before assuming polysemy, multiple meanings. Ruhl (1989:vii) argues that:

> words contribute much less to meaning than usually supposed; the apparent lexical meaning of a word includes in large part a contribution of contextual factors, both linguistic and extralinguistic. Factoring out contextual meaning, we find that some words have a single, highly abstract meaning ...

In the following section we will assume and then attempt to disprove monosemy, recognizing that the meaning of a morpheme is not always obvious from its translation.

3.1 THE 'ADJACENCY' POSTPOSITION i^2

As (11) illustrates, some of the meanings of the postposition i^2 in Gborbo are the same as those in Gbaeson, and like their Gbaeson counterparts in (7) can also be translated as 'on' or 'against.'

(11) **lu**^{1} **nmu**^{2} **do**^{2} **ɔ**^{3} **bʊ**^{2} **i**^{2}
fly bite there 3s leg on
'A fly bit him on the leg.'
lu^1 **nmu**^{2} **do**^{2} **ɔ**^{3} **bʊ**^{2}
fly bite there 3s leg
'A fly bit his leg.'

(12) **gbaa**^{32} **tba**^{3} **dɛ**^{3} **i**^{2}
chair hit something against
'The chair hit against something'
gbaa^{32} **tba**^{3} **dɛ**^{3}
chair hit something
'The chair hit something.'

In some cases, but not all, the postposition i^2 may simply be a phonological reduction of **li**^{2} 'against', which suggests a possible historical source for the postposition. The two sentences in (13) have the same meaning.

(13) **ɔ**^{3} **po-ɛ**^{33} **o**^{2} **gbu**^{41} **li**^{2}
3s put-VAL there house against
'He puts it on the wall of the house.'
ɔ^3 **po-ɛ**^{33} **o**^{2} **gbu**^{4} **i**^{2}
3s put-VAL there house against
'He puts it on the wall of the house.'

Further evidence for 'against' as the meaning of i^2 is the contrast between the two sentences in (14).

(14) **ɔ**^{3} **tba**^{3} **taa**^{43} **gbuaN**^{33} **i**^{2}
3s hit basket fist against
'She tapped the basket.'
ɔ^3 **tba**^{3} **taa**^{43} **gbuaN**^{33}
3s hit basket fist
'She punched the basket.'

In some cases, the interpretation of 'against' can be quite concrete, in (14) and (15), but in other contexts it is more abstract, as in (16).

(15) **ji-ɛ^{13} do^{2} gbu^{41} i^{2}**
1s^come-VAL there house against
'I touched against the house.'

(16) **ɔ^{3} ji^{1} o^{2} lɔ^{4} i^{2}**
3s come there town against
'He came around the edge of the town.'

However, the translation of **i^{2}** as 'against' is probably too specific. The following sentences suggest that the meaning of this postposition is more general and can include the concept of 'with' or 'together with'. A better translation is probably 'adjacency', as illustrated in (17)-(19).

(17) **diɛ^{13} ɛN^{2} k^{w}aʊ^{44} sma^{2} i^{2}**
1s^eat^VAL 1s rice soup adjacency
'I ate my soup with rice.'

(18) **diɛ^{13} ɛN^{1} baɪ^{32} smaN^{2} i^{2}**
1p^eat^VAL 1s friends rice adjacency
'I ate rice with my friends.'

(19) **bla^{2}-ɛ^{3} tebo^{23} sʊn^{2} i^{2}**
1s^hit-VAL table pestle adjacency
'I hit the table with a pestle.'

The interpretation of ADJACENCY as ACCOMPANIMENT, as in (17) and (18) or as INSTRUMENTAL, as in (19), depends on both the meanings of other words in the sentence and on shared knowledge of the real world, as does the interpretation of 'with' in the translations. Similarly, in the context of 'kill' and 'leopard' in (20), the phrase **pu^{4} i^{2}** 'with a gun' will be interpreted as INSTRUMENTAL, but in (21), the meaning of adjacency would be ACCOMPANIMENT.

(20) **ɔ^{3} dba-ɛ^{23} ci^{4} pu^{4} i^{2}**
3s kill-VAL leopard gun adjacency
'He killed the leopard with a gun.'

(21) **ʊ^{3} diɛ^{33} nyʊ^{2} pl(ʊ)ɪ^{44} de^{2} i^{2}**
3p eat-VAL people white there adjacency
'They ate while the Europeans were present.'

In some contexts, the postposition **i^{2}** can best be translated as 'to'. In (22), this interpretation is partly because of the postposition and partly because of the verb **mu^{3}** 'go'.

(22) **ɛN^{1} k^{w}oaN^{33} muɛ^{33} dbʊ^{3} i^{2}**
1s husband go-VAL work adjacency
'My husband is going to his workplace.'

The hypothesis that **i^{2}** has a more abstract meaning than its translations is consistent with the fact that in (23) it is ambiguous.

(23) **ʊ^{3} teN-ɛ^{43} duɛ^{233} paa^{44} i^{2}**
3p buy-VAL guests cassava adjacency
'They bought cassava for the guests/with the guests.'

The sentence may be translated either as 'they bought cassava with the guests', or 'they bought cassava for the guests'. Similarly, sentences (24) through (26) can have more than one interpretation.

(24) **soko^{33} mu-ɛ^{33} ɔ^{3} i^{2}**
Soko went-VAL 3s adjacency
'Soko went with him.' or 'Soko went for him (for his benefit).'

(25) **ɔɔ^{33} de-ɛ^{33} soko^{33} i^{2}**
3s-PR dance-VAL Soko adjacency
'She is dancing for/with Soko.'

(26) **ɔ^{3} sa-ɛN^{33} bli^{43} dbu^{2} i^{2}**
3s tie-VAL cow rope adjacency
'She tied the cow with the rope.' or 'She tied the rope on the cow.'

If the postposition **i^{2}** has an abstract meaning of ADJACENCY, this is consistent with the fact that its noun complements can have different thematic roles including location ('on/to/against the house') accompaniment ('with my friends'), instrument ('with a pestle'), or benefactive ('for my friends'). This is plausible if we assume that the other words in the sentence and knowledge of the real world provide enough context for the different interpretations. Interestingly, another postposition in Gborbo, **i^{3}**, has exactly the opposite meaning.

3.2 THE 'DISTRIBUTIVE' POSTPOSITION i^{3}

In Gborbo there is a postposition **i^{3}** which, unlike the adjacency postposition **i^{2}** has a mid rather than a high tone. This 'distributive' postposition is cognate with the **i^{2}** postposition in (8) in Gbaeson, but in Gborbo, difference in both form and meaning make it clear that this is a separate morpheme. However, even this postposition has a number of translations in different contexts. Its central meaning of non-adjacency can be interpreted as 'all over', 'scattered', or 'different places'.

(27) **lu^{2} nmu^{3}-i^{3} ɔ^{3} jua^{23} i^{3}**
fly bite-VAL^LOC 3s face distributive
'A fly bit him all over his face.'
lu^{2} nmu^{3} ɔ^{3} jua^{23}
fly bite 3s face
'A fly bit him on his face.'

(28) **ʊ^{3} mu^{3} de^{3} i^{3}**
3p go back distributive
'They went back to different places.'
ʊ^{3} mu^{3} de^{3}
3p go back
'They went back.'

(29) **sɛɪ^{32} ni-ɛ^{33} gbu^{1} de^{3} i^{3}**
children be-VAL house behind distributive
'The children are all around behind the house.'
sɛɪ^{32} ni-ɛ^{33} (de^{2}) gbu^{1} de^{3}
children be-VAL (there) house behind
'The children are behind the house.'

(30) **ɔ^{3} teN^{3}-ɛ^{43} k^{w}aʊ^{44} lɔ^{4} i^{3}**
3s buy-VAL rice town distributive
'He bought rice in different places in town.
ɔ^{3} teN^{4}-ɛ^{4} k^{w}aʊ^{44} do^{2} lɔ^{3}
3s buy-VAL rice there town
'He bought rice in town.'

(31) **ɔɔ^{33} na^{3} koko^{42} kɪN^{3} (kɛN^{3} + i^{3} → kĩN^{3})**
3s^PR walk cocoa on^distributive
'She is walking all over the cocoa.'

ɔɔ^{33} na^{3} koko^{42} kɛN^{3}
3s^PR walk cocoa on
'She is walking on the cocoa.'

(32) wii^{32} tba^{3} -ɛ^{3} ɔ^{3} bʊ^{3} i^{3}
thorns pierce VAL 3s leg distributive
'Thorns pierced his leg in several places.'
wii^{32} tbɔ^{3} ɔ^{3} bʊ^{3}
thorns pierce 3s leg
'Thorns pierced his leg.'

English translations for the distributive postposition, i^{3} are less varied than those for the adjacency postposition, i^{2}. The meanings 'several places', 'all over', 'all around', and 'in different places' all transparently share the common idea of 'not adjacent', or 'distributive'. This idea of non-adjacency is as abstract as the idea of adjacency, and the two postpositions, i^{2} and i^{3} seem to be antonyms. The adjacency postposition i^{2} is found in sentences in which things are together or are in the process of coming together, and translates as 'together', 'to', 'for', 'with', and 'against'. The distributive postposition i^{3} is found in sentences in which things are separate or in the process of coming apart, and translates as 'apart', 'from', and 'away from'. What Ruhl (1989:174) shows for English verbs is that some morphemes have meanings so general that paraphrase is difficult for particular sentences. However, when all of the examples are collected, the unified meaning makes sense.

4. CHOOSING A DEFAULT HYPOTHESIS

A comparison of the postpositions i^{2} and i^{3} in the two dialects suggests that both Gborbo and Gbaeson have one distributive and one adjacency postposition. In Gbaeson these two postpositions have the same form, i^{2}. At first, this might seem to be evidence against the default assumption of "one form, one meaning." Both the evidence from Gborbo and the clear difference in meaning between the two postpositions show that there are two different postpositions, not one. However, Ruhl's claim is not that there is always a one-to-one relationship between form and meaning. His claim is that the default assumption should be that of monosemy, and that the investigator should first attempt to disprove monosemy before assuming polysemy.

There is no obvious explanation for why the two postpositions are homophonous in Gbaeson but have different forms in Gborbo. The one lesson which can be drawn is that assuming polysemy and assuming monosemy can lead to different conclusions. The Polysemy Hypothesis might have led to the assumption of at least three different morphemes in Gbaeson Krahn, all with the form i^{2}. Had Gborbo been examined independently, the same hypothesis might have suggested at least five different morphemes. However, the assumption of monosemy identified two postpositions in Gborbo, a "distributive" and an "adjacency" postposition, and it is likely that Gbaeson has the same two postpositions as well. With the assumption of monosemy, there is less danger of introducing errors resulting from the imposition of categories from one's own language. The hypothesis that the two postpositions have relatively abstract core meanings accounts not only for the fact that certain sentences are ambiguous, but also for their wide range of translations.

We will now explore a verb suffix in Krahn which is also difficult to translate and will show how the assumption of monosemy is useful in this case as well.

5. THE VALENCE MARKER -ɛ

In a number of the examples above there is a toneless suffix -ɛ which assimilates to the height of the final vowel of the verb. Pairs of sentences such as those in (33)-(35) have led some to believe that this suffix assigns different thematic roles such as such as BENEFACTIVE, ACCOMPANIMENT, CAUSATIVE, or INSTRUMENTAL.

(33) **ʊ**^{2} **dba**^{1} **sʊʊ**^{33} (Gbaeson)
3p kill chicken
'They killed a chicken.'
ʊ^{2} **dba**^{1}-**ɛ**^{3} **dɪwɪ**^{31} **sʊʊ**^{33}
3p kill-VAL guests chicken
'They killed a chicken for the guests.'

(34) **a**^{4} **tɛN**^{4} **sʊʊ**^{33} (Gborbo)
1p buy chicken
'We bought chicken.'
a^{4} **tɛN**^{4}-**ɛ**^{3} **pue**^{43} **i**^{2} **sʊʊ**^{33}
1p buy-VAL cassava adjacency chicken
'We bought chicken with cassava.'

(35) **ʊ**^{2} **dba**^{1} **ci**^{4} (Gbaeson)
3p kill leopard
'They killed a leopard.'
ʊ^{2} **dba**^{1}-**ɛ**^{3} **ci**^{4} **pla**^{4}
3p kill-VAL leopard cutlass
'They killed a leopard with a cutlass.'

(36) **soko**^{33} **mu**^{3} (Gborbo)
Soko go
'Soko went/goes.'
soko^{33} **mu**-**ɛ**^{33} **ɔ**^{3}
Soko go-VAL 3s
'Soko made him go.'

(37) **ɔɔ**^{33} **de-o**^{32} (Gborbo)
3s^PR dance-there
'She is dancing there.'
ɔɔ^{33} **de**-**ɛ**^{33} **soko**^{33}
3s^PR dance-VAL Soko
'She is making Soko dance.'

In closely related languages, a number of homophonous suffixes have been proposed for what seem to be similar suffixes. Singler (1979) proposes that Klao has a causative suffix -e, a passive suffix -e, and a benefactive suffix -e. Reporting the analyses by others, Marchese (1979) notes that Wobé has a causative suffix -ɛ, a passive suffix -ɛ, and a declarative, affirmative particle -ɛ. However, in Krahn, the suffix illustrated in (33)-(37) seems to be a single morpheme.

One indication of this is the fact that, regardless of meaning, the suffix -ɛ does not occur in most negative or hypothetical sentences, but only in affirmative factual ones. Consider the Gborbo sentences in (38). In (38b), the negative marker is a high tone (tone 2) realized on the subject. The suffix -ɛ can occur in the affirmative sentence (38a), but not in negative sentence (38b).

(38) a. **sokoo**^{33} **di**-**ɛ**^{33} **dɛ**^{3} **sʊ**^{2} (Gborbo)
Soko^PR eat-VAL thing always
'Soko is always eating. '

b. **sokoo**^{32} **di**^{3} **dɛ**^{3} **sʊ**^{2}
Soko^PR^NEG eat thing always
'Soko isn't always eating.'

Similarly, in the affirmative factual sentences below, the suffix is present, but in the nonfactual and negative sentences it is not. When the suffix is used, there is no nasalization of the underlyingly nasalized verb **teN**^{43} 'buy' in (39a) and (39c), the suffix assimilates to **e**, and the **e** of the verb dissimilates to **i** so that /**teN**^{43}/ 'buy' plus the suffix is pronounced [**ti-e**^{43}] and /**gbeN**^{2}/ 'catch' plus the suffix is pronounced [**gbie**^{22}].

(39) a. **ɔ**^{3} **teN-ɛ**^{43} **dɛ**^{3} (Gborbo)
3s buy-VAL thing
'He bought something.'

b. **ɔ**^{3} **teN**^{43} **dɛ**^{3}
3s buy thing
'He should buy something.'

c. **ɔɔ**^{33} **teN-ɛ**^{43} **koko**^{41}
3s^PR buy-VAL cocoa
'He buys cocoa.'

d. **ɔɔ**^{32} **teN**^{43} **kafi**^{33}
3s^PR^NEG buy coffee
'He doesn't buy coffee.'

(40) **ɔ**^{3} **gbeN-ɛ**^{22} **gbeN**^{1}
3s catch-VAL bear
'He caught the bear.'

gbeN^{2} **gbeN**^{1} (Gborbo)
catch bear
'Catch the bear!'

(41) **ɔ**^{3} **mu-ɛ**^{33} **kle**^{45}
3s go-VAL farm
'He's gone to the farm.'

ɔ^{3} **mu**^{3} **kle**^{45}
3s go farm
'Let him go to the farm.'

aa^{42} **mu**^{3} **de**^{2}
1p^NEG go t here
'Let's not go there.' or 'We can't go there.'

(42) **gbafɔɔ**^{344} **di-ɛ**^{33} **k**^{w}**ouN**^{34}
toad eat-VAL leaf
'The toad can eat leaves.'

gbafɔɔ^{342} **di**^{3} **k**^{w}**ouN**^{34}
toad^NEG eat leaf
'The toad cannot eat leaves.'

gbafɔ^{34} **di-ɛ**^{33} **k**^{w}**ouN**^{34}
toad eat-VAL leaf
'The toad ate the leaves.'

gbafɔ^{34} **se**^{3} **k**^{w}**ouN**^{34} **di**^{3}
toad NEG leaf eat
'The toad did not eat leaves.'

Egner (1989:127) identifies a suffix -ɛ in Wobé as a declarative marker (la marque déclaratif), and says that it occurs when a verb is followed by a complement or

pro-complement. In Krahn, too, it is often the case that the suffix occurs with the addition of a complement, as in (43) and (44).

(43) **ɔ**^{3} **dba**^{42}**ci**^{4} (Gborbo)
3s kill leopard
'He killed a leopard.'
ɔ^{3} **dba-ɛ**^{42} **ci**^{4} **cnɛɛ**^{32}
3s kill-VAL leopard cutlass
'He killed a leopard with a cutlass.'

(44) **pa**^{34} **too**^{34}
carve mortar
'Carve a mortar!'
pa-ɛ^{34} **too**^{34} **cnɛɛ**^{32}
carve-VAL mortar cutlass
'Carve a mortar with a cutlass!'

However, the Krahn facts are apparently more complex, because there are numerous examples of verbs which do not use the suffix when the verb has a complement or pro-complement, as shown in (45).

(45) **ɔ**^{3} **na**^{23} (Gborbo)
3s drink
'He drinks.' or 'He drank.'
ɔ^{3} **na**^{23} **nmɔ**^{3}
3s drink palm wine
'He drinks/drank palm^wine.'
ɔ^{3} **na-ɛ**^{23} **nmɔ**^{3} **dɛ**^{3} **i**^{2}
3s drink-VAL palm^wine thing adjacency
'He drinks/drank palm wine with something.'

We propose that in Krahn the suffix -ɛ is a valence marker which signals a marked thematic structure, but has no lexical meaning of its own. The claim of a suffix -ɛ as a valence marker has previously been made for Vata and Gbadi by Koopman (1984:23) and for Guéré by Burns (1986). [6] In some contexts, this suffix in Krahn sometimes seems to have a specific meaning. For example, in (46b) it seems to be a CAUSATIVE -ɛ and in (46c) seems to be a DECLARATIVE -ɛ.

(46) a. **soko**^{33} **mu**^{3} (Gborbo)
Soko go
'Soko went/goes.'

b. **soko**^{33} **mu-ɛ**^{33} **ɔ**^{3}
Soko go-VAL 3s
'Soko made him go.'

c. **soko**^{33} **mu-ɛ**^{33} **ɔ**^{3} **i**^{2}
Soko went-VAL 3s adjacency
'Soko went with him.' or 'Soko went for him (for his benefit).'

However, the interpretation of the thematic roles in (46) depends as much on other possible choices determined by the words in the sentence as on the presence of the

[6] Koopman (1984:23-24) calls verbs with a similar suffix in Vata and Gbadi *applied verbs*. In Vata a locative or instrumental argument may be added when the suffix /-lɛ/ is added to a verb, and in Gbadi a goal, locative and instrumental argument may be added with the suffix /-lu/.

Burns' claim is that "all occurrences of verbal suffix /-ɛ/ mark the presence of a marked argument--an argument which is additional to the subcategorization structure of the verb" We assume a definition of *argument* which includes noun phrases, postpositional phrases and the locatives **de**^{2} and **do**^{2}.

suffix -ɛ. In (46a), Soko is the only argument, and can only have the role of actor. In (46b), the suffix -ɛ indicates that the verb **mu**^{3} 'go' has an additional argument. The only possible thematic role for the pronoun **ɔ**^{3} 'he/she' is that of the actor, so, by default, the subject, **Soko**, must be the cause. Notice that for (46c), which seems to have the same suffix -ɛ, there is no causative interpretation. The verb has a postpositional phrase as a complement and the pronoun **ɔ**^{3} is the object of the postposition **i**^{2}. In (46c) there is no causative interpretation. Similar relationships hold in (47).

(47) a. **ɔɔ**^{33} **de-o**^{32} (Gborbo)
3s^PR dance-there
'She is dancing there.'

b. **ɔɔ**^{33} **de-ɛ**^{33} **soko**^{33}
3s^PR dance-VAL Soko
'She is making Soko dance.'

c. **ɔɔ**^{33} **de-ɛ**^{33} **soko**^{33} **i**^{2}
3s^PR dance-VAL Soko adjacency
'She is dancing for/with Soko.'

If the suffix -ɛ were causative in (47b), it should be in (47c) as well, but it is not.

In addition to examples where the suffix apparently has one meaning in one context and no meaning in others, there are cases in which, not only the presence, but also the type of complement makes a difference in whether or not the suffix will occur. For example, the verb **po**^{3} has a general meaning, and can translate as 'put, look, plant, throw or shoot'. At first, (48c) and (49c) seem to be counterevidence to the hypothesis that -ɛ is a valence marker which signals a marked number of verb complements

(48) a. **ɔ**^{3} **po**^{3} **pu**^{4} (Gborbo)
3s shoot gun
'He shot the gun.'

b. **ɔ**^{3} **po-ɛ**^{33} **jlu**^{1} **pu**^{4} (**i**^{2})
3s shoot-VAL cobra gun (adjacency)
'He shot (at) the cobra with the gun.'

c. **ɔ**^{3} **po-ɛ**^{33} **jlu**^{1}
3s shoot-VAL cobra
'He shot (at) the cobra.'

(49) a. **ɔ**^{3} **po**^{3} **sou**^{21} **(Gborbo)**
3s shoot stone
'He threw the stone.'

b. **ɔ**^{3} **po-ɛ**^{33} **sou**^{21}
3s shoot-VAL stone
'He shot (at) the stone.'

The sentences in (48c) and (49b) seem to be counterexamples, since both appear to have only a single argument. However, the verb **po**^{3} is subcategorized only for the noun which is an instrument, such as **pu**^{4} 'gun'. The suffix -ɛ occurs only when a non-instrumental argument is added, as in (48b) and (49b). Although an instrumental argument is obligatory for this verb, it can optionally be deleted, but it is understood. In the context of a group of sentences such as (48), the sentence ***ɔ**^{3} **po**^{3} **jlu**^{1} *'He shot the cobra' was greeted with laughter, accompanied by the explanation that you can't use a snake to shoot with. When asked to translate the meaning of a sentence such as (48c), in which the instrument was understood, one Krahn speaker would always volunteer information about an instrument, adding a phrase such as "with a gun", "with a slingshot", or "with binoculars".

Because a required argument can optionally be deleted, both sentences in (50) are correct. The deleted argument is understood, and because there is the implication in (50b) that Soko is using binoculars (the most likely instrument), but not in (50a). The phrasal verb **po^{3} ja^{3}** means 'look at'.

(50) a. **soko^{33} po^{3} na^{3} ja^{3}** (Gborbo)
Soko look bird at
'Soko looked at the bird(s).'

b. **soko^{33} po-ɛ^{33} na^{3} ja^{3}**
Soko look-VAL bird at
'Soko looked at the bird(s) (with binoculars).'

The sentences in (51), like those in (50), suggest that the presence or absence of the suffix **-ɛ** depends more on the subcategorization of the verb than on the meaning of the verb complements. The verb **sa^{4}** in (51a) can be translated as 'take, pay, pull out, answer, or discuss'.

(51) a. **ɔ^{3} sa^{4} tba^{2}^tba^{2}** (Gborbo)
3s answer nonsense
'He talks nonsense.'

b. **ɔɔ^{33} lu^{23}**
3s^PR speak
'He is speaking.'

c. **ɔ^{3} lu-ɛ^{23} tba^{2}^tba^{2}**
3s speak-VAL nonsense
'He speaks/spoke nonsense.'

d. **ɔ^{3} se^{3} tba^{2}^tba^{2} lu^{23}**
3s NEG nonsense speak
'He doesn't speak nonsense.'

e. ***ɔ^{3} lu^{2} tba^{2}^tba^{2}**
3s speak nonsense

In the context of (51) the verbs **sa^{4}** and **lu^{23}** mean approximately the same thing, but have different subcategorizations. The verb **sa^{4}** requires a complement, but the verb **lu^{23}** does not. As the difference between (51a) and (51c) show, the use of the suffix **-ɛ** is not automatic when a verb has a complement. It signals complements which occur in addition to those for which a verb is subcategorized.

In most situations **-ɛ** seems to have a basic additive meaning. There are other morphemes **-ɛ** and **(y)ɛ** which also have an additive meaning, and one of these may be historically related to the suffix. For example, there is a conjunction **(y)ɛ^{3}** ... **(y)ɛ^{3}**, 'and ... and', illustrated in (52).

(52) **moN^{1}-(y)ɛ^{3} ɛN^{1} bao^{23}-ɛ^{3} a^{4} mu-ɛ^{33} dɛ^{3} di^{2}** (Gborbo)
1s-and 1s friend-and 1p go-VAL thing eat
'My friend and I are going to eat.'
ta-yɛ^{42} mu-ɛN^{33}
2s^place-and go-and
'Where are you going?'

Gborbo also has a common subordinator, **yɛ**, which can translate as either 'then' or 'and'.

(53) **ɔ^{3} koN^{2} ɔ^{3} yɛ^{2} teN^{4}** (Gborbo)
3s have 3s then buy
'He has to buy it.' (Literally: 'He has then he buys.')

It is sometimes difficult to distinguish between the verb suffix -ɛ and the subordinator yɛ in Gborbo sentences such as (54b).

(54) a. **ɔ^{3} mu^{3}** (Gborbo)
3s go
'He went.'

b. **ɔ^{3} mu-ɛ^{33} gbu^{1} paaN^{33}**
3s go-? house enter^NOM
'He is going to enter the house.'

In other contexts it is possible to confuse the suffix -ɛ with the third person pronoun **ɛ^{3}**, the nominaliser -ɛ, the reduced pronoun **(d)ɛ^{3}** 'thing, and the locative **(d)ɛ^{2}** 'there'. This is one reason it is difficult to ascertain its role in sentences, and why it sometimes appears to have different meanings in different contexts. However, many of the different interpretations, such as instrumental or causative, derive as much from the specific contexts as from the central meaning of the suffix.

6. CONCLUSION

Ruhl (1989) argues that when investigating meaning, one should not assume polysemy. The two meanings for **i^{2}** in Gbaeson would, at first, seem to be counterevidence to Ruhl's Monosemy Hypothesis, but this is not the case. Ruhl proposes that one should first *disprove* monosemy before assuming polysemy for any morpheme, and this is what we have done. By assuming monosemy for the adjacency and distributive postpositions, we have shown that a number of apparent homonyms in Krahn are, in fact, two postpositions with meanings more abstract than many other Krahn postpositions.

In related languages and dialects, the verbal suffix -ɛ has been assumed to be a number of different suffixes, and for other languages and dialects this may be the case. However, in Krahn this morpheme is a valence marker with an abstract 'additive' meaning. The suffix signals the presence of complements in addition to those for which the verb is subcategorized. By assuming a unified, but highly abstract meaning for a morpheme rather than a number of separate but homophonic morphemes, we have been able to account for what seem like 'multiple' meanings for three different morphemes in Krahn.

REFERENCES

Bing, J. Mueller. 1993. Default features in contour tones. Principles and prediction: The analysis of natural language. In Mushira Eid and Gregory Iverson, eds. Current isssues in linguistic theory, 93. Amsterdam: John Benjamins.

Bearth, Thomas and Christa Link. 1980. The tone puzzle of Wobé. Studies in African Linguistics 11.2:147-205.

Burns, Rebecca. 1986. The verbal suffix /-ɛ/ in Guéré. Paper presented at the Seventeenth Conference on African Linguistics, Bloomington, Indiana.

Duitsman, John. 1978. The phonology of Krahn, Gbakɛsɔ dialect. Monrovia: Institute for Liberian Languages.

———, Kathy Roessler, and E. Banks Roessler. 1981. Gbɛn an chɛ (Take care of yourself). Monrovia: Institute for Liberian Languages.

Egner, Inge. 1989. Précis de grammaire wobé. Annales XV.

Koopman, Hilda. 1984. The syntax of verbs. Dordrecht: Foris Publications.

Marchese, Lynell. 1979. Atlas linguistique kru. Abidjan: Institut de Linguistique Appliquée.

Ruhl, Charles. 1989. On monosemy. Albany: SUNY Press.

Singler, J. 1979. Verb suffixes in Klao. CIRL 6. Abidjan: Institute de Linguistique Appliquée.