The Particle KAI in Bimanese

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Oceanic Linguistics

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The Bimanese particle *kai* occurs both as an instrumental preposition preceding a noun phrase and within the verb complex, where it performs a variety of syntactic functions that fall into two main groups: valency-increasing and nominalization. However, in discourse, a substantial number of instances have no clear syntactic function, and appear to be performing a discourse function instead. In this paper, based on our examination of a corpus of narratives and conversational data, we outline the main syntactic functions of *kai*, and investigate its discourse distribution. Valency increase may involve the licensing of an additional applicative object with either a one- or two-argument verb, or more rarely the creation of a one-argument verb from a nonverbal base. Nominalizations are of two types, one producing locative nouns, and the other nominalized clauses. Discourse *kai* is found with both transitive and intransitive verbs, with no increase in valency.

1. INTRODUCTION.[1] Bimanese, a Central Malayo-Polynesian (CMP)[2] language spoken in the eastern half of the island of Sumbawa, Indonesia, makes use of three different applicative particles to increase the valency of the verb: *kai, laɓo/laʔo*, and *ʋea*. The three differ in their syntactic distribution, as well as in the semantic roles that they add. *ʋea,* which adds benefactive arguments, only occurs within the verb complex. *Laɓo/laʔo,* which adds comitative arguments, can occur within the verb complex, but this usage is relatively rare, and *laɓo/laʔo* mostly functions as a preposition. In our entire corpus, for example, there are only two instances of *laɓo/laʔo* within the verb complex. *Kai,* on the other hand, freely occurs both within the verb complex and separately from it. In the verb complex, Owens (2000) identified it as an applicative marker mainly introducing instrumental arguments, and outside it as an instrumental preposition. However, this

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2. Bimanese is generally considered to be a member of the Bima-Sumba-Flores group, within CMP. However, recent studies have questioned both the existence of CMP as anything other than a geographical grouping (Donohue and Grimes 2008) and the existence of a single group comprising Bimanese and the languages of Sumba and of western and central Flores (Blust 2008). It is not currently clear that Bimanese has any close relatives.

analysis is based largely on isolated sentences collected by means of elicitation, not on its distribution in discourse. When a discourse perspective is taken, it becomes clear that *kai* within the verb complex is not restricted to applicative functions, and, in fact, does not always appear to have a clear syntactic function of any type.

This study constitutes a first attempt at investigating *kai* from a discourse perspective. It will address three main questions about *kai*. The first, most basic, question is, what is the distribution of *kai* in discourse? We will attempt to determine the relative frequencies of *kai* both within the verb complex and outside it, and the relative frequency of syntactically motivated and syntactically unmotivated *kai* within the verb complex. The second question focuses on those instances of *kai* within the verb complex that are syntactically motivated, and asks what syntactic functions *kai* serves, and what the relative frequencies of the different functions are. The third question focuses on those instances of *kai* within the verb complex that are not syntactically motivated, and asks whether we can determine discourse functions, or at least discourse environments for *kai*.

2. GRAMMAR OF THE BIMANESE VERB COMPLEX. The Bimanese verb complex consists of a core, generally a main verb or adjective, plus potentially a variety of verbal adjuncts. Cores consisting of a sequence of two or more verbs derived through verb serialization are not uncommon. The boundaries of the verb complex, and the nature of the elements that can be considered part of it, can be identified by the position of actor and emphatic clitics when present, as they cliticize either to the initial or the final element in the complex. Actor clitics are frequent in discourse, as overt actors are most often encoded by just a clitic, and clitics also can, and often do, cooccur with nouns and pronouns referring to the actor. Actor clitics typically encliticize to the end of the verb complex when the clause is realis, and procliticize to the first element of the verb complex when the clause is irrealis or when another enclitic is occupying the final slot. As final emphatic clitics are also quite frequent in discourse, the final boundary of the verb complex is marked in a large group of verbal clauses, the initial boundary is marked in a smaller set, and both boundaries in an even smaller set.

Within the verb complex, in addition to the verb core, a range of other elements is found. There are a few types of elements that may precede the main verb, adjective, or serial verb construction, such as the negative particle *vati*, modals such as *loa* 'can' and *neʔe* 'want, will', and temporal/aspectual adverbs such as *vau* (perfective) and *vuŋa* (progressive). An even larger group follows the main verb, including the three applicative particles *kai, laɓo/laʔo*, and *vea*, and a wide range of adverbials such as the intensifiers *poda* and *lalo*, the softener *toʔi* 'small, just', the reciprocal marker *aɲi*, the simultaneous action marker *salaho,* quantifiers like *saraʔa* 'all', the plural marker *mena*, and *cua* 'each', and other modifiers of action such as *vali* 'again' and *rero* 'around'. When an adverbial cooccurs with an applicative, the adverbial will generally follow the verb core, and the applicative will follow the adverbial. Sequences of more than one adverbial are also possible, and these sequences can also be followed by an applicative.

Finally, a number of enclitics may close out the verb complex, either singly or in combination, displacing any potential actor clitics, which will then appear in initial position. The clitics include the perfective marker *ra*, the conditional *si*, emphatic *mpa* and *ku*, the

softener *pu*, and the temporal marker *du*. Some of these may also occur earlier in the verb complex, or outside the verb complex. For example, *ra* sometimes procliticizes, and sometimes encliticizes to the verb core, to preceding adverbials, or to a preverbal element. *Mpa* and *mpa* plus *ra* (*mpa=ra*) occur in a wide range of environments outside the verb complex. The behavior of these particles is quite complex, and beyond the scope of this paper.

3. PRIOR DESCRIPTIONS. In this section, we begin by discussing the distribution of applicatives in Austronesian languages in general and in languages that are most closely related to Bimanese in particular. We then describe in more detail what is known about the use of *kai* in Bimanese.

3.1 APPLICATIVES IN AUSTRONESIAN LANGUAGES. Applicative constructions are found in many languages, including many members of the Austronesian family. Two applicative suffixes that alternate with related prepositions are reconstructed for Proto-Austronesian (PAN) (Starosta, Pawley, and Reid 1982), *i and *aken, the latter of which may be the ultimate source for *kai*, as well as for many of the applicative markers found in other languages in the family. However, note that in the PAN focus system there was a set of applicative voices using other verbal affixes, and applicative constructions in modern Austronesian languages are often derived from these affixes as well. This is the case, for example, for Philippine and Formosan languages (Huang 2005), and presumably for Bajau (Donohue 1996), which uses a suffix -*an*. In some of these languages, applicativization remains bound up with voice. However, for languages in which applicatives are formed with reflexes of *i and *aken, applicativization and voice alternations are independent processes.

In PAN, *aken was probably associated with locative, instrumental, and agentive/causative case relations; on the other hand, *i was probably associated mainly with locative, dative, and benefactive (Starosta, Pawley, and Reid 1982).[3] When we look at the daughter languages in which applicative markers are reflexes of *i and *aken, we also find combinations of several semantic roles with a single affix, with some similarity both to each other and to the system proposed by Starosta, Pawley, and Reid (1982) for PAN, but with some variation as well. There are two main differences between modern systems and the hypothesized protosystem: first, in modern languages, location is associated with only one of the two particles, not both; second, benefactive is often associated with a reflex of *aken, not of *i. Thus, for example, in Tukang Besi (Donohue 2001), the enclitic =*ako*, which derives from *aken, is used to add beneficiary, instrument, purpose, and cause applicative objects, while -VC*i*, derived from *i, is used with locative and goal applicative objects. In Bimanese, on the other hand, as noted above, benefactives are associated with a separate form, *vea*, which does not seem to be a reflex of a known PAN form, while locatives, as we shall see below, are grouped together with instruments, purposes, and causes, as they were presumably in PAN, and associated with *kai,* and there is no trace of PAN *i.

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3. Starosta, Pawley, and Reid (1982) use lexicase terminology, which we have converted into conventional semantic case labels.

If we look at those languages that are presumably most closely related to Bimanese, we do not find many applicative markers. Many of the languages of the CMP group are isolating, and use serial verb constructions rather than applicative affixes or particles. This is true of languages of Flores such as Ngadha (Djawanai 1983), Ke'o (Baird 2002), and Lio (Wouk, field notes). Kambera, spoken in Sumba, has an applicative suffix *-ng* that adds a goal, recipient, beneficiary, maleficiary, or location as a direct argument of a transitive or intransitive verb, and also derives verbs from nominal roots, deictics, quantifiers, and prepositional nouns. It may also be used to denote imperfective or continuous aspect (Klamer 1998). This particular set of semantic roles shows some similarities with *kai,* but the inclusion of beneficiary is a marked difference. Furthermore, as we shall see, the association with imperfective aspect is quite at odds with what we find in Bimanese. Additionally, Klamer notes that, according to Onvlee (1925), *-ng* is not a reflex of some earlier applicative particle or preposition, being derived instead from a third person singular object suffix. Kambera has, thus, presumably innovated a new applicative form after the loss of the PAN applicative suffix.

The evidence from these CMP languages, thus, suggests that the PAN applicative suffixes were lost, either in all the languages in the purported group individually, or in a single ancestor language at an earlier stage; Occam's razor supports the second possibility. If this single language were ancestral to Bimanese as well, we might safely assume that Bimanese also lost applicative suffixes and had to either innovate or borrow a new one. However, we cannot be certain of this, as Blust (2008) places any connection between Bimanese and the Sumba and Flores languages at a higher level than any connection between Sumba and Flores. It is, thus, entirely possible that Bimanese retained a reflex of *aken even though it was lost in the ancestor of the languages of Sumba and Flores.

However, *kai* does not take the form that we would expect if it were a reflex of *aken. We would expect a form like *ahi or aho,* as final consonants were lost, *k most often became [h], and the first and second most frequent reflexes of Proto-Malayo-Polynesian (PMP) schwa are, respectively, [i] and [o] (Blust 2008). Not all occurrences of *k became [h]; some remained [k], so *aki* and *ako* are also possibilities. However, there is no indication that medial *k was ever lost, such that a bisyllabic root became monosyllabic, with the two vowels merging as a diphthong. Generally, bisyllabic protoforms are bisyllabic in Bimanese as well. Thus *kai* would be a highly anomalous reflex of *aken. Jonker (1896) proposes that *kai* is derived from the verb *kani* 'use' through loss of the internal nasal, and another possibility is that it is a somewhat oddly shaped borrowing of Malay *kan* (applicative). At present, it is not possible to determine its origin, but an examination of its functions will show a similarity to PAN applicative suffixes.

3.2 Kai. There are few sources of information about the Bimanese language, either published or unpublished. Owens (2000) discusses *kai* briefly, noting that *kai* may occur either within the verb complex or outside it. She notes that when it occurs outside the verb complex, as a preposition, it has an instrumental function, as in example (1).[4]

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4. Glossing utilizes the Leipzig list of standard abbreviations. Additional abbreviations are EMPH, emphatic particle; HES, hesitation particle; PA, personal article; POL, politeness marker; TEMP, temporal.

(1) d̂ari=na fo?o ake kai tiso=na.
    cut=3SG mango DEM KAI knife=3SG
'He cut the mango with his knife.'

When *kai* occurs within the verb complex, Owens suggests that it also typically has an instrumental meaning, as in (2), and the instrumental NP becomes the grammatical object of the clause, moving into position following the verb complex. In example (2), it is clear that *kai* has moved into the verb complex, and does not form a constituent with the instrumental NP, as it is followed by the actor enclitic; in Bimanese, clitics occur only at either the right or the left edge of the verb complex, and not within it. *Tiso* (knife) immediately follows the verb complex, in direct object position, displacing the patient *fo?o* (mango) into second object position.

(2) d̂ari=kai=na tiso=na fo?o ake.
    cut=KAI=3SG knife=3SG mango DEM
'He cut the mango with his knife.'

However, Owens also notes that *kai* can occur with NPs in semantic roles other than instrument, as illustrated in examples (3a) and (4), taken from Owens (2000). In (3a), the additional argument is a recipient. In this case, no clitics are present to mark the end of the verb complex; thus we lack morphological evidence that *kai* is within the verb complex. However, the recipient immediately follows *kai*, while the theme is in second object position. The only other alternative for this clause would be verb followed by a direct object NP followed by an oblique NP consisting of a prepositional phrase beginning with the locative preposition *di,* as shown in (3b). This suggests that, in (3a), *kai* is not a preposition, and is indeed part of the verb complex, while both arguments are direct, and, thus, that (3a) is a double object construction.

(3) a. Sia landa=kai dou mone oto=na.
       3SG sell=KAI person male car=3SG
     'He sold the man his car.'

    b. Sia landa=na oto=na di dou mone.
       3SG sell=3SG car=3SG to person male
     'He sold his car to the man.'

(4) Nahu hari=kai=ku Reho.
    1SG laugh=KAI=1SG Reho
'I laughed at Reho.'

In example (4), the additional argument is a theme, although Owens identifies it as a goal. Here there is clear evidence that *kai* is within the verb complex, as it precedes the actor clitic *ku*. The theme, *Reho,* is not introduced by a preposition; rather it immediately follows the verb, as a direct object.

The most comprehensive source of information on Bimanese grammar is Jonker (1896), which unfortunately has not been translated from Dutch, and is, thus, not widely accessible. Jonker describes the use of *kai* in detail, with copious examples, and outlines many of the uses that we describe in this paper, although his discussion is couched in rather different terminology in many instances. We present his findings only very briefly here, with limited exemplification, since in large part they parallel ours, and we will dis-

cuss and exemplify them in more detail, from our own perspective, later in the paper, while pointing out where either our analysis or our findings differ from Jonker's.

Jonker notes the use of *kai* as an instrumental preposition (see example [1] above), and as part of the verb complex, with both transitive and intransitive verbs, allowing a prepositional object to become a direct object, thus, of course, transitivizing formerly intransitive verbs. This object, according to Jonker, most often refers to an instrument, as in example (2) above, or to a cause. Causal adjuncts are found in questions, both in direct questions introduced by *ɓa ɓau* 'why' or *au* 'what' when it questions what was the reason for something, as in (5a), and in reported speech, where they are typically introduced by the Arabic-derived *asa(l)* 'reason', as in (6a). In both cases, *kai* is required for both the question (taken from Jonker in both examples) and the answer (supplied by Arafiq in both examples), as shown by the ungrammaticality of both the questions and the answers given in (5b) and (6b). Jonker seems to be claiming that the use of *kai* increases the valency of the verb of the consequent in each case, and that the causal adjunct thus becomes a causal object.

(5) a. ɓa ɓau si   da ila to?i=kai=mu isi mada=mu?
       why   EMPH NEG open small=KAI=2SG seed eye=2SG
       'Why don't you open your eyes?'

   Da ila to?i=kai=ku isi mada=ku ɓa   supu=ku.
   NEG open small=KAI=1SG seed eye=1SG because sick=1SG
   'I don't open my eyes because I'm sick.'

   b. *ɓa ɓau si   da ila to?i=mu isi mada=mu?
       why   EMPH NEG open small=2SG seed eye=2SG

   *Da ila to?i=ku isi mada=ku ɓa   supu=ku.
   NEG open small=1SG seed eye=1SG because sick=1SG

(6) a. Na=soɗi=ra asa(l) ʋara=kai=na ɗi nisi[5] ake.
       3SG=ask=PRF reason exist=KAI=3SG at island DEM
       'S/he asked why s/he was on this island.'

   Asa(l) ʋara=kai=na ɗi nisa ake ɓa   ʋa?a ɓa lopi.
   reason exist=KAI=3SG at island DEM because carry by boat
   'S/he was on the island because (s/he was) carried (there) by a boat.'

   b. *Na=soɗi=ra asa(l) ʋara=na ɗi nisi ake.
       3SG=ask=PRF reason exist=3SG at island DEM

   *Asa(l) ʋara=na ɗi nisa ake ɓa   ʋa?a ɓa lopi.
   reason exist=3SG at island DEM because carry by boat

Jonker notes that *kai* is also found after questions beginning with *ɓune* 'how', which he explains on the grounds that there is a close connection between the notion of the manner in which something happened and the reason that it happened.

Jonker presents a large number of examples of the use of *kai* in clauses that begin with a sequential marker composed of the demonstrative *ede* 'that' plus either the perfective enclitic *ra,* or a sequence of the emphatic enclitic *mpa* plus *ra*, as *ede=ra,* or

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5. Note that Jonker shows *nisi* but the word is actually *nisa;* this appears to be either an error on Jonker's part, a typographical error, or a change in the language since Jonker's time.

ede=mpa=ra, which are used to combine sequential clauses, with the approximate meaning of 'after that', as in example (7).

(7) Ede=mpa=ra lao kai wai   ma=ʋeha poo   ede.
     after.that   go KAI old.woman REL=take   bamboo that
     'After that the old woman who took the bamboo went away.'

He argues that these should be considered an extension of the function of *kai* to introduce a causal object. He further notes that in some instances there is no sequential marker, neither *ede=ra* nor *ede=mpa=ra,* but he supposes it can be considered to be there, but not overtly, thus allowing the use of *kai.* He does note, however, that *kai,* while common after *ede=ra,* is by no means obligatory. We will discuss this phenomenon below; however, we do not regard *kai* in these cases to be introducing an argument, causal or otherwise. Rather, we will discuss instances of these types (with and without *ede=ra* and *ede=mpa=ra)* when we discuss the discourse functions of *kai* (what we term discourse *kai*).

According to Jonker, *kai* is also found after verbs with locative expressions and, by metaphoric extension, with temporal expressions, as in (8) and (9). Again, he seems to be suggesting that these locative and temporal expressions are functioning as objects, which in modern terminology would be called applicative objects.

(8) Na=lampa=kai=ku[6] ncaŋa ma=ka=lai.
     3SG=walk=KAI=EMPH   path   REL=ADV=different
     'He went (along) another path.'

(9) Na=mai=kai=ku   ʋakatu subu.
     3SG=come=KAI=EMPH time   morning
     'He came (in the) morning.'

Jonker also notes the relatively rare use of *kai* in nominalizations representing the place where an activity is carried out, as in *leʋa kai* 'battle field', and an optional use in nominalizations following the preposition *di ade* 'in' (lit. 'in the heart'), as in (10).

(10) di ade lampa=kai=mu, ʋati ʋara eda=mu ɗamba toʔi ɗuʋa=na.
      in heart walk=KAI=2SG   NEG exist see=2SG children small two=3SG
      'While you were walking, didn't you see two small children?'

As noted above, these functions will be discussed in greater detail in light of their occurrence in our data.

4. DATA AND METHODS. This study is based on a small corpus consisting of two conversations and four elicited narratives. One of the conversations was recorded in Mataram in 1996, between a speaker from Kore in the northwest part of the Dompu Regency and a speaker from Dompu, the capital of Dompu Regency. The subject of this conversation was raising chickens; examples from this source are identified as being from "Chickens." The other conversation was recorded in 2010 in the village of Sila, in the eastern part of the Dompu Regency, between two Sila natives, one of whom is one of the authors of this paper. The subject of this conversation was local politics; examples from this source are identified as being from "Politics." The narratives, three frog stories and a pear film story, were all collected from natives of Sila, two frog stories in Mataram

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6. It should be noted that the emphatic marker *-ku* is homophonous with the 1SG suffix.

in 2007, produced by one of the authors of this paper, and the remaining frog story and the pear film story in Sila in 2008. Although the corpus, thus, includes speakers from a number of areas, dialectal variation in Bimanese is low, doubtless due in large part to the 1815 eruption of Mt. Tambora and the subsequent population upheavals,[7] which led to large scale depopulation and relocation of people in the Dompu Regency (Raffles 1830; Openheimer 2003).

The corpus contained 154 instances of *kai*. Of these, only seven were not part of the verb complex. Of those seven, four were functioning as a preposition introducing an instrumental NP, as in (11). Here we can see that *kai* is not part of the verb complex, since the right boundary of it is marked by the perfective enclitic *ra*.

(11) Na=mai ʋeha=ra kai oto.
       3SG=come take=PRF KAI car
      'He came and brought (them) with a car.'   (Chickens)

Two others formed ordinal numbers, which in Bimanese consist of the prefix *ka*, a numeral, and *kai*, as in *ka-dua=kai* 'second'. The remaining instance occurred in an idiomatic phrase, given in (12).

(12) Sa=poda=kai=na, de   lao vaʔa=ku ɓa ndai.
       one=correct=KAI=3SG EMPH go   carry-EMPH OBL POL
      'Actually, I (should) go and get (them myself).'   (Chickens)

As previously noted, both *kai* and *laɓo/laʔo* can occur either in the verb complex or outside it, although in our data *laɓo/laʔo* rarely occurred in the verb complex, and impressionistically this is true in the language as a whole. Based on our data, it appears that *kai* behaves in the opposite way; thus, while *laɓo/laʔo* is used mainly as a preposition, *kai* functions mainly as a verbal adjunct, and only relatively rarely as a preposition.

All instances of *kai* in the verb complex were entered into a database, where they were coded for the syntactic type and referential status of their argument NPs, number of arguments, mood, aspect, affectedness of the patient, constituent order, identity of the verb root, and whether or not the clause was nominalized. Of these 147 instances, 91 (62 percent) proved to have identifiable syntactic functions, while the remaining 56 (38 percent) did not. The discussions in this paper are based on a combination of findings from these data and native speaker intuitions about grammaticality, made by Arafiq, who is a native speaker of the Sila dialect of Bimanese.

5. SYNTACTIC FUNCTIONS OF *kai*. We observed a number of different syntactic functions of *kai*. The majority of the functions involved an increase in valency, and in 5.1, 5.2, and 5.3 we discuss the creation of one-argument, two-argument, and three-argument verbs, respectively, from nonverbal, one-argument, and two-argument sources. In 5.4, we examine constructions with question words, while in 5.5 we look at issues of relativization and nominalization with *kai*. In all of these constructions, the use of *kai* is obligatory.

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7. The death toll is put at between 70,000 and 100,000, some from the eruption itself, but more from starvation and disease.

5.1 NONVERBAL ROOTS. *Kai* can be used to create a verb from a nonverbal root. In our corpus, there is one instance where the resulting verb takes one argument, illustrated in (13a). Here the root *pemerenta* 'government', a noun borrowed from Indonesian, takes *kai* to create a verb meaning something like 'to run the government'. As shown by the constructed example (13b), *pemerenta* is also used as a noun in Bimanese.

(13) a. Tapi pemerenta=kai=na.
       but   government=KAI=3SG
      'But he runs the government.'   (Politics)

    b. Pemerenta ʋati loa=na ka-susa   ndai.
       government   NEG can=3SG CAUS-trouble POL
      'The government can't cause us problems.'

There were also four instances of verbalization that created a two-argument verb. In two of these instances, *kai* was added to the question word *au* 'what' to create a verb meaning 'use for what', as in (14).[8]

(14) ɗi   au=kai=mu aba?
      PURP what=kai=2SG brother
      'What will you use it for, brother?'   (Chickens)

In one of the other two, *kai* was added to the adverb *ndake* 'like this' to form a verb meaning 'do like this to it', and in the other, *kai* was added to a noun.

Finally, there was one instance of verbalization that created a three-argument verb from the hesitation particle *hanu* 'whatchamacallit', which can be used as a place holder for a lexical verb when the speaker is having difficulty retrieving the correct lexical item. This instance, which is given in example (15), could also be considered an instance of applicativization, since it creates a ditransitive verb.

(15) Ede ʋara ɗi   hanu=nari=kai jaŋa   ɗo mai de   sa=toʔi.
      DEM exist PURP HES=a.little=KAI   chicken south come EMPH one=little
      'It's there in order to give the chicken that's slightly to the south a little bit (of it).'   (Chickens)

Interestingly, the most likely verb to use in this situation—the one the speaker was probably looking for—is the ditransitive *mbei* 'give', which does not require *kai* in order to add a third argument, as it is inherently ditransitive.[9] However, temporarily unable to retrieve the lexical item that encodes ditransitivity, the speaker was forced to express it analytically, through the use of *kai*. Jonker (1896) discusses the use of *kai* in verb formations of the type exemplified in (13), but not of the other types. This is not particularly surprising, as he worked with a corpus of traditional folk tales, and the constructions described here are more likely to occur in conversation than in the more polished, performance-like task of narrative production.

5.2 INTRANSITIVE ROOTS. In another 26 instances, *kai* was added to a one-argument verb[10] or adjective to form a transitive verb. Thirteen of the added arguments were causers, as in (16), where *kai* is added to the adjective *ʋinte* 'swollen' to create a

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8. It should be noted that *au* cannot be used directly as a verb, without *kai*.
9. Discourse *kai* can occur with *mbei*. although there are no instances in our corpus.
10. These verbs can be either unergative (*ntu'u* 'perch') or unaccusative (*made* 'die').

verb meaning 'cause to swell'. In fact, all instances of *kai* + adjective had this function. Jonker (1896) does not discuss this function.

(16) Paʔe ɓa ani re   ni,   ʋinte=kai loko   sia.
     sting OBL bee EMPH EMPH swollen=KAI stomach 3SG
     '(Being) stung by (the) bee caused his stomach (to) swell up.'
                                                     (Frog, where are you?)

Causatives with *kai* differ from the other morphological causative found in Bimanese, formed with the prefix *ka-,* in that the *ka-* causative expresses deliberate action, as in (17), while causatives formed with *kai* indicate outcomes that are not deliberate.

(17) Ka-ruku ka-ruku   lalo   ɓa sia lako=na ede soɓu ani re.
     CAUS-shake CAUS-shake immediately OBL 3SG dog=3SG that nest bee EMPH
     'The dog then shook the bee's nest.'   (Frog, where are you?)

Interestingly, of the 13 instances of causitivization, only three express the causee as a direct argument of the verb, as in (16). In the remaining ten, the causee is preceded by the oblique marker *ɓa*, as in (18).

(18) Sara sa=toʔi ʋento=na na=iha=kai=ku   ɓa jaŋa.
     reason a=little startle=3SG 3SG=ruin=KAI=EMPH OBL chicken
     'Because if it (the chicken) is a bit startled, that (being startled) will ruin the chicken.'   (Chickens)

In example (18), the patient *jaŋa* 'chicken' is preceded by *ɓa*, the oblique marker that most often occurs before (typically) lower topicality actors in a construction that could be considered a type of passive or inverse, although *ɓa* is also sometimes found with intransitive subjects. It is not clear whether this is simply an accident of the data, or whether there is a preference for causee patients in the causative *kai* construction to be expressed as obliques.

Another five added arguments were patients, but of a particular type, one that comes into being by virtue of the action expressed by the verb. In these instances, the verb root was either the verb *ndadi* 'to become' or the existential verb *vara,* as in (19), used to create a verb with a meaning of 'bringing into existence'.

(19) Uara=kai raɓa Leɓo   ŋeo.
     exist=KAI dam place.name EMPH
     '(He) built Lebho dam.'   (Politics)

The other common function of *kai* with one-argument verbs was the addition of a locative argument. There were eight instances of *kai* licensing a locative argument in our data, as in example (20). Jonker (1896) also notes this function.

(20) Ndano ake ke ʋati loa ʋati di   hanu ʋati di   liʋa=kai ni.
     pool   DEM DEM NEG can NEG PURP HES NEG PURP swim=KAI EMPH
     'That pool can't … isn't for um … isn't for swimming in.'[11] (Frog on his own)

Addition of a patient or theme other than those created by the action of the verb seems to be less common for *kai,* as there was only one instance in our corpus, given in (21).

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11. This example contains a sequence of repairs. Without those repairs, the utterance would have been *Ndano ake ke wati di liwa=kai ni.*.

(21) Lohi   ka-losa=lalo=kai   ɓa sia re   ni   ani re.
     vomit CAUS-exit=immediately=KAI OBL 3SG DEM EMPH bee DEM
     'He immediately vomited the bee out.'   (Frog on his own)

Here a serial verb construction consisting of the intransitive verb *lohi* 'vomit' and the causative verb *ka-losa* 'expel'—itself consisting of the causative prefix *ka-* and the intransitive verb *losa* 'exit, go out'—is followed by the emphatic adverb *lalo* and finally by *kai*. Jonker (1896) does not note usages of this type.

    Jonker (1896) argues that *kai* can license temporal adjuncts as direct arguments of the verb. However, we have not generally found this to be the case. Rather, *kai* seems to be optional in most cases, as shown in example (22). Whether the temporal expression precedes or follows the verb complex, the utterance is grammatical both with and without *kai*, and has the same meaning in all cases (given just once, after the last example). We, thus, assume that any instances of *kai* with a temporal expression are not grammatical, and must be a response to discourse factors. However, we have not actually found any such usages in our data set.

(22) a. Made=na ai   ma sidi.
       die=3SG   time REL morning
       'S/he died in the morning.'

     b. Made=kai=na ai   ma sidi.
       die=KAI=3SG   time REL morning
       'S/he died in the morning'.

     c. Ai   ma sidi   made=na.
       time REL morning die=3SG
       'S/he died in the morning.'

     d. Ai   ma sidi   made=kai=na.
       time REL morning die=KAI=3SG
       'S/he died in the morning.'

    Jonker (1896) gives only a single example of *kai* with a temporal argument, given as (23a) in its original form, and as (23b) as it would be said today.

(23) a. Wati=sa mai=na   ɗi wakatu mboha ai, na=mai=kai=ku
       NEG=if   come=3SG at time   middle time 3SG=come=KAI=EMPH
       wakatu subu.
       time   morning
       'If he doesn't come at midnight, he will come in the morning.'

     b. Wati=si mai=na ai   ma ɓoha, na=mai=kai=ku ai   ma sidi.
       NEG=if   come=3SG time REL midnight 3SG=come=EMPH   time REL morning
       'If he doesn't come at midnight, he will come in the morning.'

This example does indeed require *kai*, but not because it involves a temporal expression. Rather, it is the presence of the emphatic particle *ku* at the end of the verb complex in a conditional clause that seems to be the triggering factor. As (24a) shows, without *kai,* the sentence is ungrammatical, but if *ku* is omitted (24b) or placed at the end of the utterance (24c), the sentence becomes acceptable.

(24) a. *Wati=si mai=na ai   ma ɓoha, na=mai=ku   ai   ma sidi.
       NEG=if   come=3SG time REL midnight 3SG=come=EMPH   time REL morning

b. Wati=si mai=na ai   ma ɓoha,   na=mai ai   ma sidi,
   NEG=if   come=3SG time REL midnight 3SG=come time REL morning
   'If he doesn't come at midnight, he will come in the morning.'

c. Wati=si mai=na ai   ma ɓoha,   na=mai ai   ma sidi=ku.
   NEG=if   come=3SG time REL midnight 3SG=come time REL morning=EMPH
   'If he doesn't come at midnight, he will come in the morning.'

We don't have an explanation for why this interaction between *kai* and *ku* exists in conditional clauses, but it seems to be the case.

5.3 TRANSITIVE ROOTS. *Kai* frequently functions as an applicative marker with transitive verbs, forming ditransitives. In our data, there were 27 instances of *kai* licensing an additional direct argument for a verb that was already transitive. Most of the added arguments were patient/theme (ten instances), as in example (25), locative (eight instances), as in (28a), or instrumental (seven instances), as in (30a). Jonker (1896) discusses the use of *kai* to license locative and instrumental direct objects, but not patients or themes.

(25) Ta[12] ka-londo=ra   oi   nono ede re,
     1PL CAUS-descend=PRF water drink DEM EMPH
     'I remove the drinking water,

     oi   nono ra tau oi   ani kombi oi   gola (e)de,
     water drink REL put water bee maybe water sugar DEM
     'water (in) which (was) put honey or sugar water,

     cepe=kai=ra   oi   ntiri.
     replace=KAI=PRF water ordinary
     'replace (it) with ordinary water.'   (Chickens)

In the first line of example (25), the speaker produces a clause in which he describes removing the water that was given to the chickens on first arrival. In the second line, he produces a free noun phrase modified by a relative clause that describes that water. In the third line, he produces a second main clause that describes how he exchanges that water with ordinary water. Both the actor and the patient of the first main clause are participants in the second main clause, again functioning as actor and patient, although neither is overt. However, the third argument, the ordinary water, is also direct, not the object of a preposition introduced by *kai*, as *kai* is clearly part of the verb complex, since it is followed by the perfective clitic *ra*.

In (25), as is normal in conversation, referents whose identity is easily recoverable are not overtly mentioned. However, it is possible to construct utterances in which both themes are overt, as in (26a), where the basic object precedes the verb, while the applicative object follows it, and changing the position of the noun phrases would change the meaning of the utterance.

(26) a. oi   gola cepe=kai=ra   oi   ntiri
        water sugar replace=KAI=PRF water ordinary
        'replace the sugar water with ordinary water'

     b. *cepe=kai=ra   oi   gola oi   ntiri
        replace=KAI=PRF water sugar water ordinary

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12. Here the speaker uses a plural to refer to himself, out of politeness.

    c. cepe=kai=ra oi   gola kai oi   ntiri
        replace=KAI=PRF water sugar with water ordinary
        'replace the sugar water with ordinary water'

    d. cepe=kai=ra kai oi   ntiri   oi   gola
        replace=KAI=PRF with water ordinary water sugar
        'replace the sugar water with ordinary water'

If both objects follow the verb, then even if *kai* is present, there can only be one direct object, the basic object, while the other theme must be preceded by a preposition, a second instance of *kai,* as shown by the ungrammaticality of (26b), where both arguments follow the verb and both are direct. The need for a preposition is true regardless of the order of the two themes, as shown in (26c) and (26d). In both, the *kai* in the verb complex is optional, and could be omitted; however, the *kai* preceding *oi ntiri* is obligatory. These restrictions, however, could be due to the meaning of the verb in question, and the fact that the two arguments cannot be distinguished based on any semantic criteria,[13] as we do not find such a restriction in other cases.

It does not appear to be possible to construct an utterance with three overt direct arguments, unless the actor is cliticized to the verb complex, as shown in example (27a). If the actor precedes the verb complex, then both themes must follow, as shown by the ungrammaticality of (27b), where both the actor and one object precede; and as we have seen in (26), if both themes follow, one of those themes must be oblique, not direct, and, thus, preceded by a preposition. If, on the other hand, the basic theme precedes the verb, then either the actor must be a clitic, as in (27a), or the actor must follow, and in those cases the actor will be preceded by the oblique preposition *6a,* as in (27c), while the verb may or may not take an actor clitic. If the actor is a free-standing direct argument, the clause will be ungrammatical, whether an actor clitic is present or not, as shown in (27d) and (27e).

(27) a. Oi   gola ra=cepe=kai=na   oi   ntiri.
          water sugar PERF=replace=KAI=3SG water ordinary
          'He replaced the sugar water with ordinary water.'

      b. *Oi   gola Rusla[14] cepe=kai=na oi   ntiri.
          water sugar Ruslan replace=KAI=3SG water ordinary

      c. Oi   gola ra=cepe=kai=(na) oi   ntiri   6a Ruslan.
          water sugar PERF=replace=KAI=(3SG) water ordinary OBL Ruslan
          'Ruslan replaced the sugar water with ordinary water.'

      d. *Oi   gola ra=cepe=kai=na   Ruslan oi   ntiri.
          water sugar PERF=replace=KAI=3SG Ruslan water ordinary

      e. *Oi   gola ra=cepe=kai   Rusla oi   ntiri.
          water sugar PERF=replace=KAI Ruslan water ordinary

In example (28a), the patient precedes the verb as a direct argument, while the locative noun *toples* 'jar' follows it, also as a direct argument. If *kai* were not present, *toples*

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13. The nature of the verb *cepe* 'replace' is such that the two arguments must be highly similar, so that one can replace the other. It is, thus, not possible to determine which argument plays which role by referring to, for example, animacy, gender, or any other disambiguating factor.

14. Ruslan is an Indonesian name. Bimanese does not have final consonants, so the name Ruslan in Bimanese varies between *Ruslan* and *Rusla*.

would have to be preceded by the locative preposition *di,* as in (28b). As illustrated by (28c), the locative noun cannot occur as a direct argument in the absence of *kai.*

(28) a. Terusi karefa (a)ke tau=kai toples.
         then   frog   DEM   put=KAI   jar
         'Then he put the frog in a jar.'   (Frog, where are you?)

     b. Terusi karefa (a)ke tau di toples.
         then   frog   DEM   put   in   jar
         'Then he put the frog in a jar.'

     c. *Terusi karefa (a)ke tau toples.
         then   frog   DEM   put   jar

Unlike the previous example, in this case the semantic roles are not ambiguous: while it is possible to put frogs into jars, it is not possible to put jars into frogs. Thus, either object can precede the verb, as shown by (29a), where *toples* 'jar' has been moved to preverbal position, and when both follow the verb, either one may come in immediate postverbal position, and no additional preposition is required to disambiguate, as shown by (29b) and (29c). It is also possible to add an independent actor before the verb, with no restrictions on the ordering of the two objects, and no need for an additional preposition, as shown by (29d) and (29e).

(29) a. Terusi toples tau=kai karefa ake.
         then   jar   put=KAI   frog   DEM
         'Then he put the frog in a jar.'

     b. Terusi tau=kai karefa ake toples.
         then   put=KAI   frog   DEM jar
         'Then he put the frog in a jar.'

     c. Terusi tau=kai toples karefa ake.
         then   put=KAI   jar   frog   DEM
         'Then he put the frog in a jar.'

     d. Terusi sia tau=kai=na karefa ake toples.
         then   3SG put=KAI=3SG   frog   DEM jar
         'Then he put the frog in a jar.'

     e. Terusi sia tau=kai=na toples karefa ake.
         then   3SG put=KAI=3SG   jar   frog   DEM
         'Then he put the frog in a jar.'

In example (30a), the first speaker produces a turn that mentions an amount of money, while in the following turn the second speaker hazards a guess as to what the money was used for, in the form of a relative clause for which the sum of money would be the head noun. Since this turn is built on the preceding one, the money, which is the instrument of the purchase, is not repeated, and within the relative clause it is not overt, as it is coreferential with the head. However, if present, it would be a direct argument, as is the patient, the food that was bought. It could precede the verb complex, as in (30b), or follow as in (30c) and (30d). As with example (29), the order of the two objects is free when both follow the verb, and no additional preposition is required.

(30) a. Ruslan: Tolu ratu   rivu=ku   di   sadia ɓa ndai=ta.
three hundred thousand=EMPH PURP prepare OBL POL=1PL
'I prepare three hundred thousand (rupiah).'

Kawi: di   veli=kai ŋaha=na de   ro?
PURP buy=KAI food=3RD EMPH Q
'To spend on their food?'   (Chickens)

b. Tolu ratu   rivu   veli=kai=na ŋaha=na.
three hundred thousand buy=KAI=3SG food=3SG
'He spent 300,000 on their food.'

c. Ueli=kai=na ŋaha=na tolu ratu   rivu.
buy=KAI=3SG   food=3SG three hundred thousand
'He spent 300,000 on their food.'

d. Ueli=kai=na tolu ratu   rivu   ŋaha=na.
buy=KAI=3SG three hundred thousand food=3SG
'He spent 300,000 on their food.'

The data we have looked at so far suggest that, when the utterance is not ambiguous, Bimanese ditransitives are symmetrical, and neither the applicative object nor the base object can be considered primary. However, when the utterance is potentially ambiguous, as in examples (26) and (27), the basic object is primary and the applicative object is secondary. More work is required to determine whether Bimanese objects should be considered completely symmetrical, as is the case in Bantu languages, and also in one Austronesian language, Bajau (Donohue 1996).

Although the majority of the instances of *kai* with transitive verbs added instrumental, locative, patient, and theme arguments, there were, in our data set, two instances of the use of *kai* with transitive verbs where temporal expressions were involved, and where *kai* was obligatory in the verb complex. This brings to mind Jonker's (1896) discussion of *kai* allowing a temporal expression as an argument of the verb. However, as noted above, temporal expressions do not generally require *kai*. This is true for transitive verbs, just as it was for intransitives, as evidenced by example (31). Whether the temporal expression precedes the verb complex, as in (31a), or follows, as in (31b), *kai* is not required, and the temporal expression need not be preceded by a preposition, although it can be, as in (31c).

(31) a. Ai ma sidi   landa=na jaŋa.
time REL morning sell=3SG   chicken
'S/he sold the chicken in the morning.'

b. Landa=na jaŋa   ai   ma sidi.
sell=3SG   chicken time REL morning
'S/he sold the chicken in the morning.'

c. Landa=na jaŋa   di ai   ma sidi.
sell=3SG   chicken at time REL morning
'S/he sold the chicken in the morning.'

In both instances in our data where *kai* is required, the verb occurred in a purpose clause, as in example (32).

(32) Ede=ɗu ʋakatu ma ʋancu ncihi-ncao ɗi landa=kai jaŋa re.
     DEM=TEMP time REL very appropriate PURP sell=KAI chicken EMPH
     'That's the perfect time to sell the chickens.'   (Chickens)

A purpose clause giving the purpose of a noun that is not a direct argument of its main verb must take *kai*, as in (33a), just as it would in a simple declarative clause, like (33b).

(33) a. Liŋa ake caru   ɗi   maru kai.
        pillow this comfortable PUPR sleep=KAI
        'This pillow is comfortable to sleep on.'

     b. Maru=kai=na liŋa.
        sleep=KAI=3SG pillow
        'S/he slept on the pillow.'

This is very similar to what we see in (32), except that that the preceding element is a temporal expression. However, while in (32b) *liŋa* 'pillow' can only be a direct argument of the verb if *kai* is present, temporal expressions occur much more freely, as evidenced by example (31) above. It is only when the verb is found in a purpose clause following a temporal expression that we see an association between temporal expressions and *kai*. It is not entirely clear to us why this association should exist, given that, in general, temporal expressions do not call for *kai* and do not become arguments. However, it appears to be a robust phenomenon, such that in elicited utterances with a temporal expression followed by a purpose clause the verb must be marked with *kai*.

5.4 QUESTION WORDS. *Kai* is required with a number of question words, although not with all of them. In general, it is required for questions where the answer either could be or must be an applicative object. Constituent order also seems to play a role.

When the question word *ta ɓe* 'where' occurs in initial position, the verb will be followed by *kai*, as in example (34). There were four such instances in our data.

(34) Ta ɓe ra=mai=kai=na   mancoro jaŋa   ede re?
     where PRF=come=KAI=3SG flu   chicken DEM EMPH
     'Where did that chicken flu come from?'   (Chickens)

This might seem like straightforward applicativization, since, when *kai* is present, a locative adverbial expression can become the direct argument of a verb. However, when the question words occur later in the clause, *kai* is not used, as is shown in the constructed examples given in (35).

(35) a. Ta ɓe la Rusla   maru=kai=na?
        where PA Ruslan   sleep=KAI=3SG
        'Where did Ruslan sleep?'

     b. *Ta ɓe la Rusla   maru=na?
         where PA Ruslan   sleep=3SG

     c. La Rusla   maru=na ta ɓe?
        PA Ruslan   sleep=3SG where
        'Where did Ruslan sleep?'

     d. *La Rusla   maru=kai=na ta ɓe?
         PA Ruslan   sleep=KAI=3SG where

In (35a), where *ta ɓe* occurs initially, the verb must take *kai,* hence the ungrammaticality of (35b). However, when the question word occurs in situ, *kai* cannot be used, as evidenced by the grammaticality of (35c) and the ungrammaticality of 35d.

This is different from locative applicativization, which occurs whether the locative argument precedes or follows the verb. Jonker (1896) makes no mention of the form *ta ɓe* meaning 'where', either with or without *kai*. He mentions a form *bakai,* which he glosses as 'where', and which he derives from an emphatic particle *ba*[15] plus *kai*. He states that after *bakai,* a verb is usually marked with *kai,* although occasionally a simple verb occurs. It, thus, appears that *kai* was optional but highly common at that time in the environment of a locative question where the question word is initial. However, he does not discuss the possibility of a clause with *bakai* in situ. The form *bakai* is no longer used in modern Bimanese in most areas, having been replaced by *ta ɓe,* so we can not investigate whether with *bakai* in situ a following verb could occur with *kai*.

The reply to a question with *ta ɓe* could use an applicative construction, as in (36a) or (36b), or a prepositional phrase, as in (36c) or (36d). The order of the elements is not relevant.

(36) a. Maru=kai=na ranja.
          sleep=KAI=3SG   bed
          'He slept in a bed.'

     b. Ranja maru=kai=na.
          bed   sleep=KAI=3SG
          'He slept in a bed.'

     c. Maru=na ɗi ranja.
          sleep=3SG   in bed
          'He slept in a bed.'

     d. ɗi ranja maru=na.
          in bed   sleep=3SG
          'He slept in a bed.'

Some other interrogatives that are typically clause-initial also seem to require *kai*. However, unlike the locative interrogative, these do not correspond to adverbial phrases. Rather, they correspond to clauses that give the cause or reason for the action. Reason questions beginning with *ɓa ɓau* 'why' include *kai,* as in example (37a). This *kai* is obligatory, as evidenced by the ungrammaticality of (37b). However, as with *ta ɓe,* if *ɓa ɓau* comes at the end, *kai* is unnecessary, as in (37c).

(37) a. ɓa ɓau=ku hadaŋ=kai ɓa dou Uoro   vali?
          why=EMPH   block=KAI   OBL person place.name moreover
          'Why did the people from Woro go so far as to intercept (the people from Campa)?'   (Politics)

     b. *ɓa ɓau=ku hadaŋ ɓa dou Uoro   vali?
           why=EMPH   block   OBL person place.name moreover

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15. This is probably the same as the first word of *ɓa ɓau,* and probably should be transcribed with an implosive *ɓ*. Although Jonker consistently distinguishes between [d] and [ɗ] in his orthography, he does not distinguish between [ɓ] and [b], so we cannot be certain.

    c. Hadaŋ ɓa dou Uoro   ɓa ɓau?
       block OBL person place.name why
     'They were intercepted by the people from Woro why?'

The reply to (37a) and/or (37c) would have to have *kai* in the consequent, as shown in example (38), where (38a) is grammatical and (38b) ungrammatical.

  (38) a. Hadaŋ=kai ɓa dou Uoro   ɓa ra=hade=na dou Uoro.
       block=KAI OBL person place.name OBL PERF=kill=3SG person place.name
     'They were intercepted by the people from Woro because they had killed a person from Woro.'

    b. *Hadaŋ ɓa dou Uoro   ɓa ra=hade=na dou Uoro
       block OBL person place.name OBL PERF=kill=3SG person place.name

Questions with *ɓune* 'how' also obligatorily occur with *kai* when *ɓune* is initial, as in example (39a). Without *kai*, the utterance is ungrammatical, as evidenced by (39b). And as with *ta ɓe* and *ɓa ɓau*, if *ɓune* is final, *kai* is not used, as in (39c).

  (39) a. ɓune hanta=kai=na ʋadu ma tani ede?
       how lift=KAI=3SG   stone REL heavy DEM
     'How did he lift that heavy stone?'

    b. *ɓune hanta=na ʋadu ma tani ede?
       how lift=3SG stone REL heavy DEM

    c. Hanta=na ʋadu ma tani ede ɓune?
       lift=KAI=3SG stone REL heavy DEM how
     'He lifted that heavy stone how?'

The reply to (39) would require *kai* if the answer involved an instrument, as in (40a), and would not use *kai* if the answer did not involve an instrument, as in (40b).

  (40) a. Hanta=kai=na ʋadu ma tani ede kani=na cuŋki ma naʔe.
       lift=KAI=3SG   stone REL heavy DEM use=3SG lever REL large
     'He lifted the heavy stone using a large lever.'

    b. Hanta=na ʋadu ma tani ede, bantu ba dou mboto.
       lift=3SG stone REL heavy DEM help OBL person many
     'He lifted the heavy stone with the help of many people.'

Jonker (1896) discusses the use of *kai* with *ɓa ɓau* and *ɓune*. However, his understanding is somewhat different from ours. In his view, licensing causal arguments is one of the basic functions of *kai*, second only to licensing instrumental arguments, and it explains not only the usage with question words, but also the usage of the particle in sequenced clauses in narratives, a usage we will refer to as discourse *kai*. Jonker's view is based, in part, on his familiarity with applicative constructions in Austronesian languages of North Sulawesi and the Philippines that are used with causal and temporal objects. However, we have not found *kai* to license temporal arguments, and while we agree that it does license causal arguments, in our view, contrary to Jonker's, the use of *kai* in questions, and with causal objects, is separate from the use of discourse *kai*. Additionally, while in Jonker's day *kai* may have simply licensed locative objects, in the modern language its use in questions is related to issues of constituent order, such that it cannot occur when the question word is at the end of the clause.

Although we find *kai* with a number of different question words, we do not find it in temporal questions, whether the question word ɓune ai 'when' occurs initially, as in (41a,b), or later in the clause, as in (41c,d).

(41) a. ɓune ai mai=na   sia?
          when   come=3SG 3SG
          'When did s/he come?'

     b.*ɓune ai mai=kai=na sia?
          when   come=KAI=3SG 3SG

     c. Mai=na sia ɓune ai?
          come=3SG 3SG when
          'When did s/he come?'

     d. *Mai=kai=na sia ɓune ai?
          come=KAI=3SG 3SG when

However, given that we do not find *kai* with temporal expressions in declaratives, it is not particularly surprising that it also does not occur in temporal questions.

5.5 RELATIVIZATION AND NOMINALIZATION. *Kai* also functions as a nominalizer, and, in fact, seems to be the only nominalizer in the language. While three forms *i-, *-in-, and *-an are reconstructed for PMP, and are believed to have been retained through to Proto-Oceanic (Lichtenberk 2011), there are no traces of them in Bimanese.

As noted above, *kai* allows the addition of a locative object, with both transitive and intransitive verbs. Examples (42) and (43) give two elicited examples containing intransitive verbs that also occur in nominalizations in our data.

(42) Kanggihi=kai=na tolo   nahu.
      farm=KAI=3SG   rice.paddy 1SG
     'He farmed using my rice paddy.'

(43) Maru=kai=na uma nahu.
      sleep=KAI=3SG house 1SG
     'He slept in my house.'

Locative relative clauses—that is, clauses where the head noun is coreferential with a referent in the relative clause that is semantically a locative—will have *kai* in the verb complex, as in example (44), where *hidi* 'place' is the head of the relative clause, and the compound verb *maru=ra=woko* 'sleep and grow' takes *kai*. In this case, as in examples (42) and (43) above, *kai* is functioning as an applicative marker that allows the formation of a relative clause with a locative head noun. Unlike other relative clauses, the verbs of locative relative clauses are not preceded by a relative marker.[16]

(44) Ma penti   ndai re waʔu=ra   sadia hidi
      REL important POL   EMPH already=PERF prepare place
     maru=ra=woko=kai jaŋa.
     sleep=and=grow=KAI   chicken
     '(The) important (thing is that) we've already prepared a place where the chickens can sleep and grow.'   (Chickens)

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16. There are three relative markers in Bimanese—active *ma,* passive *ra,* and purposive *di*—although an alternative analysis as voice markers has also been proposed (Satyawati 2010).

Additionally, a verb followed by *kai* can function as a noun, either following a preposition, as in example (45), or as the argument of a verb, positions where nouns normally occur and where verbs cannot, unless they take *kai*. Here *kai* functions to create a noun meaning the place where that activity occurs.

(45) Sia doho lao aka kaŋgihi=kai=na.
      3SG PL   go   to   farm=KAI=3PL
      'They went to (the place where) they farmed.'   (Pear film)

In our corpus, there are seven instances of nominalization with *kai,* and three instances of locative relative clauses using *hidi*. Jonker (1896) also describes such nominalizations, although he states that they are rare, as speakers at that time were far more likely to use locative relative clauses with *hidi* or another word meaning place, than a locative nominalization; so it appears that the locative nominalization construction has grown more productive in the last 100 or so years.

Jonker argues that the locative meaning of these words originates from the omission of *hidi* or a similar word. Possibly this nominative construction developed from a reduction of the relative clause consisting of omission of the head, leading to a reanalysis of *kai* as a nominalizer.[17]

Kai also occurs in another construction, where it seems to create a nominalized clause that expresses simultaneous action, similar in meaning to a subordinate clause beginning with *while* in English, as illustrated in example (46a). We call these *ade* nominalizations because they begin with the preposition *ade* (meaning 'in', or literally 'heart'), and again argue that they are nominalized because they occur directly after a preposition, in the place where a noun would normally occur.

(46) a. Ade neʔe=kai=na jambu   (a)kande   mboto=ra
          in   climb=KAI=3SG type.of.fruit aforementioned many=PRF

          gendo=na ta   ese.
          embrace=3SG at above
          'While climbing the previously mentioned *jambu* tree, he got a lot
          (of fruit) up there.'   (Pear film)

      b. *Ade neʔe=na jambu   (a)kande   mboto=ra
          in   climb=3SG type.of.fruit aforementioned many=PRF

          gendo=na ta   ese.
          embrace=3SG at above

This type of construction is also quite common, with eleven instances in our corpus. It is found mainly in narratives, where it is used to relate sequenced actions one to another. Jonker (1896) gives numerous examples of this function, although in his data *ade* is always preceded by the locative preposition *di,* whereas in our data *di* is only present in two of the eleven instances. This is likely to represent diachronic change. Alternatively, it may represent a gap in Jonker's corpus, but this seems less likely, given the comprehensiveness of his study of the language. The *ade* nominalizations represent a form of clause combining that is more likely to occur in narrative than in conversation, and all of our

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17. We are grateful to Mark Donohue for suggesting this. An anonymous reviewer suggested that these might still be relative clauses, with a null relative marker. However, we have as yet encountered no evidence to suggest that such a null relative marker exists in Bimanese.

instances occur in narratives; thus our data are quite comparable with Jonker's data, which consist of traditional narratives. Additionally, Jonker notes that *kai* is optional in this environment, but we have no instances of *ade* nominalizations that do not involve *kai,* and it appears that in the modern language *kai* is obligatory, as all eleven of our examples were judged ungrammatical when *kai* was omitted, as in shown in example (46b).

Jonker (1896) proposes that in these constructions *di* is the preposition, while *ade,* which usually indicates an interior location, in this construction represents time instead. Thus, as with locative nominalizations, one might see this construction as originating in a locative relative clause. However, Jonker (1896) argues that *ade* and the following verb with *kai* are in an appositive relationship, rather than being a relative clause with *ade* as its head, perhaps because of the lack of a relative clause marker introducing the verb complex. Given the rarity of *di* in the construction in modern Bimanese, and the obligatoriness of *kai,* we prefer to think of *ade* as a preposition, and *di ade* as a less commonly used compound preposition, followed by a nominalized clause. However, an alternative analysis is possible—one that sees *ade* as the nominal head of a relative clause, followed by a locative relative clause.[18]

6. DISCOURSE FUNCTIONS. As noted above, not all instances of *kai* have obvious syntactic functions. In our data, we found 56 instances of *kai* that did not fit into any of the categories described so far in this paper, all of which native speaker intuition determined to be optional, as the clauses in question would have been equally acceptable had *kai* been absent. On the other hand, in all the cases previously discussed, *kai* is obligatory and, if omitted, the clause becomes ungrammatical. This is not the case for these 56 instances: here *kai* is completely optional.

Because these instances of *kai* are not obligatory, we presume that they perform functions at the level of discourse. Of course, in a sense, applicativization is a discourse function, since speakers often have a choice as to which referent will be placed in object position, and which one will be oblique. However, it nonetheless also impacts on the syntactic organization of the clause. In contrast, these uses do not appear to have any syntactic implications.

Among the 56 instances, 16 involved intransitive verbs, and 40 transitive verbs. Native speaker intuition suggests that clauses with *kai* put emphasis on the action for both intransitive and transitive verbs, and also on the object for transitive verbs. As emphasis is a rather vague notion, it would be desirable to develop a more precise understanding of the discourse function of *kai.* However, at this time we cannot yet identify most of the factors associated with the appearance of discourse *kai.* In the following sections we provide some further information about these discourse uses.

As noted previously, Jonker (1896) describes something similar. However, he argues that this usage has its roots in the function of *kai* as licensing causal arguments. His argument is as follows. *Ede* 'that' by itself is usually used to express a cause, while the addition of the perfective marker *ra* is used in the meaning of 'after that', but these two forms *ede*

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18. Shibatani (2008, 2009) has argued that Austronesian languages do not actually have relative clauses, and that all so-called relative clauses are actually nominalizations. His analysis would actually fit quite well with Jonker's appositive proposal. From this perspective, the question of whether these are relative clauses or nominalizations becomes moot.

by itself and *ede=ra*) are to a certain extent used interchangeably. Jonker believed that this indicated that they originally had different functions, but had come to partially overlap, which is a reasonable assumption, given the meaning of the components of *ede=ra (ede = 'that', ra* = PERF). When *ede=ra* was used as a causal expression, then the verb would require *kai,* and this use of *kai* then spread to other instances of *ede=ra*, which were still used for the original temporal function. As a result, *kai* was now (in 1896) optionally used with any clause beginning with *ede=ra*. Jonker further argued that, even in instances where *ede=ra* was absent, it could be considered to be there but concealed (*verzwegen*), in other words, not overt. Discourse *kai* then would become a marker of sequenced action, hinting, as it does, at an unexpressed temporal sequencing conjunction.

We, on the other hand, do not consider licensing causal arguments to be a fundamental function of *kai*, as explained above. And while it is true that approximately one-third (11) of our instances of discourse *kai* begin with either *ede=ra* or *ede=mpa=ra*, and most of these are sequential narrative clauses, only approximately half (18) of those that lack these conjunctions are sequenced narrative clauses, while the remainder (19) are nonsequential, some being in relative clauses, some being repetitions of previously mentioned actions, and some describing on-going states.

Furthermore, there are large numbers of sequenced narrative clauses in our data that do not involve *kai.* It would, thus, be very difficult to explain, using Jonker's hypothesis, why *kai* occurs where it does, and not in those other instances of sequenced clauses. It may well be that Jonker is correct about the origin of the combination of *ede=ra* and *kai*, but additional factors would still have to be at work to explain its actual usage.

6.1 INTRANSITIVE CLAUSES. There were 16 instances of intransitive verbs marked with *kai* with no increase in valency, as in example (47).

(47) ɓola =kai=ra   sia.
     wake.up=KAI=PRF 3SG
     'He woke up.'

This finding is surprising, as one would not normally expect a valency increasing marker to occur in a construction that is clearly intransitive. However, it is worth noting that all of the verbs involved proved to be unaccusative,[19] according to the most generally accepted semantic-based definition of unaccusativity (Kuno and Takami 2004). They were mainly verbs of existence like *vara* 'exist' and *ndadhi* 'come into being', aspectual verbs like *nggori* 'finish', and verbs of motion like *mai* 'come' and *losa* 'exit', or they had subjects that could be argued to be patient-like, lacking volition, such as *ɓola* 'wake up' in example (38) above. If we understand unaccusative verbs to have an underlying patient, and, thus, to be similar in some sense to transitive verbs, it is perhaps less surprising to find discourse *kai* associated with them.

The situation is not completely straightforward, however. As noted by Levin and Rappaport (1989) and Levin and Rappaport-Hovav (1992), motion verbs fall into three classes, only two of which—the direction class and the manner-with-direct-external-control class—are unaccusative, while the third, the manner-with-no-direct-external-control class, is unergative. In our data, most of the motion verbs come from the two

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19. For this observation we are grateful to Jozina Vander Klok.

unaccusative classes, but we also found two instances of verbs from the manner-with-no-direct-external-control class–*lampa* 'walk', and *rai* 'run'–occurring with *kai,* which is problematic for the unaccusative analysis.

According to Levin and Rappaport-Hovav (1992), when such verbs occur with directional prepositional phrases, they become accomplishment verbs, and are, thus, unaccusative. However, the two instances in our data occur with no prepositional phrase, so they cannot be argued to be unaccusative on these grounds.

It is, of course, possible that they are not in the same class as their English translation equivalents. Levin and Rappaport (1989) and Levin and Rappaport-Hovav (1992) find that some instances of mismatches can be explained in terms of such differences; for example, English 'blush' is an activity verb, and, thus, unergative, while Italian *arrossire* 'blush' is an achievement verb, and, thus, unaccusative.

We attempted to determine whether *lampa* 'walk' and *rai* 'run' were activity verbs, as in English, or accomplishment verbs, as are the activity verbs with directional prepositional phrases, or perhaps, although it seemed unlikely, achievement verbs, by applying Dowty's (1979) tests to them. It was not a totally straightforward exercise, but we were able to reach some tentative conclusions.

They are not achievement verbs. Although five of the eight tests that distinguish between achievement and activity verbs turned out not to be applicable to Bimanese, in that in Bimanese all the verbs we tested passed these tests, there were three tests—occurring with *kanarinari* 'carefully', with the progressive adverb *wunga*, and after *nggori* 'finish'—where *ngolu* 'win', a clear accomplishment verb in Bimanese, failed them but *lampa* and *rai* passed. However, we were unable to draw a firm conclusion as to whether they are accomplishment verbs. There are five tests that distinguish between activity and accomplishment verbs. However, three of them cannot be applied to Bimanese. Tests 9 and 10 distinguish between *in an hour* and *for an hour*, but in Bimanese both of those are expressed identically as *sa jam* (an/one hour), which can occur with verbs of all classes. Test 14 depends on an ambiguity in the meaning of clauses containing *almost,* where almost imparts a negative meaning ('he almost ran' = 'he did not run'). Accomplishment verbs are ambiguous between not doing the action at all and doing it but not completing it, whereas activity verbs unambiguously mean did not do it all. However, the corresponding Bimanese construction is *pori da lampa kai na,* where the verb is preceded by both *pori* 'almost' and an obligatory negative particle *da,* and it imparts a positive meaning of 'he almost didn't run, but in the end he did'. It is not possible to use *pori* without *da,* and three native speakers were unable to think of a way to express the negative meaning.

This leaves two tests, tests 7 and 12. In test 7, *X is V-ing entails X has V-ed, lampa* and *rai* behave like activity verbs, in that they carry the entailment. In test 12, activity verbs cannot occur with *finished*, while accomplishment verbs can, and *lampa* and *rai* act like accomplishment verbs, and unproblematically cooccur with *nggori* 'finish'. It is, thus, currently not possible to determine whether *lampa* and *rai* are activity verbs or accomplishment verbs. This indeterminacy may open the way for them to be unaccusative.

It should also be noted that, even if it is correct that discourse *kai* is found only with unaccusative intransitive verbs, it is by no means true that unaccusative verbs are typically marked with *kai*. There were many unaccusative verbs that never occurred with *kai*

in our data set, such as *mbi'a* 'break' and *midi* 'stop', and those that did occur with *kai* also occurred, often quite frequently, without it. Thus there were 31 instances of *vara* 'exist', and 24 instances of *maɓu* 'fall', without *kai*. It, therefore, seems clear that discourse *kai* is not marking unaccusative verbs, and must have some other function.

6.2 TRANSITIVE CLAUSES

6.2.1 Transitive clauses with no overt patient. There were a number of instances of clauses with semantically transitive verbs, that is, verbs whose argument structure specifies two arguments, where there was no overt patient, and the verb complex contained *kai*. In five of these, the verb was clearly and obviously transitive, and the patient, although not overt, was easily identifiable, either having been mentioned in the immediately prior clause, or having been mentioned at the beginning of a chain of clauses, and then clearly understood as an argument of the verb in the remaining clauses of the chain, although not overtly expressed. Thus, although no overt patient is present, these verbs are clearly, from a discourse perspective, transitive; they clearly reference an object. However, in seven other instances, while the patient was recoverable, it was not mentioned in the immediately prior text, and the main verb of the clause was one that is often used intransitively in discourse. Of course, even when used intransitively, such verbs have a patient in the real world. If one eats, for example, then necessarily something is eaten. However, if it does not matter to the discourse what was eaten, a speaker can simply say something like 'He ate, and then he left.' In such a case, the verb can be considered to be intransitive from a discourse perspective.

The majority of the clauses of this type in our data came from the frog stories, and described the act of searching for the missing frog, as in example (48).

(48) Lao tio=kai=ra   ɗi ʋuɓa.
      go   look=KAI=PRF in   forest
      'He went searching (for the frog) in the forest.'   (Frog, where are you?)

In cases like these, for a native speaker it seemed clear that the frog was somehow invoked by the clause and should, thus, be included in the translation. Without *kai*, on the other hand, a better translation for example (48) would be 'He went to the forest to search.' In both instances, it is the frog that is being searched for, but only in one instance is the frog's identity foregrounded, such that the semantically transitive verb is also discourse transitive, in that the listener's attention is directed toward the frog that is being searched for. In English, the only way to draw attention to the identity of the patient is by referring to it with a noun or pronoun. However, in Bimanese, in addition to these two options, it appears that the particle *kai* can be used to direct attention to the patient.

6.2.2 Grammatically transitive but pragmatically ditransitive clauses. There were two instances in our corpus where the clause containing *kai* is clearly transitive and the patient is overt, but the use of *kai* seems, according to native speaker understanding, to evoke a previously mentioned third referent. Both come from the same conversation, involve the same verb, *ndavi* 'make', and are used within moments of each other. They are given in example (49).

(49) Ruslan: Uatipu ndaʋi=kai ɓa ndai uma=na.
              not.yet make=KAI OBL POL house=3SG
              'Not to mention the cost of preparing housing for them.' (lit.
              'I haven't yet made their house.'[20])

     Kawi: Uma ro   salaja na /ʋara ʋali ja/ pala.[21]
              house and hut   3SG exist again also but
              'It seems it (the chicken) also has a house.'

     Ruslan: /ya/
                                          yes

     Ruslan: Ya, ʋatipu ɗi ndaʋi=kai ɓa ndai ɗi   ntuʔu
              yes not.yet PASS make=KAI OBL POL PURP perch
              ro   maɓa=kai ŋara=na ni.
              and hit=KAI   name=3SG EMPH
              'Not to mention the cost of preparing all those things.' (lit.
              'Yes. I haven't yet made [a place for them] to perch on and
              things like that.')   (Chickens)

The speaker, who breeds chickens for the market, has just mentioned how much
money he had to accumulate for the chickens and their feed, and now goes on to enumer-
ate other costs involved. The clauses he produces are straightforward transitive clauses,
and in both cases the *kai* is optional. Furthermore, there is no way to add a third argument
to the clause as it is constructed. This could only be achieved by moving *kai* out of the
verb complex and adding an instrumental prepositional phrase at the end, consisting of
kai plus the noun meaning money, as shown in example (50).

(50) Uatipu ndaʋi ɓa ndai uma=na kai piti.
     not.yet make OBL POL house=3SG with money
     'I haven't yet made their house with money.' or 'I haven't yet prepared
     the money to make their house.'

However, the sense of it in context is that the preparation of housing is another
expense for which money must be set aside, and to a native speaker the *kai* in this clause
is a reminder of the previously-mentioned money, in a way that is similar to the use of *kai*
in transitive clauses with no overt object, which was outlined in 6.2.1. Thus, one could
say that pragmatically these clauses are ditransitive, in that the listener's attention is
drawn to an additional referent, although clearly the clauses are grammatically transitive.

6.2.3 Other transitive clauses. In the majority of the nonsyntactic instances involv-
ing transitive verbs with *kai,* either the patient was clearly not just recoverable, but very
much evoked by the prior clause (seven instances), such that there was no possibility for
the listener to interpret the current clause as discourse intransitive, as in (51), or the patient
was overt (18 instances), as in (52). However, in none of these instances did *kai* appear to
be involved in increasing valency, or to have any other obvious syntactic function.

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20. In Bimanese, the actor is oblique; however, a passive translation is not apt here. Oblique
    actors occur frequently in Bimanese discourse, and do not represent the same discourse func-
    tion as an English passive.
21. The slashes indicate simultaneous speech: while Kawi was saying /ʋara ʋali ja/, Ruslan was
    saying /ya/.

(51) Kau   coco ŋao. Ede=mpa=ra coco=kai=ra.
     command chase cat   DEM=EMPH=PRF chase=KAI=PRF
     '(The boy) told (the dog) (to) chase (the) cat. After that (the dog)
     chased (the cat).'   (Frog on his own)

(52) Eda=kai=ra kapempe ma mboto.
     see=KAI=PRF butterfly   REL many
     '(The frog) saw many butterflies.'   (Frog on his own)

Because *kai* functions to increase valency, and thus is associated with higher levels of transitivity, we investigated the discourse transitivity of these 25 clauses. Hopper and Thompson (1980:261) state that in clauses that are higher in discourse transitivity, "the [patient] is more affected, the action is carried out more completely, or is done with more force." There are two ways to investigate discourse transitivity, one being a global investigation of the average level of discourse transitivity of clauses with *kai* and those without, and the other being a detailed comparison of the individual clauses containing *kai* and clauses using the same verbs but not containing *kai*. In the following two sections, we will first investigate the global perspective, and then do a more detailed comparison of the use of individual verbs.

6.2.3.1 Global examination of discourse transitivity. Here we address the first approach, the broad comparison of transitivity. The parameters of transitivity investigated were individuation and affectedness of patient, and mood and aspect, both as stand-ins for action being carried out completely and because these results could be compared with findings for clauses without *kai,* taken from another study of transitive clauses in Bimanese. Carrying out with force was not included, as it is difficult to determine, from a narrative or a naturally occurring conversation, how much force the speaker might have envisioned being used.

Neither mood nor aspect are obligatorily marked in Bimanese. In fact, mood is not marked grammatically at all. Aspect can be indicated by the use of preverbal aspect markers such as *vau* (perfective) or *vuŋa* (progressive), and by the perfective clitic *ra*, which most often encliticizes, but in some cases procliticizes, to the verb complex. Verbs may also be followed, within the verb complex, by elements such as *vali* 'again' and *revo* 'around', which have aspectual implications. However, many clauses are unmarked for aspect. Because of this, determinations of mood and aspect were made based on the discourse context of each utterance. Utterances that described actual occurrences were counted as realis, while those that were negative, imperative, or described future or conditional events, were grouped together and labeled irrealis, although nonrealis would be a more accurate description. Utterances that were marked as perfective, or were determined to be punctual and to represent completed actions, were coded as telic, while utterances that were marked in any way as imperfective, iterative, or frequentative, or were determined to be durative and represented incomplete actions, were coded as atelic.

We found that the clauses with *kai* were on the whole more likely to be realis and telic than were clauses without, as shown in tables 1 and 2. As shown in table 1, of the 25 clauses under discussion in this section, 24 (96 percent) were realis and likewise 24 (96 percent) were telic, which is consistent with high transitivity. An examination of 319 transitive clauses that did not contain *kai* showed that a somewhat lower proportion, 251 of

them, or 79 percent, were realis. This difference in mood is statistically significant (Chi-square = 4.335, df = 1, p = .0373). As shown in table 2, with respect to aspect, only 184 (58 percent) of the transitive clauses without *kai* were telic, a considerably lower proportion than telic clauses with *kai*. The difference in aspect is highly significant (Chi-square = 14.241, df = 1, p = .0002). These findings demonstrate that clauses with *kai* are higher in transitivity than clauses without *kai*, with respect to aspect and mood.

However, when individuation and affectedness of patient were considered, we found a quite different situation, as shown in tables 3 and 4. Table 3 shows that for both clauses with *kai* and those without, patients were more likely to be individuated, at approximately similar frequencies. The difference between the two types of clauses proved not to be statistically significant (Chi-square 0.381, p = .5369). In table 4, we see that among clauses with *kai,* almost half are not affected, and only approximately one-third were completely affected. For transitive clauses without *kai* also, close to half were not affected, and approximately the same amount were completely affected. The difference here is not statistically significant (Chi-square = 1.221, df = 2, p = .5431). These figures suggest that a higher degree of patient individuation and of patient affectedness on their own are not associated with the use of *kai*.

The global examination of transitivity, thus, shows that utterances with *kai* are higher in discourse transitivity, but only for certain parameters, and not for the ones that are most traditionally associated with notions of transitivity. On the patient parameters, utterances with *kai* are quite comparable to utterances without *kai*. This finding is compatible with Arafiq's intuition that *kai* puts emphasis on the action of the verb, since it is the verbal parameters where we find higher discourse transitivity.

TABLE 1. MOOD

	Realis	Irrealis
Clauses with *kai*	24 (96%)	1 (4%)
Clauses without *kai*	251 (79%)	68 (21%)

TABLE 2. ASPECT

	Telic	Atelic
Clauses with *kai*	24 (96%)	1 (4%)
Clauses without *kai*	184 (58%)	135 (32%)

TABLE 3. INDIVIDUATION OF PATIENT

	Individuated	Not individuated
Clauses with *kai*	16 (64%)	9 (36%)
Clauses without *kai*	223 (70%)	96 (30%)

TABLE 4. AFFECTEDNESS OF PATIENT

	Patient completely affected	Patient partially affected	Patient not affected
Clauses with *kai*	9 (36%)	4 (16%)	12 (48%)
Clauses without *kai*	148 (46%)	35 (11%)	136 (43%)

6.2.3.2 Examination of discourse transitivity of individual utterances. The 25 instances with *kai* involved 13 different roots; these were compared with the 103 instances of those same roots without *kai* found in the database of transitive clauses mentioned above. Certain observations emerged from this comparison. First, *kai* never occurred in a negated clause or a relative clause. Native speaker intuition confirms that nonsyntactic *kai* is generally inappropriate in these environments. Also, *kai* rarely occurred with complement-taking predicates (21 without *kai* vs two with), or in subordinate clauses. All of these are low discourse transitivity environments: negative clauses are irrealis, relative clauses and subordinate clauses are background, and complement-taking predicates are low in kinesis and affectedness of O. If discourse *kai* is associated with high discourse transitivity, it is not surprising that it would not be found in these environments.

An investigation of the individual clauses containing discourse *kai* in our corpus, coupled with comparison with clauses containing the same verbs without *kai*, was at least partially consistent with our global findings. As demonstrated by overall frequencies, almost all irrealis clauses lacked *kai*. Likewise, the few interrogative and imperative clauses in the data did not contain *kai*. Thus, *kai* does seem strongly associated with high transitivity values of mood. But the findings for aspect were more complex, and did not strongly support the idea that clauses with *kai* were associated with higher transitivity values for aspectual parameters, with one exception. Clauses where the action was marked as ongoing by either the progressive marker *vuŋa,* the adverb *vali* 'again, still', or the adverb *mbuipu* 'still' never contained *kai.* However, while clauses containing completed and/or punctual actions could, and did, occur with *kai,* more of them did not contain *kai,* even when they included the perfective particle *ra* or the punctual particle *lalo*.

A detailed analysis of each individual root would make this paper tediously long, and in many instances would not be particularly illuminating. However, for one root the use of *kai* appears to lead to changes in meaning that can be seen as transitivity-related. Thus *raka* 'get' is used twice with *kai,* both times meaning 'catch', as in example (53).

(53) Raka=kai =na karefa.
     get=KAI=3SG   frog
     '(The cat) caught the frog.'   (Frog on his own)

The same root is used six times without *kai,* once meaning to find and five times meaning to arrive at or reach, as in example (54).

(54) Uati raka ɓa mbere.
     NEG   get   OBL flood
     'The flood didn't reach (the bridge).'   (Politics)

'Catch' is higher in transitivity than either 'find' or 'reach', involving higher levels of volition, kinesis, and affectedness of the object.

The other roots did not generally show a meaning change with *kai,* and while for approximately half the instances of these roots without *kai* the lack of *kai* could be attributed to one of the factors mentioned above (subordinate clause, negation, irrealis, and so on), the remainder were not obviously distinguishable from clauses with the same roots that contained *kai,* in terms of Hopper and Thompson's parameters of discourse transitivity. It, thus, seems that there is some association between discourse *kai* and higher

discourse transitivity, but the situation is not straightforward enough to explain the presence of discourse *kai* simply in terms of discourse transitivity.

It is worth pointing out that many of the environments in which discourse *kai* is not found (subordination, negation, irrealis mood) do not involve assertions, while those where it is found do involve assertions. It may be that discourse *kai* is some sort of illocutionary modifier, similar to the discourse particles that are found in so many languages, contributing not to the propositional content, but to the speech act itself.[22] However, the functions of discourse particles are often difficult to determine, and at this point we have no particular suggestions of what type of illocutionary modifier discourse *kai* might be.

7. **CONCLUSION.** We have seen that the Bimanese particle *kai* is found within the verb complex far more frequently than outside it. Within the verb complex, it is more frequently used in a variety of syntactic functions, and less frequently as a discourse particle; however, the difference in frequency between the two types of uses is not extremely large.

In terms of syntactic functions, *kai* can be used to increase valency, either to form verbs from nonverbal roots, or to transitivize intransitive verbal and adjectival roots, forming causatives. *Kai* also forms transitive verbs with locative objects and functions to increase valency of transitive verbs, adding a third argument, which may be a patient or theme, an instrument, or a locative. It is not generally used to add a temporal expression as an argument, although it appears to be obligatory in certain cases with temporal expressions, when other factors are involved as well.

Beyond these, *kai* has a number of other grammatical functions. It is used with initial question words *ta ɓe* 'where', *ɓa ɓau* 'why', and *ɓune* 'how'. *Kai* is also a nominalizer, forming locative nominalizations by itself, and clausal nominalizations in conjunction with *ade* 'in'.

Kai also functions at the discourse level. It is found with both a wide range of transitive verbs, and also with unaccusative intransitive verbs, but not with syntactically ditransitive verbs. With intransitive verbs, it is not possible at this point to clearly identify its discourse function. Although it seems to be restricted to verbs that take a patient, to say that it marks the presence of a patient seems inadequate, as most instances of unaccusative verbs do not take *kai*.

With transitive verbs, in a number of cases *kai* does appear to be marking the presence of a nonovert patient, indicating that the verb is not only semantically transitive, but also discourse transitive, and in two cases it actually appears to be creating a sort of pragmatically ditransitive verb that, however, cannot be syntactically ditransitive. However, most instances of discourse *kai* with transitive verbs were already unambiguously transitive, so again this cannot be a complete explanation for the presence of *kai*. Discourse *kai* with transitive verbs appears to be associated with higher levels of discourse transitivity, but only with regard to mood and aspect, not with regard to individuation or affectedness of the patient.

At this point the exact discourse functions of *kai* remain unclear. An expanded study with a much larger data set may shed further light on the matter.

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