

TABLE OF CONTENTS

STUDIES IN LANGUAGE 35:3 (2011)

INTRODUCTION

On Transitivity

Randy J. LaPolla, František Kratochvíl and Alexander R. Coupe

ARTICLES

Pragmatic foundations of transitivity in Ao

Alexander R. Coupe

Towards an analysis of argument alignment in Takivatan Bunun

Rik De Busser

Questions on transitivity: Iatmul and beyond

Gerd Jendraschek

Transitivity in Abui

František Kratochvíl

On transitivity in two Tibeto-Burman languages

Randy J. LaPolla

Transitivity in Saliba-Logea

Anna Margetts

Transitivity in Cholim Tangsa

Stephen Morey

Transitivity in Murrinh-Patha

Rachel Nordlinger

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SPECIAL ISSUE

**Studies in Transitivity
Insights from Language Documentation**

Guest editors

František Kratochvíl, Alexander R. Coupe
and Randy J. LaPolla

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Studies in Language (SL) provides a forum for the discussion of issues in contemporary linguistics from discourse-pragmatic, functional and typological perspectives. Areas of central concern are: discourse grammar; syntactic, morphological and semantic universals; pragmatics; grammaticalization and grammaticalization theory; and the description of problems in individual languages from a discourse-pragmatic, functional, and typological perspective. For regular article contributions, the priority of a typological and cross-linguistic perspective is high: Articles on one language are welcome if of interest to the generalist/universalist. Likewise, interdisciplinary studies are welcome to the extent that they have the same perspective. In addition to regular articles, SL welcomes short contributions that report on new discoveries in little-known and/or endangered languages, emphasizing description over theory and comparison, and that are published in a special section to the journal. Contributions to this section typically derive from original fieldwork and are expected to provide concise and well-substantiated analyses of linguistic phenomena that have not been noticed much in general or in the relevant family or area but for which the wider theoretical implications cannot be established yet.

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INTRODUCTION

On Transitivity

Randy J. LaPolla, František Kratochvíl and Alexander R. Coupe

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This paper critically discusses and contrasts some of the different conceptualisations of transitivity that have been presented in the literature, and argues that transitivity as a morphosyntactic phenomenon and effectiveness of an event as a semantic concept should be separated in discussions of transitivity, and also, like many other aspects of grammar, transitivity should be seen as a constructional phenomenon, and so each construction in a language needs to be examined separately, in natural contexts. An Appendix presents some general questions one can consider when analysing language data.

Keywords: Transitivity, Radical Construction Grammar, linguistic typology, verbal valence

o. Introduction

Phenomena and questions related to the concept of transitivity in individual languages and cross-linguistically were presented in the framework of a year-long series of seminars held at the Research Centre for Linguistic Typology at La Trobe University, Melbourne, 2008–2009. The papers in this issue are a small selection of the many papers presented in that series.

Transitivity is taken as a given in most grammatical theories, that is, it is assumed to be universal, manifested in all languages, and global within a single language, i.e., relevant to all constructions of the language in the same way. Our goal in producing this special issue of *Studies in Language* is to bring attention to the intra-language and inter-language diversity actually found when one looks at substantial natural data. The title of the issue is “Studies in transitivity: insights from language documentation” because all of the studies presented in this issue are based on first-hand fieldwork and documentation of individual languages, and so have a strong empirical basis. This title is also appropriate because the approach is outward from the languages, that is, starts with the languages, working

inductively, rather than starting with the theory and looking for language data to test the theory, and is driven by the need to describe the language in its entirety, dealing with all of the constructions found.

In this paper we look at several conceptions of transitivity and how the papers of this volume relate to them, and discuss a possible alternative constructionist view. The Appendix presents some general questions related to transitivity that one can consider when analysing language data.

1. Syntactic definitions

The standard dictionary definition of “transitive” refers only to the conception of transitivity as involving the addition of a direct object, as in the following definition, from the *Collins English Dictionary* (*Collins Dictionary on computer*, www.collinsdictionaries.com. HarperCollins Publishers 2006, Ultralingua Software 2006):

“... denoting an occurrence of a verb when it requires a direct object or denoting a verb that customarily requires a direct object ... [... from Latin *transitus* a going over ...].”

Or this one from the *Oxford English Dictionary* (Second edition, 1989; online version November 2010, www.oed.com):

“Of verbs and their construction: Expressing an action which passes over to an object; taking a direct object to complete the sense.”

Nothing is said in these definitions about what a direct object is or how to identify it.

A similar approach is that of Dixon 2010, Chapter 13, “Transitivity”:

“One point to be stressed — and always kept in mind — is that *transitivity is a syntactic matter*. When a clause is said to have a certain transitivity value, and when a verb is said to show certain transitivity possibilities, these are syntactic — not semantic — specifications ... [I]t makes little sense to say, for example, that a given verb is ‘semantically transitive’ or ‘semantically intransitive’. It is more appropriate to describe it as having a semantic profile which is consistent with a certain transitivity profile at the syntactic level” (p. 116, italics in original; see also Dixon 1979, 1994; Dixon & Aikhenvald 2000).

An intransitive clause is said to have one core argument, S, and a transitive clause has two core arguments, A and O. “Allocating functions A and O to the two core arguments in a transitive clause has a semantic basis. Briefly, that argument whose referent is most likely to be relevant to the success of the activity is identified as

A ... And that argument whose referent is most likely to be saliently affected by the activity will be in O function" (p. 116). "Almost every language has some surface grammatical mechanism(s) for marking core and peripheral arguments so that they may be recognised — and the discourse understood — by listeners." (p. 118). Dixon argues that in some languages there are also extended intransitive and extended transitive clauses, which have a second or third core argument, respectively, referred to as "E" (p. 116–117). S, A, O, and E "can generally be recognised by surface coding; for example, place in constituent order, or case marking" (p. 136), but "[a] very few languages (Thai is one example) essentially lack all of (i)–(iii) and rely on the pragmatics of the situation of utterance for identification of which argument is in which syntactic function." (p. 119).¹

In this view transitivity is said to be a syntactic matter, and A and O are said to be syntactic functions, yet it is said that even where there is no syntactic marking or behaviour that would identify such syntactic functions (or even core arguments), as in Thai, the language is still said to have these syntactic functions. This is problematic, as if some phenomenon is syntactic, it must be identified and defined (morpho)-syntactically in each language that is said to manifest that phenomenon. If it can't be identified and defined (morpho)-syntactically in a particular language, then we cannot say that the phenomenon is manifested in that language. And if the phenomenon is (morpho)-syntactic, then we would not expect it to be manifested in every language, or manifested in the same way in languages that do manifest it, as (morpho)-syntactic structure is the result of conventionalisation within a particular society of speakers, and so each language will be unique in terms of what types of structures it conventionalises (see LaPolla 2003 for discussion). The traditional syntactic definition of transitivity says that a language has one or more constructions where two arguments are given special status in the clause as core (obligatory) arguments, as opposed to only one argument being given that status. This is straightforward, but defining transitivity in this way doesn't help us understand very much about the language given the circularity of identifying a clause as transitive because it has two core arguments, and saying that it has two core arguments because it is a transitive clause. The traditional view also does not recognise the diversity of morphosyntactic phenomena that show that clauses with two core arguments are not all alike (see the sections below, as well as the papers by Margetts, Coupe, and LaPolla in this issue). A problem specific to Dixon's view is that it is said that in some languages intransitive and transitive clauses can have a second or third core argument, respectively, so the number of core arguments in fact does not correlate with transitivity in Dixon's view; the key criteria is whether there is an O in the clause or not. Yet the O is defined semantically, and again there is circularity in saying that you allocate O to a

core argument in a clause because it is transitive, but the existence of the O is what makes the clause transitive.

There is also the problem of the use of the terms A, S, and O in discussions of transitivity. These designations refer to neutralisations of more fine-grained semantic roles for grammatical purposes, and so are a syntactic phenomenon, and thus are not universal and are variant between languages, yet they are used as if they are universals, and once we use them we are automatically assuming that transitivity is a relevant grammatical category in the language given that they are defined relative to transitive and intransitive clauses. (See Mithun & Chafe 1999 for more detailed criticism of the use of A, S, and O.)

2. Semantic definitions

Because the straightforward syntactic approach cannot explain the diversity of patterns related to transitivity in different languages, several semantic approaches have been developed. Here we will discuss Hopper and Thompson's (1980) Transitivity Hypothesis and Næss' (2007) reformulation of it, and the Role and Reference Grammar view of macro-role transitivity.

Hopper and Thompson see transitivity as "a relationship which obtains THROUGHOUT A CLAUSE" (p. 266, emphasis in original), and a continuum defined by a set of parameters, with features related to each parameter being seen as associated with high or low transitivity (see Table 1).

Based on this set of parameters they propose the following Transitivity Hypothesis (1980:255):

Table 1. Parameters of transitivity (Hopper & Thompson 1980:252)

	High	Low
A. Participants	2 or more participants, A and O	1 participant
B. Kinesis	action	non-action
C. Aspect	telic	atelic
D. Punctuality	punctual	non-punctual
E. Volitionality	volitional	non-volitional
F. Affirmation	affirmative	negative
G. Mode	realis	irrealis
H. Agency	A high in potency	A low in potency
I. Affectedness of O	O totally affected	O not affected
J. Individuation of O	O highly individuated	O non-individuated

- (1) If two clauses (a) and (b) in a language differ in that (a) is higher in Transitivity according to any of the features 1A–J, then, if a concomitant grammatical or semantic difference appears elsewhere in the clause, that difference will also show (a) to be higher in Transitivity.

Hopper & Thompson clarify that “... the Transitivity Hypothesis refers only to OBLIGATORY morphosyntactic markings or semantic interpretations; i.e., it states that the co-variation takes place whenever two values of the Transitivity components are necessarily present. The hypothesis in its present form does not predict WHEN these values will surface in structure or meaning — but only that, if they DO surface, they will agree in being either both high or both low in value” (1980: 255; emphasis in original).

Although this view also assumes that all highly transitive clauses have an A and an O, the transitivity of a clause involves all of the parameters; presence or absence of an overt O is only one of them. One result of this view is that a clause with two arguments but which manifests a number of low transitivity features (e.g. *Jerry likes beer*) is considered less transitive than a single argument clause that has high transitivity features (e.g. *Susan left*; exx. from Hopper & Thompson 1980: 254). This is inherently problematic in practical application. Consider a language with (a) a monovalent clause in which the single argument is marked with the agentive case, which suggests high transitivity in terms of agency but low transitivity in terms of the number of participants, and (b) a bivalent clause in which the agent argument is not marked by the agentive case, so the clause is low in transitivity in terms of agency, but high in transitivity in terms of participants by virtue of it also having a patient argument. Which clause type shows higher transitivity then, and why? Particularly in languages in which pragmatics influences morphosyntactic marking (e.g. Ao — see Coupe, this issue), a situation in which a number of transitivity parameters can be in discord is a real possibility, and this is not resolved by Hopper & Thompson’s above-mentioned clarification (p. 255).

In Hopper & Thompson’s view, unlike the traditional view, “... the transitivity features can be manifested either morphosyntactically or semantically” (p. 255). Also unlike the traditional view, they argue that “... the arguments known to grammar as INDIRECT OBJECTS should in fact be Transitive O’s rather than what might be called ‘accusative’ O’s, since they tend to be definite and animate” (p. 259).

Hopper and Thompson, in their 1980 paper, also associate transitivity with foregrounding in discourse: “We have shown that the properties associated with high Transitivity, which correlate in grammars of every language we have looked at, also turn out to predominate in the foregrounded portions of discourse” (p. 292). In more recent work, though, e.g. Thompson and Hopper 2001 and Hopper 2003, they found that when looking at natural conversation simple transitive clauses

are not common: “much of ordinary conversation is couched in non-eventive language that expresses subjective attitudes and observations”, and so they suggest that “transitivity is relevant not for a language as a whole but only for certain genres” (both quotes from abstract of Hopper 2003; see also Wouk’s (1986) suggestion that foregrounding and backgrounding aren’t relevant to conversation).

Thompson & Hopper (2001) also observe that the typical clause of English conversation has either one participant or two participants with very low transitivity, and that highly transitive exemplars are extremely rare (the latter is also true of Qiang — see LaPolla, this volume). Yet they note that fabricated examples have constituted the basis of discussions on argument structure, and that the importance accorded to the various schemas in which a given verb occurs may be an artefact of a methodology based on idealized data. They also suggest that argument structure constitutes only a small part of what a speaker needs to know about their language (see Bybee [2010:§5.2] and references therein for similar arguments downplaying the importance of argument structure in favour of a constructional view of grammar). Their analysis of English conversation is equally important for revealing that there is a remarkable degree of fluidity in the valency of verbs; transitivity is often indeterminate, and native speakers’ intuitions demonstrate a usage-based bias (see Jendraschek, this issue, and Morey, this issue, for discussion of problems related to determining valency classes; also see Bybee 2006, 2010 on frequency effects). Thompson & Hopper’s findings lead them to conclude that argument structure is of limited value for understanding how language is produced and processed, and that a construction-oriented approach is required to adequately capture the relationships between verbs and their arguments.

Hopper & Thompson 1980 has been very influential in the field, but we suggest that there are some problematic aspects of the theory that could be refined (some of which are mentioned in Hopper & Thompson 2001). One major problem is that in their discussion of each of the relevant parameters, it is clear that what they are talking about is the effectiveness of the event involved. This is actually a different thing from the traditional sense of transitivity as being related to the number of participants in a clause, particularly given that in their view a clause with one argument can be said to be more transitive than one with two arguments. We would like to argue that the lumping of a morphosyntactic property (transitivity) together with a semantic quality (effectiveness) under the same name is problematic. We think the two concepts should be separated, with one term, transitivity, being reserved for distinctions in the grammar of a language related to morphosyntactic constructions privileging one, two, or possibly three arguments as core arguments, and the other term, effectiveness, being reserved for possible explanations of such distinctions when they arise (recall the quote above from Hopper & Thompson where they say that the Transitivity Hypothesis cannot predict morphosyntactic

differences; the implication is they can explain some of the differences when they are manifested in a language).

A second problematic aspect of this theory is the definition of some of the parameters themselves. For example, Individuation of O “refers both to the distinctness of the patient from the A ... and to its distinctness from its own background” (p. 253). Among other features, they say that a referent that is human or animate is more highly individuated than one that is inanimate. The examples they give to contrast these two are *I bumped into Charles* vs. *I bumped into the table*, and they say that in the latter “it is less probable that something happened to the table, and more likely that the effect on the A is being highlighted” (p. 253). But this is not a difference of individuation in the sense of “distinctness of the patient from the A”. In real world terms a table is much more distinct from a human than another human is, and in fact the marking that we find on references to human patients and recipients can be explained in many languages using the fact that human patients and recipients are too SIMILAR to human agents, and so could be mistaken for agents, hence the need for marking them as non-agents or for marking the agents specifically as agents (see LaPolla 1992, 1995, Coupe, this issue, for discussion). The other aspect highlighted in their example is salience, not individuation. Humans are more salient referents, and so empathy will be with a human referent as opposed to a non-human referent (as in their latter example), but this is again distinct from individuation, and so should be separated out as a distinct parameter.

Næss 2007 attempts to reduce Hopper & Thompson’s features to the single semantic principle of distinctness of participants, and, following Rozwadowska 1988, talks about using the three features [\pm Volitionality], [\pm Instigation], and [\pm Affectedness].² The transitive prototype is said to be where the roles of the two core arguments are maximally distinct, that is where the Agent is [+Volitionality], [+Instigation], [-Affectedness] and the Patient is [-Volitionality], [-Instigation], [+Affectedness]. This study has a weak empirical basis, and a principled way of determining the values of these features is not given, particularly because even though they are presented as binary features, they are actually assumed to be gradient, and so the individual parameters of Table 1 still need to be taken into account, and concepts such as “Affected Agent” are impressionistically applied and therefore not very reliable. The idea that some marking might not be due to the roles being maximally distinct in real world terms, but actually too similar and so there is need to disambiguate actor from non-actor is not discussed. This is significant, as what are seen as prototypical transitive clauses in this view are the ones that have more morphological marking distinguishing the two arguments. That is, a prototypical transitive clause is a marked construction. Yet in many Tibeto-Burman languages, for example, the relevant marking is used when the agent and patient or agent and recipient are semantically and pragmatically the most similar,

that is, human and identifiable. So in those languages the marking can be said to be disambiguating an agent from a non-agent in situations where both referents have the potential to be recognised as agent or patient (see LaPolla 1992, 1995, this issue, Coupe, this issue).

In the Role and Reference Grammar (RRG) view (here abbreviated from Van Valin and LaPolla 1997, §4.2), valence is divided into three different types: syntactic valence, semantic valence, and macro-role valence. The syntactic valence of a verb is the number of overt morphosyntactically-coded arguments it takes. The semantic valence of the verb refers to the number of semantic arguments that a particular verb can take. These two notions do not always coincide, as can be seen in Table 2.

Rain has no arguments semantically, but because all simple English clauses must have subjects, it has a syntactic valence of one. *Eat* can have one argument, as in *Mary ate*, or two, as in *Mary ate a sandwich*. *Put* can have three core arguments, as in *Dana put the files on the table*, or it can have only two, as in *Dana put the files away*. Grammatical constructions that involve varying the basic valence of a verb may involve a difference of only syntactic valence, such as with the passive in English, where the syntactic valence of the verb is reduced from two to one without the semantic valence necessarily changing. For example, in *He was hit by a train* the *by*-phrase is a peripheral adjunct and therefore does not count toward the syntactic valence of the verb in this construction, but it represents the actor of the clause, and so is still a semantic argument of the verb.

RRG argues that the syntactic valence of a verb is not the same as its transitivity, as one cannot predict from the number of arguments in a clause how a verb will behave syntactically. An example is the verb *eat*, in English: it can occur with two core arguments, in which case it has a syntactic valence of two, but it exhibits Aktionsart variation: it can be used either as an activity or as an active accomplishment. If transitivity is simply a function of the number of syntactic arguments that a verb takes, then it is to be expected that the two-argument form of *eat* should manifest consistent syntactic behavior, but, as discussed in detail in Van Valin & LaPolla 1997, §4.2, the activity and active accomplishment forms manifest different behaviour, and the feature that distinguishes between the activity and

Table 2. Non-identity of semantic and syntactic valence

	Semantic Valence	Syntactic Valence
<i>rain</i>	0	1
<i>die</i>	1	1
<i>eat</i>	2	1 or 2
<i>put</i>	3	3 or 2

accomplishment uses is the nature of the non-agent argument. So, for example, if I say *He ate pizza for an hour*, with a non-referential non-agent argument, the use of the verb is as an activity, as it can appear with the temporal adverbial *for an hour*, which is used with unbounded activities, similar to intransitive activities (e.g. *He ran in the park for an hour*). The non-agent argument serves only to characterise the action,³ and generally would not appear as a passive subject. In an active accomplishment use, such as *He ate the whole pizza in five minutes*, there is a referential and individuated non-agent argument, which puts a boundary on the activity, that is, makes the clause telic. It can generally only appear with temporal adverbials representing bounded events such as *in five minutes*, not unbounded activities such as *for an hour*, and the non-agent argument in this type of clause will often appear as subject of a passive clause. This is typical behaviour for transitive clauses, whereas the activity use does not pattern like a typical transitive clause. From the RRG perspective, the crucial difference is that while both uses take two syntactic arguments, only the active accomplishment use has two macrorole arguments, an actor and an undergoer. The activity use has only one macrorole argument, an actor. Undergoer arguments are participants which are viewed as primarily affected in the state of affairs represented, and so must be referential. Because of this, *pizza* in *He ate pizza* cannot be an undergoer. Having only a single actor macrorole is a feature of canonical intransitive activity verbs like *run*, *cry* and *fly*. Thus, two-argument activity verbs like English *eat* behave like intransitive, rather than transitive verbs, despite having two syntactic arguments.⁴

The RRG view then is that transitivity must be defined in terms of the number of *macroroles* that it takes. There are three transitivity possibilities in terms of macroroles: 0, 1, or 2, as shown in Table 2. There is no notion of “ditransitive” in terms of macroroles, since there are only two macroroles. Zero macrorole verbs are termed ‘M(acrorole)-atransitive’.

Table 3. Macrorole number and M-transitivity

	<u>Semantic Valence</u>	<u>Macrorole Number</u>	<u>M-transitivity</u>
<i>rain</i>	0	0	Atransitive
<i>die</i>	1	1	Intransitive
<i>eat</i> [activity]	1 or 2	1	Intransitive
<i>eat</i> [active acc.]	2	2	Transitive
<i>kill</i>	2	2	Transitive
<i>put</i>	3	2	Transitive
<i>give</i>	3	2	Transitive

If we accept the macrorole transitivity view, we are making transitivity dependent on there being an individuated referential patient argument, similar to one criterion of Hopper and Thompson's view.

3. Transitive vs. ergative models of transitivity

The views of transitivity we have discussed so far approach transitivity purely from the point of view of whether or not the action "carries across" to another participant, that is whether or not there is an argument other than the actor. An alternative view, represented by the Tibetan grammarians, sees it quite differently. Thon-mi Sambhoṭa, a 7th century Tibetan grammarian, as interpreted by the 18th century grammarian Si-tu Paṅ-chen Chos kyi 'byuñ-gnas, analysed a transitive clause as representing "an act which is directly related with a distinct agent", and an intransitive clause as representing "an act which is not directly related with a distinct agent" (translations from Tillemans & Herforth 1989: 4). As explained by Si-tu, the agent includes the primary agent (*byed pa po gts'o bo*) and the secondary agent (*byed pa po phal ba*) (the instrument). They both take the same marker (*byed sgra* 'agentive expression'; the ergative/instrumental marker). A transitive clause is divided into 'self' (*bdag*), which includes the agents (primary and secondary) and the action (*bya*, or effort, *rtsol ba*) of the agents, and 'other' (*gžan*), which includes the entity (*dnos po*) involved in the action and the act (*las*) that the entity undergoes. The 'other' is also called the 'focus of the action' (*bya ba'i yul*). To use Si tu's example, if a woodcutter cuts wood to pieces with an axe, the woodcutter, the axe, and the action of the woodcutter are all 'self', while the wood and the falling to pieces is the 'other', the focus of the action (exx. from Tillemans & Herforth 1989: 82–82):

- (2) Intransitive: *chad, chad* (PERFECT) 'something falls off, decays, wears down'
śiñ dum.bu=r chad=do
 wood bit=ILLATIVE fall:PERFECT =SFP
 'The wood has fallen to pieces [through some natural process]'
- (3) Transitive: *gcod, bcad* (PERFECT), *gcad* (FUTURE), *chod* (IMPERATIVE) 'cut, discontinue sthg'
śiñ.mkhan=gyis sta.re=s śiñ dum.bu=r gcod=do
 woodsman=ERG axe=ERG wood bit=ILLATIVE cut=SFP
 'The woodsman cuts the wood into pieces with an axe.'

Comparing this with our dictionary definition of transitivity above, we can see that the Tibetan view takes a different perspective from the Western view: in the

traditional Western view a transitive differs from an intransitive in having a second argument that the action passes over to, while in the Tibetan view a transitive clause differs from an intransitive one in having a second argument representing an external agency. This is an interesting difference in perspective, and it would be interesting to know why the two cultures involved came up with such different analyses. Could it be because Tibetan is a language where patients are generally the unmarked participant, and agents are generally the marked participant?

Similar to this view, though entirely independent of it, is M.A.K. Halliday's (1994, 2004 §5.7) distinction between transitive vs. ergative models of transitivity. Halliday argues that there are two possible ways to view clause structure in English within the system of transitivity: using a transitive model of transitivity and using what he calls an ergative model of transitivity. Both are properties of the single system of transitivity in English. These essentially involve profiling the situation expressed by the clause in different ways.⁵

In the transitive model, a 'process and extension' model, as in (4) below, the emphasis is on an Actor, coded as Subject, doing something, and that action may or may not be extended ('carry across') to another participant (a Goal or Range)⁶ (cf. the dictionary definition above). That is, the one required argument is the Subject, and Actor in the unmarked case. This argument is seen as the source of the action. E.g. in (4), *The lion chased the tourist* (4b) relates to *The lion ran* (4a), and either the lion's running didn't extend to another participant (intransitive *the lion ran*), or it did extend to another participant (transitive *the lion chased the tourist*). This is most clear in clauses with labile verbs where the Subject of the intransitive use is the same as the Subject of the transitive use, such as *the tourist hunted / the tourist hunted the lion*. There are one or two core arguments, and other arguments must be introduced with prepositions. The Goal or Range can also be made the Subject of the clause in a passive construction (4c).

- | | | | | | |
|-----|----|--------------------|-------------------|---------------------|------------------------|
| (4) | a. | <i>The lion</i> | <i>ran</i> | | |
| | b. | <i>The lion</i> | <i>chased</i> | <i>the tourist.</i> | |
| | | Actor | Process | Goal | |
| | c. | <i>The tourist</i> | <i>was chased</i> | | <i>by the lion.</i> |
| | | Goal | Process | | Actor |
| | | Subject | Predicator | Complement | Circumstantial Adjunct |

Now consider clauses with labile verbs where the Complement of the transitive use is the same referent as the Subject of the intransitive use:

- (5) *I broke the chair.* (transitive)
 (6) *The chair broke.* (intransitive)

Both of these contrast with the passive form, *The chair was broken by me*. In the non-passive intransitive form, there is no assumption that anyone caused the chair to break. In the passive there is an assumption that someone broke the chair.⁷

In the ergative model, we look at the same situation from the point of view of ‘instigation of a process’ rather than extension (cf. the Tibetan view presented above). Looking at it this way, we can say that there is some process (an action, event or state), and one referent, the Medium (the medium through which the process is actualised), and the question is whether the process is brought about by that participant, or by some other entity (an Agent), e.g. *The lion chased the tourist* in this view relates to *the tourist ran*, and either the tourist’s running was self-motivated (*the tourist ran*) or it was instigated by some other entity (*the lion chased the tourist*). The Medium is not defined in semantic terms, that is, it isn’t the doer or the causer necessarily, but the one that is critically involved in the process (which will be different with different process types).⁸ Applying this to (5) and (6) we get the analysis in (7):

(7)	a.	<i>The chair</i>	<i>broke</i> .	
		Medium	Process	
	b.	<i>I</i>	<i>broke</i>	<i>the chair</i> .
		Agent	Process	Medium (Complement)
	c.	<i>The chair</i>	<i>was broken</i>	<i>(by me)</i> .
		Medium	Process	Actor (Circumstantial Adjunct)
		Subject	Predicator	

The two semantic models complement each other within the system of transitivity in all registers in English, but are foregrounded to different degrees in different registers. In traditional narratives, the transitive model is more often foregrounded, while in scientific English and casual conversation the ergative model is more often foregrounded.⁹

The transitivity model is linear, but the ergative/non-ergative model is not. The Medium + Process (e.g. *the boat + sail*) is the nucleus of the clause, and may be realised as a clause alone, or can appear with other participants and circumstantial functions, and it may be extended indefinitely by adding Agents (e.g. *John made Mary sail the boat*). Halliday talks about these two semantic models simply as two different interpretations, but as argued by Davidse (1992) the two models represent two clause types (two constructions) that differ in their syntactic behaviour:

- Only the transitive action processes can appear in clauses such as *This ice cream scoops out easily*, and only those of the ergative type can appear in “possessor-ascension” clauses such as *The cooling system burst a pipe*.

- A Beneficiary, such as in *The bell tolls for you*, or a Range, as in *The boat sailed the ocean blue*, can also appear in the clause. Semantically these roles are like participants but also like circumstances, and this is reflected in the fact that they can appear with or without prepositions in many clauses. With transitive action clauses, a Range argument can be an entity-type Range or it can be a process-type Range (see footnote 6 on the difference), but ergative clauses can only take an entity-type range, not a process-type range. For example, we cannot say *The door opened an opening*, the way we can say *sing a song* or *die a horrible death* with the transitive structure.
- The Agent (instigator) in the ergative construction cannot appear in an *of*-complement of a nominalization with the same meaning (*John opened the door* vs. *the opening of John*) whereas the Actor of the transitive model can (*The hunters shot the tiger* vs. *the shooting of the hunters*).

Halliday's conceptualisation, which incorporates both the traditional Western view of transitivity and something like the traditional Tibetan view of transitivity into one system, is an improvement over the other mono-construction approaches, as recognising the distinct construction types within a single language helps us to properly characterise and explain the ambitransitive uses of verbs and the differences between the two construction types pointed out by Davidse.

Although not discussed by Halliday, as he limited his discussion to English in the relevant chapter, this conception might also be extended to patterns such as in the Spanish example in (8) (from Hopper & Thompson 1980: 254, but with modified glosses)¹⁰ and the Qiang example in (9) (Tibeto-Burman; LaPolla with Huang 2003: 101), similar to Halliday's treatment of Beneficiaries (see above):

(8) *Me gusta la cerveza.*

1SG:DAT please:3SG DEF beer

'I like beer'

(9) *ʔü-dzoku-le: qa-ta sə.*

2SG-key-DEF:CL 1SG-LOC exist

'I have your key.'

In (8) the reference to beer is given the privileged grammatical status of being the sole unmarked argument of an intransitive clause and controller of the agreement on the verb, while the experiencer is given prominence as topic (put in initial position), but marked grammatically as an oblique argument. In (9) the reference to the key is given prominence both in terms of being put in topic position and in controlling agreement, while the reference to the possessor is marked as oblique.¹¹ In these two cases the single unmarked argument could be seen as the Medium.

Notice that English most naturally translates both these examples with transitive clauses.

Halliday's differentiation of transitive/intransitive and ergative/non-ergative models also helps us solve Hopper & Thompson's problem of the relationship between transitivity and foregrounding being related to genre.

If we accept the two models, we must treat them not only as different interpretations, but as two different clause types or constructions, even within one language. So a major step in our understanding of transitivity is seeing it as a construction-specific phenomenon, much as has been argued for grammatical relations (Foley & Van Valin 1984, Van Valin & LaPolla 1997, Dryer 1997, Croft 2001, Ch. 4, LaPolla 2006) and form classes (Croft 2000, 2001, Ch. 2). That is, recognising it not as a cross-linguistically universal phenomenon and a global phenomenon within a single language, but as one that can grammaticalise in different ways in different constructions within a single language and across languages. For example, in terms of grammatical pivots, English has a pivot for the cross-clause coreference construction but not for relativisation, whereas Tagalog does not have a pivot for the cross-clause coreference construction, but does have one for relativisation. In terms of transitivity, Coupe (this issue) argues that it is only relevant to certain constructions in the Ao language, such as the causative construction. If the development of obligatory morphosyntactic marking on core arguments in specific construction types can be viewed as a manifestation of the grammaticalisation of transitivity, then a number of Tibeto-Burman languages demonstrate syntactically-defined contexts in which such marking is required. For example, it is widely reported that marked word orders in which the patient argument precedes the agent argument is a common trigger for obligatory disambiguating marking being used either on the agent (agentive marking), or on the patient (anti-agentive marking) if semantic roles could be misconstrued — see LaPolla 1992, 1995 for discussion. In addition to having obligatory disambiguating case marking under identical conditions to these, Chirkova (2009: 23–24) reports that agentive marking is obligatory in relative clauses in Shǐxīng, again for the disambiguation of semantic roles, as the language requires these to be explicitly marked (see also LaPolla, this issue). Thus, manifestations of transitivity can be construction-specific and not necessarily have relevance to the entire repertoire of constructions found in the grammar of a language.

More evidence that transitivity is a grammaticalised and construction-specific phenomenon comes from work by L. J. Xu in distinguishing between ambitransitive uses of verbs and elliptical structures with zero arguments. Xu (ms. 2005) takes the English verb in (10a) to be transitive and the one in (10b) to be intransitive, but takes the corresponding Chinese verb in both (11a) and (11b) to be transitive.

- (10) a. *He ate apples.*
 b. *He ate.*
- (11) a. *Ta chi-le pingguo.*
 3SG eat-PFV apple(s)
 ‘He ate apple(s).’
 b. *Ta chi-le.*
 3SG eat-PFV
 ‘He ate (it).’

In Xu’s analysis, the difference between (11a) and (11b) is that the verb takes an overt object in the former and an ellipted object in the latter. So in Chinese a transitive verb must take an object, but the object may take a null form, whereas in English a transitive verb must take an overt object, but it may have an intransitive homonym that does not take an object. Some languages can omit the object and other languages cannot. Spanish is like English and Portuguese is like Chinese in this regard.

Supporting the claim is the observation that in languages like English the transitive and the intransitive homonym are semantically different. In the case of *eat*, the implicit argument of the intransitive verb has to be something conventionally edible, whereas the overt object of the transitive verb can be anything, for instance, a shoe (Fillmore 1986). In languages like Chinese, whether an object is overt or not, the verb has the same meaning. So what was eaten in (11b) is understood as whatever referent is relevant in the context, edible or inedible.¹² This shows that languages differ in terms of the particular meaning of similar conventionalised constructions.

But Xu argues that what was presented above is an oversimplification. Not all of the English ambitransitives are alike. Some of them are more like those in Chinese. Compare the following Chinese sentences and their English translations.

- (12) a. *Tamen tongguo-le kaoshi.*
 3PL pass-PFV exam
 ‘They passed the exam.’
 b. *tamen tongguo-le ___.*
 ‘They passed.’

In the English translation of (12b) the implicit argument cannot but be interpreted as a specific exam in the context known to both the speaker and the hearer. Conceptually, things that are “passable” do not form a class the way things that are edible do. So the English sentences in (12a) and (12b) mean the same thing, just as their Chinese counterparts do. We also saw in footnote 4 that even English *eat* can be used in some contexts where it is understood to have a delimiting object, even

if that object is not overt, as in *I ate in five minutes, then rushed off to work*. So even in the same language some uses of verbs are truly ambitransitive, while others are transitive, even though the object may take a null form.

4. Summary of this paper and others in this issue, plus conclusions

In this paper we have looked at several conceptions of transitivity which differ in terms of what is taken as the crucial difference between transitive and intransitive clauses: the traditional view of transitivity being a purely syntactic matter of having a second argument that the action “passes over” to; the Tibetan view of having a second argument that instigates or causes the first argument to undergo some action; the RRG view of having an undergoer (affected referential O) as opposed to not having an undergoer (regardless of how many overt arguments appear in the clause); Hopper & Thompson’s and Næss’ view of having a set of semantic and pragmatic features said to relate to transitivity or intransitivity we argued would better be talked about as “effectiveness” and “salience”. Halliday’s insight is to see that even within a single language not all clauses pattern the same way in terms of transitivity, and so we need a combination of something like the traditional view, the Tibetan view, and the RRG view together to account for the morphosyntactic patterns of English. We also saw from the work of L. J. Xu that even similar-looking constructions in two languages can differ in terms of transitivity.

The individual papers in this issue all point to problems with the assumption of a single uniform view of transitivity. De Busser argues that in Takivatan Bunun argument realisation is handled by a number of different interacting linguistic subsystems which cannot be integrated into a single system. He shows that the traditional notions of transitivity and argument alignment have little explanatory power for the Takivatan Bunun data. De Busser points out that the set of core argument roles might be larger than the traditionally assumed S, A, and O categories (and E or T/R in ditransitives, Dixon 1994, Haspelmath 2005; see Kratochvíl and Nordlinger (both in this issue) for similar claims). Although he talks about subsystems instead of constructions, his findings are very amenable to a constructionist analysis.

Margetts discusses transitivity and what she calls transitivity discord in Saliba-Logea, where a verb is morphologically marked for less direct arguments than appear in the clause (e.g. two direct arguments but intransitive marking on the verb), a common phenomenon in Oceanic and elsewhere (e.g. Rawang, LaPolla, this issue; Puma, Bickel et al. 2007). Her discussion of this phenomenon is innovative in that she argues that the transitivity features found in the language need to be discussed relative to different structural levels. She gives different morphosyntactic

definitions of valence and transitivity at three different levels: verb root, inflected verb and clause. Discussing each level in this way allows us to see clearly what is going on when the transitivity features of the three levels do not align, giving rise to a number of different constructions with both transitive and intransitive features.

Kratochvíl examines the role of transitivity in single and two-argument constructions in Abui, a Papuan language with a fluid semantic alignment (after Donohue and Wichmann 2008). The paper shows that in Abui there are seven argument roles: ACTOR, PATIENT, RECIPIENT, LOCATION, GOAL, BENEFACTIVE, and NEUTRAL. Not all Abui two-argument clauses have to contain an ACTOR argument; most combinations are attested. Kratochvíl argues that transitivity applies only to a subset of two-argument clauses and shows that there is no clear default two-argument construction that contains both actor and undergoer. Argument realisation in Abui is driven by semantic features such as (degree of) affectedness, control, and volition.

Nordlinger gives a detailed account of bivalent constructions in Murrinh-Patha, a non-Pama-Nyungan polysynthetic language from northern Australia. Nordlinger questions the explanatory force of syntactic definitions of transitivity for the language, in which two-argument constructions (direct object, benefactive, experiencer, and impersonal constructions) appear sensitive to semantic features of the participants such as animacy or affectedness. Nordlinger argues that the semantic prototype approaches to transitivity (Hopper and Thompson 1980, Næss 2007, among others) have much more explanatory power in dealing with languages such as Murrinh-Patha, which appears “to be sensitive primarily to the semantic role of the (non-subject) clausal participants, rather than to grammatical function: patient/theme, experiencer and source objects are encoded with the direct object marker, and benefactive/recipient/goal objects are encoded with the ‘benefactive’ markers” (p. 729).

Morey argues that in Cholim Tangsa neither the noun phrase markers nor the agreement can help us achieve a clear global definition of transitivity for the language, so his conclusion, much like Nordlinger’s, is that transitivity has a low functional load in the language, and that it is relative to particular constructions. He questions whether transitivity is a feature of the verb, or of the construction in which it appears.

Coupe investigates the extent to which transitivity has grammaticalised as a functional category in Mongsen Ao, a Tibeto-Burman language of north-east India. The only formal correlate of transitivity in Ao is agentive marking. As this occurs non-paradigmatically in verbal clauses with varying valency statuses and appears under mostly pragmatically-licensed conditions, Coupe proposes that its use can only be marginally related to the syntactic notion of transitivity. However,

agentive case marking is obligatory in generic statements of habituality and in causativized clauses, therefore it should be viewed as a phenomenon that is relevant only to certain types of constructions in the language.

Jendraschek addresses manifestations of transitivity in Iatmul syntax. Reviewing syntactic properties of Iatmul core arguments, he argues that only the category of subject has been grammaticalized in Iatmul. The object category is split into “direct objects” and “indirect objects” but only the first one can become a pivot in complex predicates and is relevant in S=O ambitransitives, switch reference, relative clause formation, agreement and obligatory focus marking. On the other hand, there is not enough syntactic evidence for the concept of “indirect object” in Iatmul. Jendraschek views transitivity as a dynamic phenomenon that can evolve over time and proposes a typology of languages based on the level of grammaticalization of syntactic transitivity. This dynamic view of transitivity accommodates all known transitivity systems. On one end of the spectrum we find languages in which argument realization is driven by semantic and pragmatic concerns. Languages in which syntactic transitivity has grammaticalised and semantic and pragmatic concerns are marginal are located at the other end of the spectrum. In this typology, according to Jendraschek, Iatmul occupies a medial position, having grammaticalised syntactic categories of subject and direct object, but having retained sensitivity to semantic and pragmatic features of undergoers. The weak grammaticalization of syntactic categories in this language also explains the absence of argument rearranging mechanisms such as passives, causatives, and applicatives.

LaPolla presents his analyses of transitivity in two Tibeto-Burman languages, Rawang and Qiang, pointing out that they were described using very different criteria for considering a clause transitive. His argument is that each language must be analysed on its own terms, and so the criteria used for identifying transitivity, if it is to be identified at all, might be different for different languages. He also argues that part of the reason for the differences between the two languages is the degree of systematicity of the marking, with the Rawang marking being more systematic, so we need to take historical development into account as well.

Aside from the work on this issue, in recent work on Atong (Tibeto-Burman; van Breugel 2008, Chapters 20–21), it has been argued that it is not possible to distinguish transitive and intransitive clauses formally, and so identification of transitivity in those languages depends solely on whether an O and an A can both be recovered from the context. Matisoff (1976) has stated that transitivity is not an important concept for understanding Lahu grammar.

Thus, although we may see transitivity as a phenomenon manifested in many languages, it is not universal, and when manifested, it may be manifested differently between languages, and even between different constructions of a single

language. The different manifestations result from speakers conventionalising different constraints on the addressee's interpretation of the speaker's communicative intention regarding events and their participants (LaPolla 2003), and from the different diachronic paths that individual constructions may wander along over time once they have been conventionalised (Jendraschek, this volume). The overall conclusion then is that transitivity, like grammatical relations (see Van Valin & LaPolla 1997, Ch.6, Croft 2001, Ch 4; LaPolla 2006) and form classes (see Croft 2001, Ch. 2), is a construction-specific phenomenon. When working on individual languages, we need to look at each construction in the language, and in natural contexts, before we consider whether something like transitivity can help us understand how the system of the language is organised.

Notes

1. "(i)–(iii)" refers to (i) marking on the noun, (ii) bound pronouns, and (iii) constituent order (p. 119).
2. Although Næss uses different labels from Rozwadowska's [\pm sentient], [\pm cause], and [\pm change], respectively, the categories are essentially the same (Næss 2007: 87). For example, Næss weakens the sense of [+volitional] to include any sentient participant (2007: 90).
3. See Van Valin & LaPolla, §3.2.3.3 for discussion. See also footnote 6, below, and Halliday 1994, Ch. 5 for discussion of what Halliday refers to as the "Range" or "Scope" argument.
4. Næss (2007: 77–82) argues that the difference between the activity and active accomplishment uses of English *eat* is not due to the properties of the object, but due to the affectedness of the agent, using the single example *I ate in five minutes, then rushed off to work* as evidence that the intransitive use (with no overt object NP) can have a telic reading. In fact with this verb there is a conventionalised understood argument that bounds the event, 'a meal', and Næss acknowledges this in the long discussion of the meaning of intransitive *eat* as 'eat a meal' in Chapter 6, citing also Fillmore 1986: 96 and Rice 1988: 203–204 as arguing that it has this meaning. It is clear then that the understood 'a meal', or in this case, 'breakfast', gives an endpoint to the action, the same way an overt individuated object would, and so the telicity of the example is not due to the affectedness of the agent, but due to the delimiting understood argument. Næss compares this use with examples like *The potatoes cooked in ten minutes*, but in this clause the potatoes are not an affected agent, and even when there is a highly affected participant, as in *I was cooking out there in the sun* (meaning 'I was very hot'), the clause is not necessarily telic. See also Section 3 below.
5. Note that what is being referred to here as "ergative" is not morphosyntactic ergative alignment, but a semantic model of event profiling. That is, it is a conception of the nature of transitivity, whether a transitive clause is one with an added patient or is one with an added agent, and not directly related to any alignment systems. The term "ergative" is used because of the similarity of the conceptualisation of this model to the morphosyntactic pattern of morphosyntactic ergative alignment, as can be seen from the discussion of the Tibetan grammarian view.

6. Halliday (1994, Ch. 5) makes a clear distinction between Goal, the affected argument of an action (cf. the concept of undergoer in RRG discussed above), and Range (or Scope), which is the argument that delimits or marks the domain of the activity expressed in the proposition (cf. the discussion of the second argument of activity predicates in RRG above). Range is further divided into entity-type Range, that is, an entity that exists, such as the mountain in *I climbed the mountain (in one day)*, and process-type range, that is, the name of the activity (often a nominalization of the verb), such as golf in *I played golf*. A clause with an entity-type Range often has an agnate form with a locative expression, e.g. *I played (the) piano*, vs. *I played on the piano*. Notice that in some conceptions of transitivity this would involve a difference in transitivity, while in others they would both be considered intransitive.

7. The passive can be used either when the agent is not salient, or less salient than the patient, as the *by me* phrase is an oblique and can be dropped, or it can be used when the actor is in focus, as it puts the reference to the actor in the clause final focus position.

8. Compare Mithun's (1994:255–7) discussion of the nature of absolutive arguments and the privileged semantic relationship they have with the verb they appear with.

9. See the discussion of Hopper and Thompson's view of transitivity in §2 above, particularly their recent findings about the genre specificity of their correlation of transitivity features with foregrounding. See also Martin's (2004) analysis of Tagalog.

10. Incidentally, Hopper & Thompson use (8) as an example of a "less than ideal patient", as if it were on a par with *I am drinking beer*, but while (8) is intransitive, it seems the motivation isn't because of the nature of the patient, but the nature of the experienter.

11. This is the case with temporary, non-ownership possession. With true ownership, a transitive clause is used (derived with the use of the causative suffix), possibly reflecting the greater involvement of the possessor with the item possessed (LaPolla with Huang 2003: 102):

- (i) *Khumtsi dzəgu kən a-ha ʃə-z.*
 PN money very one-PL exist-CAUS
 'Khumtsi has a lot of money.'

12. The difference between these two English uses of *eat* does not relate to the difference in Aktionsart found between the activity use, which includes both *He is eating* and *He is eating pizza* on the one hand, and the active accomplishment use, such as *He is eating a pizza*, which is telic due to the individuated nature of the pizza. In the example mentioned in footnote 4, *I ate in five minutes, and then rushed off to work*, there is a conventionalised understood object ('breakfast') that delimits the action, making it telic, but the understood object is not referential, as in the Chinese examples.

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Abbreviations

AGT	agentive marker	LOC	locative marker (also used for dative)
CAUS	causative marker	PFV	perfective marker
CL	classifier	pl	plural
DAT	dative marker	PN	proper name

DEF	definite marker	SFP	sentence final particle
ERG	ergative marker		

Appendix

Questions to ask about transitivity in individual languages

The following are a few questions related to transitivity that linguists examining data in individual languages might think about:

1. Are there some morphological or syntactic constructions in the language you are working on that can be explained using the concept of transitivity (however it is defined)?
2. If so, how must transitivity be defined for it to help you in understanding the language you are working on?
3. What do you think the motivation for each of the transitivity-related constructions is?
4. Does transitivity correlate with referent tracking (alignment and voice)?
5. Are the structures or morphology involved in the marking of transitivity also involved in disambiguation other than referent tracking?
6. Are they affected by the individuation of the actor argument or the non-actor argument?
7. Do they correlate with foregrounding or backgrounding or genres?
8. Do they correlate with the clause's Aktionsart?
9. Are there any other dependencies between transitivity and other systems? (For the kind of dependencies we mean, see Aikhenvald & Dixon 1998.)

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Pragmatic foundations of transitivity in Ao*

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This paper investigates the extent to which the phenomenon of transitivity contributes to syntactic organization in Ao, a Tibeto-Burman language of north-east India, by considering its manifestations from a pragmatic perspective. Agentive case marking is found to be the only formal correlate of transitivity in this language. This serves an obligatory marking function on actor arguments of verbal clauses expressing the habitual activity of a referent, and agentive marking is also consistently used to distinguish the causer argument of causativized predicates. However, in all other types of clause structures its use is pragmatically determined. Transitivity thus appears to be a construction-based phenomenon that has grammaticalized for only some aspects of Ao clausal syntax.

Keywords: Ao, Tibeto-Burman, pragmatics, agentive, case, construction grammar, grammaticalization

1. Introduction

Transitivity is widely regarded as exerting a crucial influence on morphosyntax in the world's languages. In most theories of grammar it is thought to motivate the argument structure of predicates, which in turn determines agreement patterns on verb stems in head marking languages, the marking of core case relations via relational morphology in dependent marking languages, or the arrangement of noun phrase arguments in languages that use a fixed constituent order to encode grammatical functions. Because of this, transitivity must also be acknowledged as vital to the historical development of alignment patterns and other structurally-defined conventionalizations of syntax, such as valency rearranging derivations, accessibility to relativization, the grammaticalization of syntactic pivots, and various other types of cross-clausal coreference. The demonstrated existence of these kinds of syntactic operations in a language often constitutes fundamental evidence for positing the grammatical relations of "subject" and "object", which are arguably the syntactic consequences of the grammaticalization of transitivity from a

historical perspective.¹ Indeed, transitivity could be considered the single most important catalyst for many of the morphosyntactic design features of the world's languages.

By use of the term “transitivity” I am referring specifically to the traditional syntactic notion, as suggested by the definition provided in the online June 2011 version of the 1989 *Oxford English Dictionary*, 2nd edn. (www.oed.com): ‘Expressing an action which passes over to an object; taking a direct object to complete the sense.’ This traditional syntactic concept of transitivity is also promoted in the work of Dixon (1979, 1994), who defines his notions of S, A and O in terms of transitivity and the presence or absence of an object grammatical relation. Transitivity in this view thus has an interdependent relationship with valency classes of predicates, the neutralization of semantic roles under core grammatical relations, and syntactic pivots.

In their influential paper, Hopper & Thompson (1980: 251) conceive of transitivity as “a global property of an entire clause, such that an activity is ‘carried-over’ or ‘transferred’ from an agent to a patient. Transitivity in the traditional view thus necessarily involves at least two participants ... and an action which is typically EFFECTIVE in some way” (emphasis in the original). Having defined the concept, Hopper & Thompson then seek to identify how transitivity manifests cross-linguistically. They propose that the Transitivity Hypothesis finds expression via ten key parameters: the number of participants, kinesis, aspect, punctuality, volitionality, affirmation, mode, agency, the affectedness of O, and the individuation of O. Thus for Hopper & Thompson, transitivity is represented by an unranked and unsorted cluster of morphological, semantic and syntactic properties (although see LaPolla, Kratochvíl & Coupe, this issue, for discussion of the practical problems of applying these criteria to the determination of transitivity).

While the many surface manifestations of transitivity have received a great deal of attention in the typological literature, hardly any explorations of the phenomenon fundamentally consider the communicative functions that underlie and motivate the grammaticalization of transitivity. Although this is something that was raised by Hopper & Thompson in their seminal paper, since then few authors have given it the attention that it deserves.

[W]e assume that a linguistic universal originates in a general pragmatic function, and that the universal is not explained until this function has been isolated and related to the universal. Without the connection to a communicative function, the separate components of the Transitivity relationship have only an arbitrary relationship; we lack a reason why these semantic-grammatical components, rather than others, should be selected (1980: 280).

This, then, is the identified task of the paper. Rather than follow in the well-worn footsteps of Dixon 1979, Dixon 1994, Rozwadowska 1988, Næss 2007 and numerous other publications that have grappled with transitivity from an almost exclusively structural perspective and accorded it the unquestioned status of a language universal, I will instead consider explanations for the grammaticalization of transitivity from a distinctly pragmatic point of view, drawing mainly on diachronic and synchronic evidence presented by Tibeto-Burman languages in general and by Mongsen Ao in particular. As agentive case marking is found to be the only formal correlate of transitivity in this language, its distribution and uses in verbal clauses warrants our closest attention.

Many Tibeto-Burman languages whose grammars have been intensively investigated beyond the level of the clause are reported to have core case marking patterns that reflect semantic and/or pragmatic influences to a variable extent, e.g. Lahu (Matisoff 1973), Meithei (Chelliah 1997, 2009), Qiang (LaPolla with Huang 2003), Tibetan (Tournadre 1991), Kurtöp (Hyslop 2010) and Yongning Na (Lidz 2010). Case marking in these languages can deviate substantially from those having ergative-absolutive or nominative-accusative patterns associated with certain transitivity classes of verbs. Nor can they be adequately characterized as having “semantic alignment” (Wichmann 2008), because the distribution of case marking on their clausal arguments can vary without regard to the valency of the clause. They therefore do not necessarily demonstrate any “alignment.”

Non-syntactic influences that determine the presence of core case-marking in these Tibeto-Burman languages are reported to be many and varied, including but not limited to the disambiguation of an agent or a patient, the encoding of unexpected or marked social behaviour, the marking of a contrastive topic, the encoding of deliberate activity, the expression of personal choice to perform an activity, and the clarification of a referent’s semantic role when ellipsis renders this open to misinterpretation. These pragmatic motivations collectively suggest that the fundamental function of case marking in these languages is to code clausal arguments in terms of semantic roles, not grammatical relations.

In Mongsen Ao, an agglutinative language of Nagaland state in north-east India with dependent marking characteristics (Nichols 1986) and a constituent order that is determined by the most topical argument, the single formal correlate of transitivity in basic verbal clauses is the presence of agentive marking on an actor argument. This only applies if that argument happens to be overtly expressed via a noun phrase, as the ellipsis of NP arguments is common, particularly once their referents are established as topical/given information. The presence of an agentive-marked actor often corresponds with semantic notions of volitionality/instigation and agency as meters of transitivity, but does not necessarily accord with the number of core participants involved in an event, as agentive marking

occurs on an actor in both bivalent and monovalent clauses under pragmatically licensed situations, in common with the majority of the above-mentioned languages. These various factors converge to render case marking an unreliable indicator of a clause's formal transitivity status in a language of this type. It therefore remains to be determined how the concept of transitivity is best recognized in such a language, and by what criteria. It is additionally relevant to consider the extent to which transitivity has developed as an organizing feature of Mongsen Ao, if it can be assumed that transitivity is encoded by the grammaticalization of obligatory formal marking in a given domain, as demonstrated for other categories of grammar (e.g. Lehmann 1985).

Following a sketch of the sociolinguistic landscape of central Nagaland in §2, some possible criteria for distinguishing valency classes of Mongsen Ao verbs are discussed in §3. §4 demonstrates that the language lacks a syntactic pivot, and that the absence of a grammatical voice opposition presents no hindrance for the language's ability to highlight the patient role of an undergoer in a monovalent clause expressing a resultant state. Next in §5 I consider how and why core case marking may have developed in Ao and related languages by comparing case-marking morphology across the known members of the Ao group, and by considering the origins of case marking from a diachronic and cross-linguistic perspective. The pragmatic motivations for agentive case marking and the possibility of grammaticalized morphological causatives providing a pathway for the development of a syntactically defined case-marking pattern are explored in §6. Lastly, the findings of the paper are summed up and their significance for syntactic theory and the grammaticalization of alignment systems is addressed in §7.

2. Sociolinguistic setting

Ao is a Tibeto-Burman language spoken in the Mokokchung district of Nagaland. The total population of those who identify themselves ethnically as Ao constitutes approximately 232,000 (Census of India 2001), and it is estimated that the vast majority of this community speak a variety of Ao as their mother tongue. The language continues to be acquired and spoken by younger generations in villages, but some domains of language use are under threat; a prominent example of a disappearing domain is the poetic vocabulary of traditional ballads and songs, which is generally only known to speakers above the age of fifty years.

The Ao recognize two principal dialects: a prestige dialect known as Chungli, which is the language of religion and education and has a Bible translation, and an unwritten variety known as Mongsen. The number of Ao who speak the Mongsen dialect as their first language constitutes approximately 40% of the community, or

roughly 93,000 people. Chungli villages predominate on the eastern Lampangkong range running alongside the Dikhu River, and Mongsen villages predominate on a southern range known as the Ongpangkong and a major western range known as the Chankikong at the edge of the Plain of Assam. A sub-dialect of Mongsen known as Changki is also predominantly spoken in a few villages on the Changkikong range. The pressure of other populations moving westward in earlier times possibly explains this distribution. Mongsen appears to be more conservative than Chungli and shows less lexical and morphological evidence of contact with other distantly-related Tibeto-Burman languages. Given the present-day location of Mongsen-speaking villages in the southern and the western parts of Mokokchung District, it is likely that Mongsen speakers were in the vanguard of the westward migration across the ranges of Nagaland, and that contact with following tribes was cushioned by a buffer of Chungli villages established in their rear at the eastern edge of the Ao territory.

Both Chungli and Mongsen are spoken in separate administrative wards within a number of bi-dialectal villages scattered throughout the Ao territory, and some Ao villages located at the eastern edge of Mokokchung district contain sizeable populations of Chang and/or Phom speakers, such as Jakpa village (containing Chungli- and Chang-speaking wards) and Yaongyimti (containing Chungli-, Chang- and Phom-speaking wards). Given this interesting sociolinguistic situation, it would not be at all surprising if some Ao varieties were found to demonstrate the effects of long-term contact with languages of the Konyak group.² Evidence of morphological borrowing from Chang to Chungli has previously been documented in Coupe (2007a), about which more will be said in §5.

On the basis of lexical correspondences and limited morphological evidence, the Ao dialects have been identified as forming a lower level sub-grouping with other languages of central Nagaland, viz. Lotha, Yimchungrü and Sangtam; these languages have recently been dubbed the Ao group in Burling 2003, probably for no better reason than the fact that Ao is currently the best-documented member of this group. It is significant that a substantial number of languages of the Ao group and those belonging to Burling's (2003) Angami-Pochury group collectively show historical evidence of overcounting patterns in their cardinal numeral systems. Overcounting fell into obsolescence in the early 20th century, its demise hastened by Christian missionaries' attempts to replace numeral systems perceived to be unwieldy with a decimal system that would allow children to be taught arithmetic more successfully (Coupe 2004; 2007b: 117–120). Historical records demonstrate that overcounting systems did not exist in contiguous Konyak languages, Bodo-Garo languages, Kuki languages or Tangkhul in the late 19th and early 20th centuries; this suggests that the overcounting numeral systems of the Ao and Angami-Pochury groups of central and southern Nagaland must have been innovative, and thus are diagnostic of a close genetic relationship (Coupe, to appear).

3. Valency classes of verbs

A classification of verb classes in Mongsen Ao is necessarily dependent upon the number of core arguments that that can possibly occur in a basic verbal clause, given that core case marking is not paradigmatic, and that any argument can be elided if it is contextually recoverable. For example, while potentially three-place predicates like *hən* ‘take’ or *khìz* ‘give’ can possibly occur with two core arguments and one oblique argument, there is no syntactic requirement for this in naturally occurring speech. This is demonstrated by the following excerpt from a folkloric text. Rat and Chick had previously been catching prawns in a river, therefore their established ‘old information’ status licenses the subsequent zero anaphora of NPs of all three referents. Note that even the predicate is deleted in (1c), and that the actor NP of that clause is not marked for case, as its semantic role is apparent from the context. The actor is however marked with the agentive case in (1a), as it serves to clarify that the referent of this NP is the donor of *khìz* ‘give’. Morphophonological alternations are frequent in Ao, therefore four tiers of interlinearization are used for examples.³

- (1) a. *təɿ anzala tʃu nə khìz.*
 tə-əɿ a-hən-za-la tʃu nə khìz-Ø
 thus-SEQ NRL-chicken-DIM-F DIST AGT give-PST
 ‘And so Chick gave [Rat a prawn].’
- b. *təɿ anùz akhətà kàz məsàz.*
 tə-əɿ anùz akhətà kàz məsàz-Ø
 thus-SEQ again one also request.PST
 ‘And again [Rat] requested one more [prawn].’
- c. *ajà nì aja kha apaʔ taŋ nə tʃəpáʔ*
 ajà nì a-ja kha a-paʔ taŋ nə tʃəpáʔ
 EXCLM 1SG VOC-mother CONJ VOC-father SIDE ALL what
 ‘‘Ayaa!’’ (said Chick.) ‘‘What [will] I [take] to Mother and Father?’’
- d. *məhəniaj məkhəjùz.*
 mə-hən-i aj mə-khìz-i-ùz
 NEG-take-IRR CAUS.PTCL NEG-give-IRR-DEC
 ‘‘Since [I] will not [have any to] take [home, I] won’t give [you another one].’’
- e. *ajtə jimli philəməkə khaŋ!*
 aj tə jimli.philəməkə khìz-aŋ
 EXCLM PTCL please give-IMP
 ‘‘C’mon, please give [me a prawn],’’ (said Rat).’

- f. *tə məsaj atʃuku akhətà khiʔ*
 tə məsà aj a-tʃu ku akhətà khiʔ-Ø
 thus request CAUS.PTCL NRL-DIST LOC one give-PST
 ‘Thus, since [Rat] requested [a prawn, Chick] gave [Rat] one there.’

The verbs of Mongsen Ao can be divided into bivalent and monovalent classes on the following basis. Whereas a large number of bivalent verbs may be used with just one core argument, no monovalent verb may occur with two core arguments unless it is marked for a change in valency by the causative suffix (the relationship of valency-increasing morphology to the grammaticalization of transitivity is addressed in §6). There is no justification for recognizing an additional trivalent or “ditransitive” class of verb in Mongsen, as verbs of transference potentially occurring with three arguments, such as *khiʔ* ‘give’, *zək* ‘send’ and *hli* ‘buy’, do not receive a special morphosyntactic treatment that would distinguish them from ordinary bivalent verbs with an oblique argument. Nor is a third argument obligatory. Significantly, even a prototypical exemplar like ‘give’ does not require an oblique argument to be marked by dative case, as the goal of the theme argument is also found with allative marking in narrative texts (see Coupe [2007b:283–285] for further discussion and examples).

The sub-class of monovalent verbs includes statives, such as *tʃha.u* ‘be sick’, *pəla* ‘be happy’, *tʃəsi* ‘be angry’ and *kháʔ* ‘be bitter’; verbs denoting corporeal processes, such as *hwàmesa* ‘yawn’ and *sənsi* ‘breathe’; activity verbs of posture, such as *hùŋli* ‘stand’ and *mən* ‘sit’, and verbs of (loco)motion including *wa* ‘go.PST’, *lə.u* ‘descend+come.PST’ and *səm̄tsə* ‘run.PST’. It is further possible to distinguish between stative monovalent verb roots and other sub-classes of verbs on the basis of the meanings they encode when they are reduplicated in simultaneous converb constructions. A reduplicated stative monovalent root derives an intensive meaning in this type of construction, e.g. *àpak-apak-əkə* (be.flat-RED-SIM) ‘completely flattened’ and *mələm-mələm-əkə* (be.thick-RED-SIM) ‘very thickly’, whereas reduplicated monovalent and bivalent activity verbs express the protracted duration of an activity, e.g. *tʃhùwa-tʃhuwa-kə* (emerge-RED-SIM) ‘coming, coming out’ and *ləp-si-ləp-si-ləp-si-kə* (cut-RPET-RED-RPET-RED-RPET-SIM) ‘chopping and chopping repeatedly’.

As noted above, bivalent verbs are recognizable by the criterion that they may occur in clauses with two core arguments, although they typically don’t; one of those arguments may furthermore be distinguished by agentive case marking, but this is not an obligatory syntactic requirement of all bivalent predicates and both arguments may appear without any overt case marking (e.g., see [7b], [9], [13] and [15a] for additional examples of this). The only basic (i.e. underived) verbal clause type in which agentive marking is obligatory is one in which an habitual activity

is accorded to an actor referent. To illustrate, the statement of (2a) was naturally uttered in response to the question *What are you doing?* when my interlocutor was chopping wood. The translation of (2b) was given to me when I asked how the meaning of (2a) would change if the actor argument were instead case-marked by the agentive marker *nə*.

- (2) a. *nì asəŋ sə.ɬə.*
 nì a-səŋ sə-əɬ
 1SG NRL-WOOD chop-PRES
 ‘I’m chopping wood.’
- b. *nì nə asəŋ sə.ɬə.*
 nì nə a-səŋ sə-əɬ
 1SG AGT NRL-WOOD chop-PRES
 ‘I chop wood.’ (i.e. habitually, as an occupation)

Meithei demonstrates an identical use of an agentive marker on the actor NPs of generic statements characterizing a class of referents. Chelliah (2009: 391–392) interprets agentive marking in this context as reflecting the force of tradition or instinct, likening it to assertions in English such as *The/a squid likes seaweed*, in which the actor argument is particularized. If referentiality also motivates agentive marking in this type of Mongsen Ao clause, then initially the marking is pragmatically rather than syntactically motivated. Be that as it may, it is nevertheless possible to envisage that obligatory agentive marking has become systematized synchronically to the extent that is now a syntactic requirement in clauses involving generic statements of habituality. However, this obligatory case-marking pattern remains exclusively limited to this particular construction type.

The bivalent class includes verbs belonging to the semantic domain of cognition, such as *mətət* ‘know (a person, place or thing)’, *tsəpha* ‘fear’, *philəmtʃhət* ‘remember’ and *maŋ* ‘believe’; verbs of manipulation, e.g. *hlù* ‘pick’, *thən* ‘stab’ and *tshəŋ* ‘attach’; verbs of perception, such as *hùŋ* ‘see’, *jà?* ‘hear’, *məhnəm* ‘smell’; and utterance predicates, such as *sana* ‘speak’, *asà* ‘shout’, *tən* ‘sing’ and *anak* ‘praise’. Some bivalent dynamic verbs of effect in which the semantic patient undergoes a change of state include *ɬàksa?* ‘break’, *ləp*, ‘cut’, *məzəp* ‘gnaw’ and *tʃà?* ‘eat’ — the vast majority of the members of this semantic class can also be used monovalently to express the resultant state of their undergoer arguments (see § 4 below for further discussion). Of these, *tʃà?* ‘eat’ is distinguished by virtue of the fact that it can alternatively occur with a single argument in an agent semantic role. The relative rarity of the agent-oriented type can be attributed to the language having less functional need to express the non-referentiality of the undergoer. In contrast, the ability of the language to topicalize an undergoer that has undergone a change of state while backgrounding or omitting the catalyst of this event serves a very

useful communicative function, just as the passive voice does in a language with accusative syntax. The high frequency with which bivalent verbs of Ao are used monovalently to express the resultant state of an undergoer argument thus has a pragmatic basis.

Having established that the distribution of the agentive marker is not lexically determined by valency classes of verbs, in the following section I will now demonstrate with textual examples that the assignment of agentive case marking is also independent of any possible syntactic pivots.

4. Absence of syntactic pivots and passives

A widely attested characteristic of languages that have grammaticalized syntactic relations of subject and object is a transitivity-based opposition in voice. The passive derivation serves two important functions in these languages. One function is to promote the transitive O argument to a foregrounded position; this is typically the beginning of the clause, which is the position normally occupied by the argument that has the greatest topicality in a transitive clause. The erstwhile O of the transitive clause is derived as the single S argument of an intransitive clause, a reduction in valency is signalled by morphological marking on the verb to encode the detransitivizing process, and this is accompanied by suppression of the erstwhile A argument or its backgrounding as an oblique if it is retained in the clause.

The passive derivation provides a second syntactic pivot-feeding function in accusative languages (Dixon 1979, 1994). Once the passive derivation is applied, the derived intransitive S argument can then be coordinated with an elided argument in intransitive S or transitive A function in a coordinated clause; e.g. *Cuthbert_i kissed Cadence_j and Ø_i blushed* > *Cadence_j was kissed by Cuthbert_i and Ø_j blushed*. The NP *Cadence* then becomes the coreferential controller of the elided argument in the coordinated clause. Both the active and passive voice of English permit equi-noun phrase deletion in conjoined clauses, provided that the involved arguments conform to the syntactic requirement for an S/A pivot. At least for English, the S/A pivot efficiently constrains the interpretation of the possible coreferential controllers of omitted NPs in sequences of coordinated sentences like *Cadence_j was kissed by Cuthbert_i and Ø_j blushed, then Ø_j ran away and Ø_j hid in the garden shed*. This suggests that a possible consequence of the grammaticalization of transitivity and an attendant syntactic alignment pattern is the development of a referent tracking function, but the extent to which one may be the corollary of the other is yet to be confirmed cross-linguistically.

A clause chaining language such as Ao that lacks a grammatical subject and a syntactic pivot must instead rely entirely upon pragmatics to constrain the cross-

clausal coreference of omitted NP arguments in sequentially chained clauses. From this it may be inferred that transitivity plays no part in referent tracking in this language, the reason being that it is synchronically of limited significance to this type of construction. In the folkloric text example of (3) below, Tiger is preparing for an impending fight with Wild Pig and instructs a group of monkeys to gather cane, so that he can wrap it around his body as a defence against Wild Pig's tusks. It is notable that although *saŋà tálúk* 'monkey group' functions anaphorically as the elided controlling argument of the dependent sequential clause predicates in (3b), contextual pragmatics are required to correctly interpret that this NP is not coreferential with the single core argument *akhula-la tʃu* 'tiger-F DIST' in the following matrix clause of this sentence. Sentential constituents are identified with square brackets, anaphoric NPs are represented by the symbol \emptyset , and these are conventionally subscripted with the letters *i, j* to assist in tracking coreferentiality or its absence across clauses.

- (3) *akhula nə wa.ɩə, saŋà tálúk taŋku* "ah.ɩə tənθəŋjaŋ." tə.ɩ ah.ɩə tənə.ɩ ɩ.ɩə, *akhula tʃu ah.ɩə nə khəŋphəŋ.*
- a. [[a-khu-la nə_i wa-ə.ɩ] saŋà tálúk taŋ ku_j a-h.ɩə
NRL-tiger-F AGT go-SEQ monkey group SIDE LOC NRL-cane
tən-thən-iɩ-əŋ]
pluck-TOGETHER-CAUS-IMP
'Tiger_i went [and said] to a group of monkeys_j, "Pluck and gather cane for me."⁴
- b. [[tə-ə.ɩ \emptyset _j a-h.ɩə tən-ə.ɩ ɩə-ə.ɩ,
thus-SEQ NRL-cane pluck-SEQ come-SEQ
a-khu-la tʃu_i a-h.ɩə nə khəŋ-phəŋ- \emptyset]
NRL-tiger-F DIST NRL-cane INST wrap-COVER-PST
'Thus, [the monkeys_j] having plucked and brought cane, Tiger_i wrapped (herself) thoroughly with it.'

In (4), the sentence-initial dependent clause contains a simultaneous converb construction with an elided NP argument whose referent is Tiger. Again, it is noteworthy that this elided NP is not coreferential with the core argument of the matrix clause. That is to say, this complex sentence cannot possibly be construed contextually to mean that the NP referring to Rabbit is coreferential with the elided core argument of the initial dependent clause, as would be otherwise expected if cross-clausal control of anaphoric arguments is constrained by an S/A syntactic pivot.

- (4) *tə tʃəsija likə, inisala sə nə pa mataŋ sə nə tsəphakə wa.ɩ.*
[[tə \emptyset _i tʃəsi-ja li-əkə]
thus be.distressed-CONT be-SIM

inisaʔ-la sə nə_j pa ma-taŋ sə nə_i tsəpha-əkə wa-əɿ]
 rabbit-F ANAPH AGT 3SG FACE-SIDE ANAPH ALL fear-SIM go-PRES
 ‘So, while [Tiger_i] is upset, [aforementioned] Rabbit_j, fearfully goes over to
 his side.’

Lastly, example (5) illustrates that it is indeed possible for an actor argument of a dependent clause to undergo ellipsis under identity with an actor in a higher clause, but this too is dependent upon pragmatics in the contextual instance of reporting, and not any syntactic obligation for certain grammatical functions to control coreferentiality. I therefore conclude that Mongsen Ao lacks any demonstrable evidence of a syntactic pivot.

- (5) wàzàʔ təmáŋ sə jaja_i, pa thaku jàk.
 [[wàzàʔ təmáŋ sə_i jaja-əɿ] Ø_i pa thak ku jàk-Ø]
 bird all ANAPH be.angry-SEQ 3SG PLACE LOC beat-PST
 ‘And then, all the birds_i got angry and Ø_i beat on her.’

Returning to the discussion of passives, many Tibeto-Burman languages typically achieve the functional equivalent of the passive derivation merely by shifting the undergoer argument of a bivalent clause into the pragmatically salient clause-initial position. The **functional** equivalence of this rearrangement should be stressed, because in languages like Ao there is no concomitant reduction in valency or morphological marking to signal detransitivization, unlike in the syntactic passive derivation of accusative languages. When both referents are animate and either can potentially fill the actor semantic role, this marked constituent order triggers a widely reported case-marking manifestation. The purpose of this marking is to disambiguate an agent from a non-agent, as the clause-initial argument tends to be interpreted as the actor by default, due to its topical position. In a survey of 106 Tibeto-Burman languages and dialects, LaPolla (1995) finds that such disambiguating marking represents an early stage of the grammaticalization of relational morphology, and that the motivation for the marking is pragmatic.

The constituent order in the sequential converb clause of (6) represents this marked pattern (in the Praguian sense), which parallels the marked status of the passive voice in languages having a grammaticalized voice opposition. Not surprisingly, clauses with an undergoer-actor constituent order are appropriately rendered with passive translations by native speakers who know English.

- (6) anùʔ mətshəla tʃu lítʃá-pàʔ sə nə tʃa_iə, ...
 anùʔ mətshə-la tʃu lítʃá-pàʔ sə nə tʃa-əɿ
 again deer.species-F DIST pers.name-M ANAPH AGT call-SEQ
 ‘Again, after Barking Deer was called by aforementioned Lichaba, ...’

While many Tibeto-Burman languages grammaticalize the means of marking an agent, some instead mark the patient. LaPolla (1992) characterizes this as ‘anti-ergative’ marking (now also known as ‘anti-agentive’ marking). The motivation in each case is the same, but there are different targets of grammaticalization, and different semantic roles to which the grammaticalized marking applies. This observation holds for languages of other families that obligatorily distinguish an O argument via the innovated use of dative marking when both referents of a bivalent clause are animate and/or definite, e.g. Spanish, Hindi, Ge’ez and Neo-Aramaic (Hopper & Thompson 1980:260), and especially when both are human and thus either is able to fill the agent role. If the development of disambiguating case marking represents the earliest stages of a reanalysis of function in Tibeto-Burman languages (LaPolla 2004:48), then the reanalysed use of dative case marking for very similar uses in these unrelated languages seems to be too much of a similarity for it to arise by chance. It is important to keep in mind that this type of case marking is also construction-specific. Disambiguating case marking only occurs when there is a necessity for it to be used, so it has more to do with pragmatics and less to do with formal notions of syntactic transitivity related to individuation of the O, *pace* Hopper & Thompson (1980:252–253; 256) and Næss (2007:155–156).

A second option for many languages without a syntactic passive derivation is simply to omit the agent of a bivalent clause in order to express a resultant state. Verbs that permit this operation constitute a very large sub-class in Mongsen Ao; virtually every verb that encodes a change of state can be used with just one core argument to express an undergoer semantic role. Arguments of this predicate type do not require a prior mention in order to be elided, unlike the clausal arguments of other semantic classes of verbs, such as those occurring in the examples of (1). The single core argument of a verb encoding a change of state corresponds semantically to the undergoer argument of its bivalent analogue, but has greater pragmatic salience due to its topicality.

The following examples demonstrate how a bivalent verb can also be used with a single core argument to express a resultant state. These sentences occur a few clauses apart in a folkloric text, and in the same order as in the presentation below. Sentence (7a) is in fact the very first mention of Junglefowl’s eggs in the narrative. In (7b), the verb *kəp-saŋ-zək-tʃuk* occurs with both actor and undergoer NPs. In the sentence of (7a), the same verb occurs with just one core argument to express the resultant state of its patient. The single argument of (7a) corresponds to the undergoer argument of (7b), and the resulting prominence accorded to this NP is not accompanied by detransitivizing morphology on the verb stem, as would be expected in a language with a grammaticalized voice distinction based on transitivity. Once again, while a sentence like (7a) is not passive in structure according to the formal criteria established above, it nevertheless expresses the functional equivalent of

a passive derivation. In all respects, such verbs correspond to the variable use of English change-of-state verbs like *crack* or *break*, which similarly permit the monovalent use to express a resultant state without an antecedent mention of the agent, e.g. *The/A vase cracked*. This usage is therefore very different to the ellipsis of NPs of pragmatically recoverable referents that **do** require an antecedent mention in order for the utterance to be understood, such as those of example (1).

- (7) a. *ùphàla hantsə tfu kəpsàzəkʰfuk.*
 ùphàla hantsə tfu kəp-saʔ-zək-tʃuk-Ø
 red.junglefowl egg DIST strike-SEPARATE-SEND-PFV-PST
 ‘Red Junglefowl’s eggs were cracked and scattered.’
- b. *nəŋ tʃútə ùphàla hantsə kəpsàzəkʰfuk.*
 nəŋ tʃútə ùphàla hantsə kəp-saʔ-zək-tʃuk-Ø
 2SG why red.junglefowl egg strike-SEPARATE-SEND-PFV-PST
 ‘‘Why did you crack and scatter Red Junglefowl’s eggs?’’ (asked Lichaba).’

To summarize the findings of this section, it has been demonstrated that Ao has not developed a grammatical voice distinction based on detransitivizing morphology, possibly because it already possesses more than adequate means to express the functional equivalent of a passive voice through non-derivational means. It also does not demonstrate the grammaticalization of a syntactic pivot in sequentially chained clauses.

While it is arguably true that a language in which syntactic transitivity has grammaticalized does not necessarily develop grammatical voice distinctions, grammatical relations or syntactic pivots, the absence of these grammatical features in Mongsen Ao can be viewed as additional evidence that syntactic transitivity has not developed as a globally relevant grammatical feature of the language.

5. Diachronic origins of relational morphology in the Ao group

The agentive, instrumental, allative, ablative and locative case markers of languages belonging to the Ao group are listed in Table 1 below. All relational morphemes in this sub-grouping are formally identifiable as clitics that share a phrasal distribution, occurring juxtaposed to the final constituent of the noun phrase. Given that LaPolla’s (1995) survey of ergative/agentive marking in Tibeto-Burman revealed a plethora of forms with very little evidence of cognacy outside of the individual branches, these must represent a relatively recent diachronic development, with agentive marking likely to be the last to emerge as a functional category of the relational morphology.

Table 1. Forms of agentive, instrumental, allative, ablative and locative case markers in the languages of the Ao sub-group⁵

	Agentive	Instrumental	Allative	Ablative	Locative
Mongsen Ao (Coupe 2007b)	nə	nə	nə	phi-nə	ku
Chungli Ao (Gowda 1975)	i	i	i	nun-i	nun
Yimchungrü (field notes)	nə	nə	lim	tʃhiŋ-nə	tʃhiŋ
Lotha (field notes)	nà	nà	i	i-nà, loʔ-nà	i, loʔ, ni
Sangtam (Marrison 1967)	nü	nü, tanü, khu	te, ti	cha-nü, la-nü	cha

A remarkable aspect of case marking in these languages is the extent of isomorphism observed across functionally-distinct relational categories. The Mongsen and Chungli dialects of Ao, for example, are distinguished by the fact that their agentive, instrumental and allative clitics have an isomorphic form in *nə* and *i* respectively, representing an extremely rare syncretism not only in Tibeto-Burman in light of the findings of LaPolla 1995, 2004, and Noonan 2009, but also in other language families of the world, as agentive/instrumental/allative isomorphism is unreported in discussions of case syncretism by Dixon & Blake 1979, Dixon 1994 and Blake 2001. Noonan (2009: 272) specifically notes that ergative/allative and instrumental/allative pairings are isomorphic patterns that are **not** attested in his survey of Bodic relational morphology. Identical forms also appear as formatives occurring in the dimorphic ablative markers of the two Ao dialects; these almost certainly developed out of older case compounds involving a locative marker (see Noonan 2008 for similar examples from the Bodic branch of Tibeto-Burman and other languages of the world). Agentive/instrumental syncretism is a shared feature of the Ao sub-group as a whole, and is also cross-linguistically a common finding in the above-mentioned surveys.

Example (8) demonstrates the isomorphic form *nə* encoding three functionally distinct case relations — agentive, instrumental and allative respectively — in each of the case-marked noun phrases of a Mongsen Ao proverb. It is doubtful that speakers construe *nə* as representing a single category, as they encode very distinct semantic roles and can therefore occur together in the same clause.

- (8) *aji nə tuɿ nə áthúʔfən nə anəpən wa mətəm.*
 a-ji nə tuɿ nə áthúʔ-tʃən nə a-nət-pən wa mətəm
 NRL-dog AGT GPN INST vomit-LNOM ALL NRL-TWO-ORD go like
 ‘Like a dog going back to its vomit by itself for a second time.’
 (= to eat one’s words; to reject something and then want it later) (Coupe 2007b: 105)

If one accepts the proposal by Benedict (1972:95–96) and the extensive comparative historical evidence supporting the arguments of LaPolla 1992, 1995 and 2004 that relational morphology cannot be reconstructed to the level of Proto-Tibeto-Burman, then a number of intervening steps must have been involved in the diachronic development of nominal case marking systems in these modern Tibeto-Burman languages. It is highly likely that the case marking morphology of the Ao group mostly originates from the reanalysis of heads of genitival or appositional constructions, based on our understanding of the cross-linguistically attested development of case-marking morphology from relational and spatial nouns in head-final languages (Aristar 1991, DeLancey 1997, Dryer [2006:214–215], Coupe [2007b:185–187]), Noonan [2009:263–264].⁶

Although it is not yet possible to determine the diachronic source of the Mongsen agentive/instrumental/allative marker *na*, a phonologically identical form can nevertheless be reconstructed to a putative Proto-Ao stage, i.e. **na*, as four of the five languages of the Ao sub-group (viz. Mongsen, Yimchungrü, Lotha and Sangtam) share a cognate morpheme formed with a dental nasal and a central vowel. The allative category presents a mixed bag of forms, but the ablative category is consistent in demonstrating an underlying dimorphic form represented by the locative marker plus the agentive/instrumental marker across all five languages. This proves to be a common characteristic of ablative markers in various branches of Tibeto-Burman, as dimorphic forms are also found in Meithei, Anal, Garo, Kabui and Geman Mishmi (DeLancey1984: 60), in Qiang (LaPolla with Huang 2003: 106ff.), and in Written Tibetan (LaPolla 1995: 192).

The Chungli dialect of Ao is the only member of this sub-group to lack a cognate agentive/instrumental marker; Coupe (2007a: 356–357) presents evidence that Chungli has borrowed an agentive marker from Chang as a result of intensive language contact. Despite its phonological divergence, it is nevertheless relevant to point out that the Chungli pattern is identical to other languages of the Ao subgroup, in that the forms of the agentive, instrumental and allative markers are isomorphic, and the ablative marker also matches up in terms of the sources of its morphology, as it is a compound formed with the agentive/instrumental and the locative markers.

The data of Table 1 suggest that the proto-language of the Ao group initially had a single generic oblique marker **na* that was semantically underspecified; this marker must have originally served only to distinguish obliques from core arguments. This is supported by the findings of LaPolla, who concludes that Proto-Tibeto-Burman was morphologically simple and at most only marked locative arguments (1995:218). Presumably at this early stage of Proto-Ao, the precise semantic role of an oblique argument was determined not by phonologically unique forms of case markers, but by the semantic entailments of the predicate and the

semantic nature of its referent; for example, the oblique inanimate argument of a clause with ‘go’ as the head might be inferred to have a semantic role of goal, whereas an oblique inanimate argument of ‘come’ might be inferred to function as a source. Similarly, an instrumental interpretation for an identically case-marked oblique inanimate argument would be inferred from the semantic character of its referent. These kinds of pragmatic cues continue to play an important role in determining the various semantic roles of arguments identically case-marked by *nə*, as demonstrated in the proverb of (8) above.

If the earliest function of the Proto-Ao case-marking clitic **na* was indeed to distinguish a noun phrase as having the status of a semantically underspecified oblique argument, it remains to be determined how one should account for the present-day use of a syncretic form *nV* to encode a core argument in an agentive function, in addition to encoding a range of oblique marking functions. The most feasible explanation is that the modern languages have innovated a new function for this oblique marker. It is frequently observed cross-linguistically that the commonly attested direction of metaphorical extension is for a form with concrete meaning to grammaticalize an abstract meaning (e.g. DeLancey [1984: 63]; Heine, Claudi & Hünnemeyer [1991: 123ff.]). Such an extension of function provides a logical explanation for what must be the innovative use of an erstwhile oblique case marker in a new, purely abstract role of marking an actor argument under pragmatically-licensed conditions. Blake (2001: 170) notes that it is generally accepted that semantic (and in particular local) case markers can develop new functions as abstract core grammatical markers, and he attributes this reanalysis of function to a metaphorical extension of the original concrete meaning associated with a morpheme or combinations of morphemes.

Because the motivation for agentive case marking in Ao is not exclusively syntactic at the present stage of development, the marking of a core argument (or the absence of any case marking) is not automatically determined by considerations relating to the formal transitivity status of the clause. Overt case marking of oblique arguments is always obligatory, but the marking of a core argument in basic verbal clauses is not predictable from clausal syntactic structure. That is to say, the presence of two core arguments in a verbal clause does not entail that one of these will **always** be distinguished by case marking with *nə*, unless a generic statement of habitual activity is being expressed (as described above in §3). The corollary of this is that case marking is an unpredictable indicator of a “prototypical transitive clause” in Ao. I review the essential conditions under which agentive marking is used on a core argument of a verbal clause in the following section.

6. Factors that determine agentive marking in Ao

The variable use of agentive marking in verbal clauses represents the fine-grained ways in which Ao speakers construe the roles of participants in events. Core case marking in Ao cannot therefore be attributed to an obligatory syntactic requirement to distinguish a particular grammatical relation in a paradigmatic case-marking system, as can be found in languages with consistent, predictable ergative-absolutive or nominative-accusative patterns of morphosyntactic marking, and upon which the transitivity model so heavily depends.

The view adopted in this paper is that conventionalized alignment systems only develop as a result of the paradigmaticization and obligatorification of core marking patterns (Lehmann 1985, Hopper 1991), but prior to this there must be an intermediate stage in which a core case marker need only be used in pragmatically determined situations. A consequence of this in Ao is that agentive marking occurs on actor arguments of both monovalent and bivalent clauses, or may not be used at all; this even applies to transitive clauses with a predicate that Andrews (2007: 138) would unhesitatingly identify as a “primary transitive verb”, such as *ənsət* ‘kill’ in the textual example of (9) below, representing the variety of Mongsen spoken in Waromung village. Morphosyntactic case marking, generally considered to be one of the best indicators of transitivity in languages with paradigmatic case-marking systems, therefore proves to be an unreliable criterion for recognizing the degree of transitivity in Ao.

- (9) *tə, pa ɸpɸ ənsət.*
 tə-əɪ pa ɸpɸ ənsət-Ø
 thus-SEQ 3SG PROX kill-PST
 ‘And then, she killed this.’ (in context, the pig) (Coupe 2007b: 158)

This and the following (non-causatized) examples of this section support the premise that the motivation for agentive marking in Ao is not syntactic, and that its primary function is to encode a semantic category unrelated to a grammatical relation of subject. If semantic roles can be assigned to core arguments with no risk of confusion due to the semantic nature of their referents, then disambiguating agentive marking on an argument is not necessary, as shown by (9). Conversely, agentive marking can be used for disambiguation if the (typically animate) referents of both arguments could conceivably control the activity denoted by the predicate.

- (10) *tə, pùŋila nə akhula sə həptujuk.*
 tə-əɪ pùŋi-la nə a-khu-la sə həp-tuʔ-juk-Ø
 thus-SEQ wild.pig-F AGT NRL-tiger-F ANAPH cut-PART-PFV-PST
 ‘And then, Wild Pig partly wounded aforementioned Tiger.’

Nor is it only in clauses with two core participants that one finds pragmatic agentive marking. The elicited Mongsen Ao sentences of (11a–c) below demonstrate the non-syntactically motivated marking of a core argument of a monovalent clause. The absence of the agentive marker in (11a) implies a spontaneous, uncontrolled event. The semantic entailments of a simultaneous converb expressing ‘deliberately’ in (11b) obligatorily demand the concomitant presence of the agentive marker to encode the intention of a wilfully-acting participant, while the use of the agentive marker in the absence of this modifying converb in (11c) also carries an implication that the act of coughing was instigated and performed purposefully by a volitional agent.

- (11) a. *nì akhət.*
 nì akhət
 1SG cough.PST
 ‘I coughed.’
- b. *nì nə asakə akhət.*
 nì nə asáʔ-əkə akhət
 1SG AGT be.deliberate-SIM cough.PST
 ‘I deliberately coughed.’
- c. *nì nə akhət.*
 nì nə akhət
 1SG AGT cough.PST
 ‘I coughed.’ (on purpose, to get your attention) (Coupe 2007b: 160–161)

Even monovalent arguments of what are assumed by default to be uncontrolled events, such as dying, can be assigned agentive marking in pragmatically-licensed contexts. In the example of (12) below the narrator reports on the cognitive state of Rabbit, who is about to be eaten by Tiger. Rabbit wants to preserve her life, her desire being morphologically encoded by the desiderative mood suffix on the finite verb stem. Rabbit’s personal motivation for self-preservation is also construed as involving increased agency, which is encoded by the agentive marker on the NP referring to Rabbit (note that the pronoun and topic particle following the agentive-marked NP pragmatically serve to distinguish Rabbit from the other animals that were previously eaten by Tiger in the narrative, and are therefore unrelated to the use of agentive marking in this example).

- (12) *tətʃhaɪ inisaʔ — inlif wət ɹapit tə tʃapaʔ la sə.à.ə — tə inisala tʃu nə, pa la məsəmì.ɪ.*
 tə-tʃhà-əɪ inisaʔ inlif wət ɹapit tə tʃa-pàʔ la
 thus-do-SEQ rabbit English word rabbit thus call-NR TOP
 sə.à.ə tə inisaʔ-la tʃu nə pa la mə-sə-mì-əɪ
 animal thus rabbit-F DIST AGT 3SG TOP NEG-die-DESID-PRES
 ‘And then, *inisaʔ* — the animal which is called “rabbit” in English — that animal, Rabbit, she doesn’t want to die.’ (Coupe 2007b: 161)

There is no syntactic requirement for the actor arguments of desiderative clauses to take agentive marking, as demonstrated by the direct speech textual example of (13); it must therefore be the case that a pragmatic motivation is responsible for the use of agentive marking on the NP referring to ‘Rabbit’ in the matrix clause of (12).

- (13) “*nì nìj tʃàla i à tshəmi.ùr.*”
 nì nìj tʃà-la i à tshə-mì-àɿ-ùr.
 1SG 2PL.POSS offspring-F PROX one take-DESID-PRES-DEC
 “I want to take one of these daughters of yours.”

Similarly, the personal choice to perform or not perform an action can be encoded by agentive marking on the monovalent argument of the verb *tʃəp* ‘cry’ under certain conditions. In elicitation devoid of a qualifying context, native speakers consistently assign no case marking to the single argument of this verb, as it is typically not a controlled event. Yet in the following text-internal conversation, each argument of *tʃəp* is distinguished by agentive marking. The relevance of the case marking here is explained by the context in which it is used: in order to receive some information concerning her son, the addressee of the interrogative clauses must give her word that she can control her emotions and will not cry upon hearing the news (which will report his death). The expectation of the interrogator that the addressee can control her emotional state is also encoded by his use of the agentive marker on pronominal arguments in his questions. The use of agentive marking must be encoding increased agency here, not transitivity *per se*. The examples were narrated in the Waromung village variety of Mongsen, which has a number of morphological divergences from other varieties of this dialect (one of these being the phonological form of the agentive/allative/instrumental marker *na*), but it otherwise shares identical motivations for core case marking. Observe how crucial contextual pragmatics are for assigning correct semantic roles to NPs identically case marked by *na* in (14a), especially given the pragmatically-determined order of arguments before the matrix verb in this language. Controlling arguments of utterance predicates are often (although not always) marked with the agentive case, presumably because the act of speaking often involves two human participants, and speakers need to be disambiguated from their addressees.

- (14) a. “*nàj na ən na aju à sa#əɿ.*”
 nàj na nì na a-ju à sa-à əɿ
 2SG ALL 1SG AGT NRL-word one say-IRR PTCL
 “I’ll say something to you.”

- b. “*nàŋ na tʃəp-ù mətʃəp-ù*.”
 nàŋ na tʃəp-ù mətʃəp-ù
 2SG AGT cry-IRR NEG-CRY-IRR
 “Will you cry or not?”
- c. *tàsaku “ən na mətʃəp-ù — saŋ.”*
 tà-sa-ku nì na mətʃəp-ù sa-aŋ
 thus-say-LOC.CV 1SG AGT NEG-CRY-IRR say-IMP
 ‘Upon [the man] saying that, [the mother said] “I won’t cry — say [it]!”’
- d. “*nàŋ na sitak mətʃəp-ù pa*.”
 nàŋ na sitak mətʃəp-ù pa
 2SG AGT be.true NEG-CRY-IRR QPTCL
 “You really won’t cry?” (Coupe 2007b: 162–163)

The examples of this section demonstrate that the presence or absence of agentive marking bears little relationship to the number of participants involved in an event or the affectedness of an undergoer argument if one is present, as agentive-marked NPs are found in both monovalent and bivalent clauses under conditions that are only loosely related to many of Hopper & Thompson’s parameters of transitivity outlined in §1. While Ao can still be said to have different valency classes of verbs, transitivity itself has not grammaticalized as a globally-applying functional category of the syntax, and this is why a substantial amount of variability is encountered in case marking patterns. Limitations on space preclude the provision of a full account of pragmatically motivated agentive marking in Ao, but suffice it to say that it can encode different nuances of meaning depending upon the type of clause in which it is used, the nature of the referent, the semantics of the predicate, and the attendant pragmatic circumstances of the contextual setting (for a fuller account, see Coupe [2007b: 154–165]).

As noted in the discussion of (14a) above, the only semantic class of predicate that demonstrates an observed tendency towards consistency in the agentive case-marking of a core argument is that of utterance verbs; these often assign agentive case to their actor NPs, although exceptions uttered in parallel contexts are nonetheless frequently found in natural discourse, thus demonstrating that agentive marking has not grammaticalized to the extent that it is obligatory in this construction type. For example, both the clauses of (15) were uttered by speakers to announce their intentions prior to narrating texts.

- (15) a. *nì hʃutsə à sà.ù.*
 nì hʃutsə à sa-ù
 1SG story one say-IMM
 ‘I’ll tell a story.’

- b. *nì nə mùŋsən-əi hjutsə sà.ɿ̀.*
 nì nə mùŋsən-əi hjutsə sa-ɿ̀
 1SG AGT Mongsen-ANOM story say-IMM
 ‘I’ll tell a Mongsen speaker’s story.’

A correlation between utterance predicates and a tendency towards agentive/ergative marking has also been observed in other Tibeto-Burman languages with otherwise variable case marking (e.g. Tsangla — Erik Andvik, personal communication); possibly this particular semantic class of predicate could provide an important conduit for the development of paradigmatic case marking. If the grammaticalization of transitivity is a gradual process, in common with other types of documented grammaticalization phenomena (Lichtenberk 1991), then it might be expected to slowly creep through various semantic domains of the language and thus only very gradually infect the arguments of all predicate structures, rather than triggering a syntactically motivated case-marking alignment pattern on certain arguments of the entire verb class in one fell swoop (Bybee 2010: 146–147, and references therein). Another way of looking at this is that the formal marking of transitivity correlates with the extent to which particular semantic roles must be constrained in certain constructions. This must have a pragmatic basis, such as distinguishing a speaker from an addressee in clauses with certain classes of utterance predicates. It is also very likely to be construction-specific.

Yet another pathway by which pragmatically-determined case marking might lose its contextual fluidity and regularize as a syntactically-obligatory pattern is through the consequences of a language developing a morphological causative derivation. Morphological causatives are typically highly productive, thus the potential extent of their impact upon the verbal lexicon must be influential in facilitating transitivizing processes in languages that grammaticalize this type of derivational morpheme.

A causativizing **s-* prefix of Proto-Tibeto-Burman (PTB) has resulted in cognate monovalent-bivalent pairs of verb roots in scores of Tibeto-Burman languages (Wolfenden 1929, Benedict 1972, LaPolla 2003, Matisoff 2003). A trace of its influence in Mongsen Ao is suggested by semantically- and phonologically-related verb roots, such as *mən* ‘to sit’ and *hmən* ‘to set’ (the latter is phonetically [m̥ən³³]), in which the bivalent member demonstrates evidence of aspiration on its initial consonant as an assimilated relict of the PTB causative **s-* prefix. The significant historical impact of the causativizing **s-* prefix should not be underestimated in a discussion of the grammaticalization of transitivity in Tibeto-Burman, given that it has triggered the lexicalization of valency classes in scores of languages.

Cognate pairs of lexical verb roots of the *mən~hmən* type discussed in the preceding paragraph are now rarely encountered in the Mongsen lexicon, but the

language has since developed other causative morphemes out of lexical sources. One of these has surely grammaticalized from a compound involving the verb root ‘give’. ‘Give’ is known to be a source of causative morphology in many languages of South-East Asia (e.g. see Heine & Kuteva [2002: 152], who cite Thai, Lahu, Vietnamese, Khmer and Luo as examples of languages that have grammaticalized a causative function from this lexical source). In the Mangmetong village variety of Mongsen, the form of the causative suffix is *-iʔ*, while in the Khensa village variety it is *-piʔ*. Both forms can be confidently traced back to reconstructed PTB **bəy* ‘give’ (Matisoff 2003: 132). This valency-increasing morpheme has great productivity in varieties of the Mongsen dialect and can be used to causativize virtually any activity verb.

Because a causative derivation always notionally involves at least two participants in an event, which potentially results in two animate — often human — core arguments, either of which could potentially control the event of the causativized predicate, case marking now assumes a crucial function of disambiguating the semantic roles of causer and causee in the Mongsen causative construction. Thus, what initially starts out as the innovative use of an oblique case marker to disambiguate actor and undergoer semantic roles, and then to express the increased agency of a participant in pragmatically marked contexts, could turn out to be an important catalyst for the grammaticalization of transitivity and the eventual development of a syntactically-determined case marking pattern in the causative construction type. If so, this process of syntacticization is plausibly facilitated by the grammaticalization of valency-increasing derivational morphology. Parallel evidence for this is suggested by the attested impact of the PTB causativizing **s-* prefix on the verbal lexicons of so many Tibeto-Burman languages (Wolfenden 1929; LaPolla 2003: 22–24).

Causativized clauses derived by the causative suffix *-iʔ* constitute the only other clause type in Mongsen Ao in which it is obligatory for an actor NP to be assigned agentive marking. The causative suffix *-iʔ* has few semantic restrictions and can productively derive causativized stems of both monovalent and bivalent verbs belonging to a wide variety of semantic classes.

- (16) *lítfápáʔ nə tətʃənliʔ ku nakalən ni itə məzüksajakiʔ, ...*
lítfá-pàʔ nə tətʃən-liku nakalən ni itə
 pers.name-M AGT NZP-be.hasty-CIRCM Nagaland PTCL like.this
məzuk-sa-jak-iʔ-Ø
 be.crumpled-SPREAD-RS-CAUS-PST
 ‘Because/when he was hasty (at the time he was making Nagaland, the god)
 Lichaba caused Nagaland to crumpled up like this, ...’

- (17) *pùŋila nə ah.ɿ sə akhula thaku najkə lipaʔ sə təluʔ həpsaj.ə, ...*
 pùŋi-la nə a-h.ɿ sə akhu-la thak ku naj-kə
 wild.pig-F AGT NRL-cane ANAPH NRL-tiger-F PLACE LOC bind-SIM
 təluʔ həp-saʔ-iʔ-əɿ
 entire spring.off-PIECES-CAUS-SEQ
 ‘After Wild Pig caused all the aforementioned cane that was wrapped around
 Tiger’s body to spring off, breaking into pieces, ...’
- (18) *mətshəla nə nì taham nət tsəthànjjakiaj ...,*
 mətshə-la nə nì taham nət tsə-thàn-jak-iʔ-Ø aj
 barking.deer-F AGT 1SG middle two stamp.on-SEVER-RS-CAUS-PST CAUS.PTCL
 ‘Since Barking Deer stamped on and caused my middle to be left severed in
 two ...’
- (19) *tə.ɿ wàzàʔ nə tsəpàʔ ku atsə mətʃəmilà.* (Coupe 2007b: 457)
 tə-əɿ wàzàʔ nə tsəpàʔ ku a-tsə mə-tʃəm-iʔ-la
 thus-SEQ bird AGT pond LOC NRL-water NEG-drink-CAUS-NEG.PST
 ‘And, the birds didn’t let [her] (=caused her not to) drink at the pond.’

On pragmatic grounds, it is understandable why agentive marking is required in this type of clause: caused events often involve human (or personified) participants — one in the role of the causer and another in the role of the causee — and Mongsen Ao has grammaticalized the means of disambiguating possible confusion regarding ‘who does what to whom’ by making agentive case marking obligatory on the causer argument of the causativized event. The absence of agentive case marking on a core NP in a causativized clause therefore unambiguously encodes that this argument cannot be the controlling causer of the causativized event. This is demonstrated by the unmarked pronominal argument of (20), which functions semantically as the causee, as the causer NP has been elided.

- (20) *tə.ɿ pa tsəpàʔ ku atsə mətʃəməjùʔ.*
 tə-əɿ pa tsəpàʔ ku a-tsə mə-tʃəm-iʔ-i-ùʔ
 thus-SEQ 3SG pond LOC NRL-water NEG-drink-CAUS-IRR-DEC
 ‘And, [they] would not let her drink at the pond.’ (Coupe 2007b: 456)

Conceptually it is plausible that the historical development of a morphological causative in a language could subsequently provide the mechanism by which obligatory agentive case marking becomes extended to the actor arguments of all transitive constructions, eventually giving rise to the development of a syntactically-defined case marking pattern in which A arguments get a unique morphosyntactic treatment, distinct from unmarked S and O arguments. Such a development would pave the way towards the evolution of a consistently case-marked, ergative-absolutive alignment pattern in that language. The flip-side of this observation

is that if a language happens instead to grammaticalize the means of obligatorily marking the causee argument of a causativized clause, then this could theoretically lead to the conventionalization of obligatory marking of O arguments in non-causativized clauses. In this case the result would be a syntactically-constrained, nominative-accusative alignment pattern.

7. Concluding comments

It now remains to be determined if pragmatic constraints on the use of agentive marking and other features of Mongsen Ao clausal morphosyntax can be reconciled with the syntactic transitivity model as defined in §1, which for the most part is built upon and informed by traditional grammatical descriptions of Indo-European languages.

This paper has demonstrated that core case marking: (a) is not dependent upon particular lexical or valency classes of predicates; (b) does not show a neutralization of semantic roles under a single core grammatical relation; and (c) is not constrained by a syntactic pivot. The fact that agentive marking is found in verbal clauses with varying valency statuses and under mostly pragmatically-licensed conditions strongly suggests that the diachronic development of core case marking is therefore only marginally related to the syntactically-defined notion of transitivity. But it is centrally relevant to pragmatics, as this is what overwhelmingly motivates the grammaticalization of transitivity in certain types of Mongsen Ao clausal constructions.

It is also highly relevant that agentive case marking becomes obligatory in generic statements of habituality and in causativized clauses derived by the causative suffix *-(p)iz*. Causativization is a transitivity process that adds an argument to the core in the semantic role of the causer, and obligatory agentive marking on this argument is demonstrated to serve the important function of disambiguating semantic roles. It may therefore provide a crucial means through which transitivity comes to play a fundamental role in conventionalized patterns of morphosyntactic marking, especially if analogy subsequently results in the spread of syntactically-motivated case marking to other construction types. Such a process could trigger the gradual shift to a paradigmatic pattern of obligatory marking on the A arguments of all transitive clauses and all the possible syntactic sequelae, such as syntactic pivots, (anti-)passivization processes, the development of grammatical relations, and the conventionalization of a case-marking alignment pattern.

For non-causativized clauses, however, one logical option is to recognize the role that pragmatics plays in the grammatical organization of Mongsen Ao. This better accounts for why the sole core arguments of verbs such as ‘cough’ and ‘cry’

can be distinguished under certain conditions by agentive marking when agency is involved, and also why even actor arguments of primary transitive verbs such as ‘kill’ and ‘crack’ are not consistently marked by agentive case. When the distribution of agentive marking is considered together with the observation that the language demonstrably lacks a subject grammatical relation, a syntactic pivot or a formal detransitivizing passivization process, arguments discounting the centrality of transitivity to the morphosyntactic organization of the language begin to present a rather compelling alternative analysis. That is, instead of adopting the traditional bias towards transitivity as the principal architect of morphosyntactic structure in all languages, it could just be viewed as another functional category that may or may not grammaticalize to a greater or lesser extent in a language.

Such an approach is advocated by Bauer (2000), who also challenges the received status of transitivity as a universal category underpinning the syntactic organization of human language. She takes issue with Dixon’s (1979, 1994: 70–83) analysis of active languages as sub-types of ergative languages with “fluid-S” and “split-S” characteristics, her argument being that Dixon undermines his own transitivity-based perspective by proposing that there is a split in the subject marking of intransitive arguments (p. 58). That point aside, Bauer’s thesis is that at the earliest stages, Proto-Indo-European was a language of active typology; as these characteristics were gradually replaced by nominative features, transitivity became more and more fundamental to the syntax of the proto-language. Analogously to the transitivizing role of causative morphology in Mongsen Ao, Bauer equates the replacement of the dative possessive *mihi est* construction by the transitive possessive verb *habeo* of Latin with the rise of transitivity as an important functional category in that language. In other words, the development of transitivity was initially specific only to this particular construction.

I could instead shoehorn the analysis of Mongsen Ao clausal morphosyntax into the transitivity paradigm, e.g. by identifying it as a language with “optional ergative-marking” (as McGregor 2009 and 2010 propose), and therefore having absolutive case marking on unmarked core arguments. But this approach ostensibly runs into the analytical difficulty of a putative absolutive case potentially marking A arguments as well as S and O arguments in clauses that have zero-marked core NPs, and zero-marked agent arguments are by no means a rare occurrence in Ao. It also seems theoretically incompatible to assume that the grammatical function represented by ergative case should be considered to be independent of an ergative-absolutive alignment pattern, especially when the term ‘agentive’ is already established for the marking of a semantic role, as opposed to a grammatical role. Keeping these two concepts apart clarifies description; conflating them confuses it.

There are also deeper issues concerning the optional ergative marking analysis that are in conflict with the attested diachronic development of case marking in Tibeto-Burman languages. Section 5 argues that paradigmatic morphosyntactic marking patterns do not develop until the grammatical marking of an agent becomes systemically obligatory in bivalent clauses. Once that has occurred, one should expect to encounter a predominance of clauses conforming to an ergative-absolutive pattern of case assignment on core arguments, as determined by transitivity classes of verbs and their now syntactically-determined argument structures. My preliminary research suggests that this is in fact precisely what is found in Chang, spoken just to the east of the Ao territory. That is, in this language the marking has developed to the point that core arguments are systemically assigned case according to transitivity classes of verbs, not semantic roles. However, the chronology is untenably back-to-front if it is assumed that a Tibeto-Burman language like Chang first grammaticalizes a paradigmatic ergative-absolutive case-marking pattern consistent with predicate argument structure and grammatical functions, and then somehow develops optional ergative case marking in some scenarios. A much more likely situation for this to occur in is language death, as Nichols (2008) suggests may be the case for Batsbi (Tsova-Tush), or language contact, which Meakins & O'Shannessy (2010) propose as an explanation for the use of optional ergative marking in Light Warlpiri and Gurindji Kriol.

Even if one is prepared to overlook these theoretical problems confronting the application of an optional ergativity analysis to Tibeto-Burman languages, such an approach cannot adequately explain the underlying reasons for the substantial divergences that languages like Mongsen Ao demonstrate from those with predictable case marking patterns conforming to transitivity classes; it also runs the real risk of obfuscating our understanding of how a morphological case-marking system might develop historically. As Mithun & Chafe (1999) amply demonstrate, systems that reflect the grammaticalization of agent and patient semantic roles can be both diverse and substantially different from ergative systems. It is time for linguistic theory to accommodate such systems, but this will necessitate looking beyond the syntactic transitivity model and its associated premise that all languages should be described with reference to a universal set of core grammatical relations.

A constructionist perspective permits us to appreciate that the development of transitivity need not be globally relevant to the full inventory of syntactic structures found in a language, and that when it does grammaticalize as a functionally relevant category, its recognition may only be applicable to the description of some types of constructions. Languages like Ao demonstrate that a deeper understanding of how transitivity comes to play a central role in the syntactic organization of a language can be gained by taking into account the pragmatic foundations that underlie its grammaticalization.

Abbreviations

ABL	ablative case	NRL	non-relational noun prefix
AGT	agentive case	NZP	nominalizing prefix
ALL	allative case	ORD	ordinal derivational suffix
ANAPH	anaphoric nominal demonstrative	PART	partitive lexical suffix
ANOM	agentive nominalizer	PIECES	'PIECES' lexical suffix
CAUS	causative suffix	PFV	perfective aspect
CAUS.PTCL	causal particle	PL	plural
CIRCM	circumstantial converb	PLACE	'PLACE' nascent postposition
CONJ	conjunction	POSS	possessive
CONT	continuative aspect	PRES	present tense
COVER	'COVER' lexical suffix	PROX	proximal demonstrative
DEC	declarative mood	PST	past tense
DESID	desiderative mood	PTCL	illocutionary force particle
DIM	diminutive	QPTCL	interrogative particle
DIST	distal demonstrative	RED	reduplication
EXCLM	exclamation	RL	relational noun prefix
F	feminine semantic gender	RPET	repetitive aspect
FACE	'face' nascent postposition	RS	resultant state marker
GPN	generic pronoun	SEND	'SEND' causative/directional suffix
IMM	immediate future tense	SEPARATE	'SEPARATE' lexical suffix
IMP	imperative mood	SEVER	'SEVER' lexical suffix
INST	instrumental case	SPREAD	'SPREAD' lexical suffix
IRR	irrealis mood	SG	singular number
LOC	locative case	SIDE	'SIDE' nascent postposition
LOC.CV	locative converb	SIM	simultaneous converb suffix
LNOM	locative nominalizer	SEQ	sequential converb suffix
M	masculine gender	TOGETHER	'together' lexical suffix
NEG	negative prefix	TOP	topic marker
NR	nominalizer/relativizer	VOC	vocative prefix

Notes

* Mongsen Ao data in this paper derives from my personal fieldwork in north-east India, undertaken between 1996 and 2011. Except where explicitly indicated, examples are taken from narrative texts. An early version of this paper was first presented in the Transitivity Workshop at the Research Centre for Linguistic Typology, La Trobe University in 2008; I thank the audience for their comments. I am also deeply indebted to Balthasar Bickel, Liu Hongyong and two anonymous referees for their extensive comments on an earlier draft. My understanding of transitivity has been considerably broadened by numerous discussions on this topic with my colleagues and co-editors Randy LaPolla and František Kratochvíl. I alone take responsibility for all arguments and conclusions proposed in this paper.

1. Here I follow Andrews 2007 in making a distinction between **grammatical functions** that are held to be relevant to the description of all languages, and the grammatical relations of **subject** and **object**, which are not necessarily attested in all languages, but may be demonstrated to be significant to the syntactic organization of some. Grammatical relations are thus possible but not necessarily universal categories of morphosyntax that may grammaticalize in some languages.
2. The Konyak sub-group has been conclusively demonstrated to belong to a separate branch of Tibeto-Burman, viz. Bodo-Konyak-Jinghpaw (Burling 1983, 2003). Within the state of Nagaland, the Konyak sub-group is represented by the Konyak, Chang, Phom and Khiamniungan languages.
3. Unless explicitly noted in the text, all language examples represent the variety of Mongsen Ao spoken in Mangmetong village of Mokokchung District, Nagaland. A phonemic transcription conforming to the conventions of the IPA is used for their representation. Low, mid and high tones are marked by a grave diacritic, the absence of a diacritic, and an acute diacritic respectively.
4. Causative marking in imperative clauses can express that the commanded activity is to be done for the benefit of the speaker, as indicated by the free translation of this example (see Coupe 2007b: 397–399 for discussion).
5. The vowel represented by *ü* in the Sangtam data of Marrison (1967) is assumed to be /ə/. Marrison's Sangtam data does not record tone.
6. A rare exception to this is the benefactive marker *atəmekə~atəma* of Mongen Ao, the source of which can be confidently traced to the reanalysis of a simultaneous converb construction as a relational morpheme (see Coupe 2007b: 172).

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Towards an analysis of argument alignment in Takivatan Bunun

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This article describes the morphological and syntactic mechanisms that are involved in the overt and covert realisation of core arguments in Takivatan Bunun. It argues that the interactions between these mechanisms make it difficult to explain Takivatan predicate-argument structure in terms of traditional notions of transitivity and argument alignment. As an alternative, it proposes that argument alignment in Takivatan is realised through the interaction of a number of relatively independent linguistic subsystems.

1. Introduction¹

1.1 Background

Bunun is one of the fourteen officially recognized Austronesian languages spoken in Taiwan. Although around 52,000 people are officially registered as Bunun (CIP 2010), a generous estimate would put the number of people with an operational knowledge of the language at no more than 60% of that group. All speakers are bi- or multilingual and transfer to younger generations has come to a complete standstill. Takivatan is one of five dialects and is spoken by no more than 1600 speakers in two settlements in Hualien County, at the east coast of Taiwan, and by some smaller groups in dialectally mixed villages in Nantou County, deep in the Central Mountain Range.

The data for this article was gathered between 2005 and 2009 from speakers of Mayuan village, the larger of the two Takivatan settlements in Hualien, Taiwan. The seven main consultants, five male and two female, were between 42 and 75 years of age. The stable core for the analysis consists of 3.5 hours of free-flowing narrative monologue, glossed and translated with the help of a native speaker (M; 75 y) and supplemented by a considerable set of elicited examples. Occasionally, examples from other transcribed texts are used.

1.2 Takivatan morphosyntax

Takivatan Bunun is strongly agglutinative and predominantly head-marking. Like other Bunun dialects (Nojima 1996; Lin et al. 2001) and some other Austronesian languages of Taiwan (see e.g. Blust 2003; Adelaar 2004), it has elaborate verbal morphology.² There are two major open word classes, nouns and verbs, but boundaries between these two classes are fluid and mainly based on the probabilistic distribution of lexemes in their discursive and syntactic contexts (for an elaborate list of criteria, see De Busser 2009: 178–186). However, given a suitable discourse context, most nouns may occur in verbal slots and take a subset of verbal morphology. Verbs can occur in nominal slots, but typically retain some verbal morphology. There is no inflectional morphology that is unique to nouns. Closed word classes include different pronominal and demonstrative paradigms, prepositions, question words and numerals.

A majority of Takivatan verbal roots can be classified as dynamic verbs, adjectives, or locative/directional verbs. Table 1 gives representative examples of each subclass.

Table 1. Dynamic verbs, adjectives, and locative/directional verbs

	Neutral	Causative
Dynamic	<i>ma-ludaq</i> ‘beat’	<i>pa-ludaq</i> ‘cause to beat’
Adjective	<i>ma-sihal</i> ‘be good’	<i>pi-sihal</i> ‘cause to be good’
Locative/directional	<i>mun-han</i> ‘go to’	<i>pun-han</i> ‘cause to go to’

Dynamic roots typically take a prefix *ma-* or have no prefix at all in the neutral, non-causative form. They always have a prefix *pa-* in the causative form. Adjectives are best analysed as a subclass of stative verbs. Adjectival roots take a neutral stative prefix *ma-* (homophonous but not identical to dynamic *ma-*)³ and a causative prefix *pi-*. The locative/directional roots *han* and *san* ‘be at; go to’ occur with a large contingent of locative prefixes, which add a positional or directional component to the semantics of the verb root.

Like all Austronesian languages in Taiwan that we know of except for Rukai, Takivatan has a Philippine-style argument-alignment system with verb-initial constituent order. Verbs reference actors, undergoers and locations by means of a suffixal paradigm and thereby in effect topicalise those arguments (see 2.1.2). We will refer to this as focus marking (see 2.1.1 and 2.4).

- (1) Verb is zero-marked: reference to the actor (actor focus)

Siða malɲaɲausta maduqta.

siða [malɲaɲaus-ta]_{AG} [maduq-ta]_{UNUN}

Take-AF shaman-DEF.REF.DIST millet-DEF.REF.DIST

‘The shaman took millet.’ (Adapted from TVN-012-001:69)

- (2) Verbal suffix *-un*: reference to the undergoer (undergoer focus)

Siðazun asik.

siða-un [asik]_{UN}

take-UF shrub

‘The shrubs, (they) gathered.’ (Adapted from TVN-012-001:24)

- (3) Verbal suffix *-an*: reference to the location (locative focus)

Maqtu pasiðazanin ηabul, vanis.

maqtu pa-siða-an-in [ηabul vanis]_{UN}

can CAUS.DYN-take-LF-PRV antler wild.boar

‘(In that place) (we) can catch deer and wild boar.’ (TVN-008-002:47)

A minimal clause in Takivatan can consist of no more than a verb root. This is because, especially in informal registers, constituent ellipsis and the deletion of bound morphemes are common in situations where it is possible to recover them from the pragmatic context. Only personal pronouns are marked for case (see 2.3); the roles represented by all other noun phrases are understood from position or pragmatic inference. The typical argument order for free noun phrases is (VERB) < AGENT < INSTRUMENT < BENEFICIARY < PATIENT < LOCATION < PERIPHERAL. This is inferred from combining data from multiple constructions in the corpus, since the occurrence of more than one free argument with a single verb is uncommon and the occurrence of more than three is non-existent (see 2.2).

The main goal of this article is to explain how this argument alignment system operates in the Takivatan dialect and how this illustrates that transitivity, often considered a cornerstone of syntactic analysis at the clause level, might be considered epiphenomenal in Takivatan Bunun and possibly in other languages with a Philippine-style argument alignment system. Section 2 first gives an overview of the syntactic and morphological subsystems that together are responsible for the expression and implication of core arguments in the Takivatan Bunun predicate-argument complex. Section 3 discusses a number of fundamental problems that the Takivatan situation poses to traditional concepts of transitivity and argument alignment. It concludes that the complex behaviour and interactions between the different grammatical subsystems outlined in 2 make it difficult to apply established distinctions between transitive and intransitive event types or to analyse Takivatan Bunun in terms of accusative and absolutive argument alignment strategies. Section 4 argues that this indicates that Takivatan Bunun argument alignment cannot be described in terms of a single system or principle, but rather is the aggregate result of the interactions between various subsystems.

2. Argument alignment in Takivatan Bunun

Argument alignment is the part of the grammar of a language that is responsible for the expression and/or inference of arguments in the predicate-argument complex. Traditionally it is assumed that languages can only belong to a small number of alignment types and these are defined by how arguments are marked in transitive and intransitive constructions. Kibrik (1979:63–66) gives an overview of all logically possible options, the two most common of which are nominative-accusative and ergative-absolutive alignment. It has been argued repeatedly that this traditional view does not lead to an adequate analysis of argument structure in at least a number of Philippine-style languages (Foley 2007). As will be demonstrated below, this is also the case for Takivatan Bunun.

In this section, I will therefore give an overview of the morphological and syntactic subsystems that contribute to argument alignment in Takivatan Bunun, the idea being that if a grammatical system is too complicated to analyse in its entirety, it is opportune to isolate syntactically coherent subsystems and construct a coherent analysis for each of these. Based on an understanding of the separate subsystems, we might be able to come a better understanding of the entire system and, possibly but not necessarily, arrive at some sort of synthesis.

Section 2.1 introduces a number of basic concepts and defines their use throughout the article. I will then discuss focus suffixes (2.4); verbal prefixes (2.5); causative prefixes (2.6); the realisation of free noun phrases (2.2); and personal pronouns (2.3).

2.1 Basic concepts

2.1.1 *Focus morphology*

A continuous source of terminological confusion in the context of the Austronesian languages of Taiwan and the Philippines is the use of the term ‘focus system’. This expression was introduced at the start of the 1960s to indicate that argument alignment options in these languages could not be equated with voice alternations in Indo-European languages (Blust 2002). It is important to keep in mind that the Austronesian notion of focus does *not* refer to the pragmatic concept of focus as introduced by the Prague School and later applied to syntactic analysis (e.g. in Li & Thompson 1976, and Van Valin & LaPolla 1997, Ch. 5). Rather, it designates a system of verbal cross-referencing that is peculiar to a sizeable group of Austronesian languages of Taiwan and the Philippines. This system is used for expressing functional relationships between the predicate and pragmatically privileged arguments in the predicate-argument complex.

2.1.2 *Topic*

For the purpose of this article, we will call the argument that is targeted by the verbal suffixal morphology the *topic* of a clause. It corresponds to the clause-internal topic (see Nikolaeva 2001: 10–11). It is best understood as a clause-internal pragmatic category indicating “what the clause is about” that has to some extent developed a privileged grammatical status, but not one equivalent to what is thought of as “subject” in Indo-European languages. This is in line with Comrie (1988: 172), who proposes “a category of syntacticized topic that is neither the pragmatic relation of topic nor the syntactic (grammatical) relation of subject.”

This article is not the place to make any definitive claims about subjecthood in Philippine-style languages. However, it is probably fair to say that, in these languages, the analysis of the privileged argument as a subject is controversial (Schachter 1976, Chafe 1976, amongst others). Lambrecht (1996: 131ff) notes a strong correlation between (internal) topic and subject, but also makes clear that they often do not overlap. The fact that, in many languages with a Philippine-style alignment system, ‘subjects’ tend to be definite (see Keenan 1976 amongst others) is an indication that they are probably better analysed as topics, since topicality has stronger links with definiteness than does subjecthood (Li & Thompson 1976: 461 and Nikolaeva 2001: 5).

2.1.3 *Core vs. periphery*

Crucial to any discussion about argument alignment is the distinction between core and peripheral arguments. Core arguments are conceived of here as a class of arguments that belong to the syntactic valency of the verb, as indicated by certain grammatical behaviours. In Takivatan Bunun, the set of core arguments includes agents, undergoers (including patients, instruments and beneficiaries), and — perhaps surprisingly — locative arguments. Core arguments contrast with a set of peripheral arguments expressing place, time and manner. Briefly, the reasons for this classification are:

- i. Core arguments fall under the scope of focus suffixes (see examples (1)–(3)) and can therefore become the topic of a clause. This is even true for instruments and beneficiaries, although in those cases the undergoer suffix must be accompanied by an additional prefix (see 2.5). Peripheral arguments are never the target of verbal cross-referencing morphology.
- ii. Core arguments that are targeted by a focus suffix can be left-dislocated with the topicaliser *-a*; this is impossible for peripheral arguments.
- iii. Non-topic personal pronouns are always in the neutral form, disregarding the type or argument they encode (see 2.3). In other words, case marking on non-

- topical pronouns cannot be used to distinguish core from peripheral arguments.
- iv. Personal pronouns in topic position are in the topical agent form when they are agents, but in the neutral form in all other cases (see 2.3). However, if this were to be used as evidence for a distinction between core and peripheral arguments all undergoer arguments would be non-core, including patients, and only agents in topic position would be core arguments.
 - v. Peripheral arguments are typically clause-final and occur after all core arguments.
 - vi. Some peripheral arguments can be expressed preverbally as an auxiliary verb construction. This is never possible for any core argument.
 - vii. Peripheral arguments can be expressed by prepositional phrases, as well as by noun phrases. Core arguments can only be expressed by a noun phrase.
 - viii. If instruments or beneficiaries were non-core, one would have to explain why they can be expressed in positions between the verb and core arguments, given the unmarked argument order in 2.2.

Verb	AG	INSTR	BEN	PAT	LO
predicate	core	non-core	non-core	core	core

- ix. If locative arguments were non-core, one would have to explain why (a) there is a syntactic difference between locative arguments and peripheral place arguments and (b) it is possible for a locative argument to occur in immediate post-verbal position, as in the example below.

(4) *Kamaʔuka ʔiti saŋlav.*

kama-ʔuka [*ʔiti*]_{IO} [*saŋlav*]_{UN:PAT}
 RATHER-NEG.have here vegetables

‘There are rather few vegetables here.’ (TVN-xx2-003:26)

Note that these criteria are not necessarily generalisable to other Austronesian languages with a Philippine-style system.

2.2 Realisation of full noun phrase arguments

Takivatan argument order is fixed and free arguments are ordered from high to low agentivity:⁴

Agent	<	Instrument	<	Beneficiary	<	Patient	<	Location	<	Peripheral
(AG)		(INSTR)		(BEN)		(PAT)		(LO)		

However, in actual discourse it is impossible to express more than three arguments on a single verb and it is rare to express more than one. The postulated argument order can be extrapolated from a comparison of multiple examples of constructions with two arguments. (Examples (5) and (8) below illustrate the relative position of all arguments except for the locative argument.) Three-argument constructions are only possible in certain contexts:

- i. There can be no ambiguity about the functional role of each participant.
- ii. Arguments cannot be too bulky; typically only single-word phrases are allowed in three argument constructions.
- iii. Three argument constructions are more likely when one of the arguments is a bound pronoun.

This means that three-argument constructions like (5) are extremely uncommon.

- (5) *naʔiskalatun ɖaku tuqnaɖi asu.*
na-is-kalat-un [ɖaku]_{AG} [tuqnaɖ-i]_{UN:INSTR} [asu]_{UN:BEN}
 IRR-INSTR-bite-UF 1S.N bone-PRT dog
 ‘I want to give the bone to a dog to bite it.’ (lit: ‘I want to use the bone for the dog to bite.’) (TVN-xx2-005:65)

If only one argument is expressed, the interpretation of its function depends on its semantics and on the context. In (6) the argument *bunun* ‘people’ is always interpreted as an agent, because it is highly animate. The second person undergoer ‘you’ is implied by the presence of the focus suffix *-un*, but not explicitly expressed. In (7), on the other hand, *qaimaŋsuɖ* ‘thing’ is inanimate and therefore interpreted as an undergoer.

- (6) *ludaqun bunun*
ludaq-un [bunun]_{AG}
 beat-UF people
 ‘Some people beat (you).’ (not: ‘some person is beaten’) (TVN-xx2-001:139)
- (7) *Tuqluzun qaimaŋsuɖ*
tuqlu-un [qaimaŋsuɖ]_{UN}
 cover-UF thing
 ‘The thing/object is/has been covered.’ (not: ‘something was covered by the object’) (TVN-xx2-001:159)

If more than three arguments need to be expressed or a complex noun phrase creates confusion, periphrastic strategies are used. Most common are serial verb and auxiliary verb constructions. In constructions with auxiliary verbs, the agent is usually expressed on the first auxiliary, thereby reducing the complexity of the

argument group accompanying the semantic head of the predicate. This is illustrated in (8).

- (8) *maqtužas pasimul đaku qaimaŋsuđ?*
maqtu-[*žas*]_{AG} *pa-simul* [*đaku*]_{UN:BEN} [*qaimaŋsuđ*]_{UN:PAT}
 can-2S.TOP CAUS.DYN-borrow 1S.N thing
 ‘Can you lend me the thing?’ (TVN-xx2-004:4)

In (9), the argument cluster on *pasimul* ‘lend’ is further distributed by the introduction of a possessive serial verb construction. Native speakers prefer the latter example because the arguments are maximally dispersed across three verbs.

- (9) *maqtužas pasimul qaimaŋsuđ isaiv đaku?*
maqtu-[*žas*]_{AG} *pa-simul* [*qaimaŋsuđ*]_{UN:PAT}
 can-2S.TOP CAUS.DYN-borrow thing
is-saiv [*đaku*]_{UN:BEN}
 TRANS-give 1S.N
 ‘Can you lend me the thing?’ (TVN-xx2-004:5)

It is clear that, at least to some extent, argument realisation is determined by purely formal mechanisms, such as the restriction on having more than three arguments per verb or the tendency to maximally distribute arguments across the verbs of complex predicates. These have nothing to do with the semantics or grammatical status of these arguments, but rather with the complexity of the surface realisation of the clause.

Table 2. Personal pronouns

	Bound		Free			
	Topic	Non-topical agent	Neutral	Topical agent	Locative	Possessive
	(TOP)	(N)TOP.AG)	(N)	(TOP.AG)	(LO)	(POSS)
1S	-(<i>z</i>)ak	-(<i>z</i>)uk	<i>đaku, nak</i>	<i>sak, saikin</i>	<i>đakužan</i>	<i>inak, ainak, nak</i>
2S	-(<i>z</i>)as	—	<i>sužu, su</i>	—	<i>sužužan</i>	<i>isu, su</i>
1I	—	—	<i>mita</i>	<i>žata, inžata</i>	<i>mitažan</i>	<i>imita</i>
1E	-(<i>z</i>)am	—	<i>đami, nam</i>	<i>đamu, sam</i>	<i>đamižan</i>	<i>inam, nam</i>
2P	-(<i>z</i>)am	—	<i>mužu, mu</i>	<i>amu</i>	<i>mužužan</i>	<i>imu, mu</i>

2.3 Personal pronouns

First and second person personal pronouns are the only words in Takivatan that are marked for case. Third person pronouns behave like demonstratives, do not have case distinctions, and are therefore excluded from the present discussion (see De Busser 2009 for an overview). It is important to observe that the bound and free pronoun paradigms follow different alignment patterns.

2.3.1 Free forms

Free forms (with the exception of third persons) distinguish between a neutral form (N) and a topical agent form (TOP.AG). The latter exclusively marks agents in agent focus constructions and is restricted to emphatic contexts and high registers. (In most situations, bound forms are employed to mark topical agents.)

- (10) *miliskin sak tu nitu mataiklas*
miliskin [sak]_{AG} tu ni-tu ma-taiklas
 think 1S.TOP.AG COMPL NEG-COMPL STAT-intelligent
 ‘I believe that I am not very intelligent.’ (TVN-012-002:1)

- (11) *ni sam hamu*
ni [sam]_{AG} hamu
 NEG 1E.TOP.AG do.together
 ‘We do not participate.’ (TVN-008-vxxx:27)

The neutral form is used for both topical and non-topical undergoers, as in (12) and (13) respectively; for non-topical agents, as in (14); for left-dislocated arguments, no matter what argument they express; and for post-nominal possession.

- (12) *Mindaidað aipun ðaku*
min-daidað [aipun]_{AG} [ðaku]_{UN:PAT}
 BECOME-love DEM.S.MED 1S.N
 ‘She will start to love me.’ (TVN-xx2-007:48)
- (13) *Kadiŋvaʒa Ulikun ðaku*
ka-dijva-a [Uli-kun]_{AG} [ðaku]_{UN:BEN}
 HI.AG-phone-LNK PN-DEF.SIT.MED 1S.N
 ‘Uli gave me a call.’ (TVN-008-003:138)
- (14) *Nasiðaun ðaku qaimaŋsuðti*
na-siða-un [ðaku]_{AG} [qaimaŋsuð-ti]_{UN:PAT}
 IRR-take-UF 1S.N thing-DEF.REF.PROX
 ‘I cover the thing.’ (TVN-xx2-003:11)

Locative forms of the personal pronoun are extremely rare. They are derived from the neutral form by adding the suffix *-an* and always indicate a location near the first or second person.

- (15) *Han... tanau ðakuʔan*
han tan-ŋaus [ðakuʔan]_{PLACE}
 be.at be.at-front 1s.LO
 ‘It was... it was in front of me.’ (TVN-008-002:200)

Possessive pronouns express attributive possession and are derived from the neutral form by addition of the prefix *i-*.

2.3.2 *Bound forms*

Bound forms of the personal pronoun tend to be used in actor focus constructions and typically refer to topical agents.

- (16) *Maqunʔak ismut*
maqun-[ʔak]_{AG} [ismut]_{UN:PAT}
 cut-1s.TOP grass
 ‘I cut off the grass’ (TVN-012-002:8)

On the rare occasion that bound pronouns occur in undergoer focus constructions, they invariably refer to topical undergoers, as in (17).

- (17) *Kalatunʔak asu.*
kalat-un-[ʔak]_{UN:PAT} [asu]_{AG}
 bite-UF-1s.TOP dog
 ‘I am bitten by a dog.’ (TVN-xx2-005:56)

The only exception to this pattern is *-uk*, a portmanteau form that refers to a non-topical agent in an undergoer focus construction.

- (18) *Panaquka*
panaq-[uk-a]_{AG}
 shoot-1s.NTOP.AG-LNK
 ‘It was shot by me.’ (TVN-008-002:87)

Typically, a verb takes only a single bound pronoun. Unlike many other Philippine-style languages, Takivatan Bunun has no bound genitive pronouns.

Two interesting conclusions can be drawn. First, free and bound personal pronouns follow different alignment patterns. Free pronouns distinguish between topical agent forms and everything else, whereas bound pronouns distinguish between topics and non-topics. Second, neither of these two patterns straightforwardly corresponds to classical accusative or ergative alignment patterns.

2.4 Focus suffixes

Many descriptions of Austronesian argument alignment places focus suffixes on centre stage and these suffixes are often integrated into a single paradigm with prefixes, infixes and sometimes other morphemes (see Wolff 1973; Ross 2009; and many others). I have argued at length elsewhere (De Busser 2009: 268–81) that in Takivatan Bunun it is better to keep the different affix types separated. This article will start from the assumption that focus suffixes and verbal prefixes form distinct paradigms.

Based on that assumption, Takivatan Bunun distinguishes three focus types:

- i. Agent focus (AF), unmarked.
- ii. Undergoer focus (UF), marked by *-un*.
- iii. Locative focus (LF), marked by *-an*.

Examples are given in (1)–(3) for *siða* ‘take’ and below for *tasʔi* ‘build, repair’.

(19) *Namatasʔizak busul.*

na-ma-tasʔi-[-zak]_{AG} [busul]_{UN}
 IRR-DYN-build-1s.TOP gun
 ‘I make a gun.’ (TVN-xx2-004: 20)

(20) [...] *na patasʔiun.*

na pa-tasʔi-un
 so CAUS.DYN-build-UF
 ‘(The thing is broken,) so I want to have it fixed.’ (TVN-xx2-004: 16)

(21) *Patasʔian.*

pa-tasʔi-an
 CAUS.DYN-build-LF
 ‘I want to make it so that something stays in a fixed spot.’ (TVN-xx2-004: 18)

Undergoers can be patients, beneficiaries or instruments, but a UF suffix without any verbal prefix nearly always marks a patient as topic. As examples (20) and (21) show, the topic is not always overtly realised. In fact, it is more likely to be omitted than expressed, because as a topic it can be easily recovered from the discourse context. In some constructions, especially with locative focus, speakers tend to reject explicitly expressed topical arguments.

The three focus types are often associated with dynamic verbs expressing transitive concepts, but we will see below that focus marking also occurs with other event types, such as stative or locative/directional events.

2.4.1 Actor focus constructions

Actor focus constructions are indicated by the absence of a focus suffix on the verb.

- (22) *Siða malḥaṇausta asik.*
siða [*malḥaṇaus-ta*]_{AG} [*asik*]_{UN:PAT}
 take shaman-DEF.REF.DIST shrub
 ‘The shaman gathered the shrubs.’ (constr.)

Neutral (i.e. non-causative) verbal prefixes can normally only occur in actor focus constructions. In undergoer and locative focus constructions, they are either deleted or replaced by a causative or associative prefix.

- | | | | | | |
|------|--------------------|---|------------------------|--|------------------------------|
| (23) | <u>Actor focus</u> | | <u>Undergoer focus</u> | | <u>Locative focus</u> |
| | <i>ma-taszi</i> | ↔ | <i>pa-taszi-un</i> | | ↔ <i>pa-taszi-an</i> |
| | DYN-build | | CAUS.DYN-build-UF | | CAUS.DYN-build-LF |
| | ‘He builds it.’ | | ‘He builds it.’ | | ‘He builds it on that spot.’ |
| | | | | | (constr.) |

2.4.2 Undergoer focus constructions

The UF suffix *-un* cross-references the undergoer of a construction, typically the patient, but sometimes the beneficiary or instrument. It does not change argument order (compare (24) below with (22), its AF equivalent). Apart from shifting pragmatic stress from agent to undergoer, an UF construction does not change the overall semantics of a clause.

- (24) *Siða^{un} malḥaṇausta asik.*
siða-un [*malḥaṇaus-ta*]_{AG} [*asik*]_{UN:PAT}
 take-UF shaman-DEF.REF.DIST shrub
 ‘The shrubs, the shaman gathered.’ (constr.)

A change from AF to UF does, however, change case assignment in personal pronouns, at least with dynamic events that encode an agent and a patient. Note, however, that the number of arguments remains unchanged.

- (25) *Antalamzak suzu*
antalam-[*zak*]_{AG} [*suзу*]_{UN:PAT}
 answer-1s.TOP 2s.N
 ‘I answer you.’ (TVN-xx2-001:4)
- (26) *Antalamun ḍaku suzu*
antalam-un [*ḍaku*]_{AG} [*suзу*]_{UN:PAT}
 answer-UF 1s.N 2s.N
 ‘You, I answer.’ (TVN-xx2-001:3)

With adjectives and locative/directional verbs, the undergoer suffix tends to have causative-like semantics, despite the fact that all these verbs have dedicated causative prefixes (see 2.6). The UF *-un* in these contexts is therefore probably better understood as marking a conceptual shift in which the argument most immediately involved in the event (in the examples below the person that is going) is encoded as a patient-like, rather than agent-like participant.⁵

(27) *Hanun aip minpantu.*

han-un [aip]_{AG} min-pantu

go-UF DEM.S.VIS BECOME-student

‘(They) made her [lit: that one] go there to become a student.’ (TVN-012-002:119)

(28) *Hanun daiða madainpus kasi.*

han-un [daiða]_{PLACE} ma-dainpus [kasi]_{UN:PAT}

go-UF there DYN-put.inside candy

‘Go there [lit: I make you go there] to put candies inside’ (TVN-xx2-001:158)

On adjectives with an inanimate participant in the agent slot, the semantic effect of adding an undergoer focus suffix is often similar to direct causation. Normally, such constructions are syntactically analogous to (27) and (28): an undergoer suffix is added, but nothing else changes. However, in one case, given as (29), an explicit causer is introduced in the agent slot. This is the only attested example of an undergoer focus suffix having a valency-increasing effect.

(29) *Maqai masihal titiza, sihalun aipi sia binanauzað*

maqai ma-sihal [titi-a]_{AG}

if STAT-good meat-SUBORD

sihal-un [aipi]_{AG} [sia binanauzað]_{UN:BEN}

good-UF DEM.S.PROX ANAPH wife

‘If the meat was good, he [this one] could store it well for his wife.’ (TVN-012-001:52)

Undergoer focus forms of verbs cannot take neutral prefixes (STAT *ma-* in *ma-sihal*). The prefix is either deleted or replaced by a causative or associative prefix (*pi-* and *ka-* for adjectives)

2.4.3 Locative focus constructions

The influence of the LF suffix *-an* on the constituency of clauses is hard to determine because most LF constructions contain at most a single argument, and this is usually not the locative argument. It is equally hard to say anything about the influence of LF *-an* on pronominal case, since no LF construction with two pronominal forms has so far been attested in the corpus.

An interesting example of an LF construction without any explicit arguments is (30). The concept that from a semantic point of view might be considered the undergoer of the event (*lumaq* ‘house’) is in this example encoded as part of the verb.⁶

- (30) *Nakalumaqan masihala*
na-ka-lumaq-an ma-sihal-a
 IRR-MAKE-house-LF STAT-good-LNK
 ‘(The land) is suitable for building houses.’ (TVN-012-002:131)

Sentence (31) is an example of a one-argument construction.

- (31) *Kavaza nabalivan mita hulus.*
kavaza na-baliv-an [mita hulus]_{UN:PAT}
 immediately IRR-buy-LF 1I.POSS clothes
 ‘I will immediately go buy your clothes there.’⁷ (TVN-xxx-xx1:139)

The locative suffix can also cross-reference agents of verbs of perception and cognition, and agents of other lowly-agentive concepts, e.g. *dajað* ‘help, assist’.

- (32) *Haiða masihal saduan qaniju.*
haiða ma-sihal sadu-an [qaniju]_{UN}
 have STAT-good see-LF picture
 ‘There is a beautiful movie on TV.’ (TVN-xxx-xx1:58)

Like the UF suffix, LF *-an* can occur with non-dynamic events, but unlike UF *-un*, the neutral (i.e. non-causative) verbal prefix is sometimes retained in these cases.

- (33) (...), *masihalan dalaquna*
ma-sihal-an [dalaq-un-a]_{LO}
 STAT-good-LF ground-EMPH-LNK
 ‘(They went down to a place called Dastalan,) the land there was very good.’
 (TVN-012-002:167)

Example (33) is atypical in that a vast majority of LF constructions in the corpus have no explicitly expressed locative arguments and speakers often indicate that it is impossible to insert one. So far, no adequate explanation has been found for why this is the case.

In conclusion, verbal suffixes in Takivatan create a ternary distinction between AF, UF and LF that is relevant to dynamic, stative and locative/directional verbs, and to transitive as well as intransitive concepts. The semantic and sometimes also syntactic effect of non-AF suffixes depends on the type of host they combine with. There is no evidence that focus cross-referencing promotes arguments into the core or demotes them to the periphery (with the exception of some causative-like

undergoer focus constructions of stative verbs). It influences case assignment in personal pronouns, but not argument order. Overall, its effect seems to be most adequately explained in functional-semantic rather than syntactic terms.

2.5 Verbal prefixes

Takivatan Bunun has a large set of verbal prefixes (De Busser 2009: 265–388; more than 150 verbal prefixes have been counted). Table 3 gives some examples that are relevant to the discussion at hand.

Table 3. Some verbal prefixes

Type	Prefix	Function
Locative	<i>i-</i>	Stationary (space & time); ‘at, in’
	<i>mun-</i>	Allative (space & time); ‘towards’
	<i>maisna-</i>	Ablative (space & time); ‘from’
Event type	<i>ma-</i>	Marks dynamic events
	<i>ma-</i>	Marks stative events
	<i>min-</i>	Marks inchoative events
Participant orientation	<i>is-</i>	Marks instrument orientation
	<i>ki-</i>	Marks beneficiary orientation
	<i>sin-</i>	Marks resultative object orientation

This subsection is mainly concerned with three participant orientation (PO) prefixes that encode pragmatic information about participants:

- i. The instrumental (INSTR) prefix *is-*.
- ii. The beneficiary (BEN) prefix *ki-*.
- iii. The resultative object (RES.OBJ) prefix *sin-*.

The instrumental prefix indicates that the event expressed by its host comes about with the help of an instrument, as in (34).

- (34) *Maq a ʔimakuna ni aipi tu isludaq bunun.*
maq a [ʔima-kun-a]
 DEFIN LNK hand-DEF.SIT.MED-LDIS
ni [aipi]_{UN:INSTR} tu is-ludaq [bunun]_{UN:PAT}
 NEG DEM.S.PROX COMPL INSTR-beat people
 ‘These hands here, they are not for beating people.’ (TVN-013-001:19)

The beneficiary prefix *ki-* is rare and has so far only been attested with the root *saiiv* ‘give’. It gives prominence to the beneficiary of an event, as in (35).

- (35) *Kisaivʔak qaimaŋsuð*
ki-saiv-[ʔak]_{UN:BEN} [qaimaŋsuð]_{UN:PAT}
 BEN-give-1S.TOP thing
 ‘I want to borrow things.’ (lit: ‘Somebody has to give me things.’)
 (TVN-xx2-004:3)

The resultative object prefix *sin-* gives prominence to a patient-like argument that is the result of the event expressed by its host, as in (36).

- (36) *Sinsusuað bunuað*
sin-⟨su⟩suað [bunuað]_{UN:RES.OBJ}
 RES.OBJ-⟨REP⟩-grow plum
 ‘They had grown plums (indicates that the plums are already on the tree).’
 (TVN-012-001:41)

Functionally, these prefixes are similar to focus suffixes in that they refer to a particular participant role of the event and thereby indicate that this role is somehow pragmatically and syntactically privileged. In terms of their exact morphological and syntactic effects, however, there are important differences.

First, PO prefixes almost never occur on verbal stems that do not express dynamic events; examples such as (37) are rare. There are also no attestations of PO prefixes with locative or directional verbal stems. Focus suffixes, on the other hand, readily combine with all kinds of verbal stems.

- (37) *Istamasaðan, udinunan*
is-tamasað-an [udinunan]_{LO}
 INSTR-strong-LF gathering
 ‘We were very fervent at the (prayer) gathering.’ (TVN-008-002:221)

Example (37) provides further evidence that focus suffixes and PO prefixes are grammatically distinct: the stem *tamasað* contains both an instrumental prefix *is-* and a LF prefix *-an*. This would not be possible if the prefix and the suffix were in paradigmatic opposition.

Another difference is that the focus suffixes influence case but do not affect argument order, whereas two of the PO prefixes, BEN *ki-* and RES.OBJ *sin-*, influence both case and argument order. These two changes only co-occur when both arguments involved in the switch are personal pronouns, as in (38)–(39).

- (38) *Masaivʔak su tilas.*
ma-saiv-[ʔak]_{AG} [su]_{UN:BEN} [tilas]_{UN:PAT}
 DYN-give-1S.TOP 2S.N cereal
 ‘I give you rice.’ (constr.)

- (39) (...), *na kisaivzak su tilas*.
na ki-saiv-[zak]_{UN:BEN} [su]_{AG} [tilas]_{UN:PAT}
 so BEN-give-1S.TOP 2S.N cereal
 '(I don't have rice anymore), you give me rice!' (TVN-xx2-003:46)

The instrumental prefix *is-*, on the other hand, appears to change neither argument order nor case assignment.

- (40) *ispaluzluzak viazi bunun*.
is-pa-luzluz-[zak]_{AG} [via-i]_{UN:INSTR} [bunun]_{UN:PAT}
 INSTR-CAUS.DYN-wound-1S.TOP knife-PRT people
 'I use this knife to wound a person.' (TVN-xx2-008:40)

Examples like (38)–(39) might be interpreted as an indication that PO prefixes exhibit a voice-like or applicative-like behaviour, because they raise the instrument, beneficiary or resultative object to actor position. However, both passivisation and applicativisation typically lead to a change in transitivity: the first demotes an agent to the periphery; the second adds a peripheral object to the core (see Dixon 1994). Neither happens in the case of PO prefixes. Since instruments, beneficiaries and resultative objects are best analysed as core arguments (see 2.1.3), PO prefixes have no effect on the valency of verbs. They merely reshuffle the order of two core arguments.

2.6 Causative prefixes

Section 2.1.1 showed that in some environments, UF constructions have causative-like semantics. In addition, a subset of verbal prefixes (see Table 4) have variant forms with unambiguously causative semantics, i.e. they indicate that an external agent is involved in the event or that the argument which is syntactically encoded as the agent and which is the main agentive force in the event is not the instigator of the event. Causative forms are typically formed by replacing the initial consonant *m-* of the neutral form by a morph *p-* and can express both direct and indirect causation.

Table 4. Neutral and causative variants of prefixes

	Neutral	Causative
Dynamic	<i>ma-saiv</i> 'give'	<i>pa-saiv</i> 'cause to give; make give'
Stative	<i>ma-sihal</i> 'good'	<i>pi-sihal</i> 'make good'
Inchoative	<i>min-haiða</i> 'become prosperous'	<i>pin-haiða</i> 'cause sb to become prosperous'
Allative	<i>mun-han</i> 'go'	<i>pun-han</i> 'cause to go; make sb go; put'
Ablative	<i>maisna-?ita</i> 'come from there'	<i>paisna-?ita</i> 'cause to come from there'

Causative forms commonly occur in AF constructions and with the UF prefix *-un*. Combinations with LF *-an* exist, but are less common (see (21) for an example).

- (41) *palusʔan inta*
pa-lusʔan inta
 CAUS.DYN-celebrate 3P. DIST
 ‘(The leader) tells them to celebrate.’ (TVN-012-001:79)

- (42) *patasʔiun*.
pa-tasʔi-un
 CAUS.DYN-make-UF
 ‘I will have it fixed (by someone else).’ (TVN-xx2-004:16)

Speakers are usually very reluctant to allow for the introduction of the causer as an explicit argument in causative constructions, especially with dynamic verbs. In the corpus, causatives typically occur without arguments following the verb, as illustrated by the concatenation of causative in forms in (43). This requires that their referents are somehow accessible in the discourse, either because they have been explicitly introduced in a previous sentence or because their identity is clear from the discourse context.

- (43) *Maqai haiḁa tantuŋuka, pisihalun paluŋku, pasihal baḁbaḁ, pakaunan*
maqai haiḁa tantuŋu-ka pi-sihal-un pa-luŋku
 if have visit-DEF.SIT.DIST CAUS.STAT-good-UF CAUS.DYN-sit.down
pa-sihal baḁbaḁ pa-kaun-an
 CAUS.DYN-good talk CAUS.DYN-eat-LF
 ‘If there is a visitor, you have to let him sit down comfortably, and talk to him in a pleasant way, and give him (something) to eat.’ (TVN-013-001:15)

With undergoer forms of adjectives and locative/directional verbs, it is somewhat easier to add explicit causers, although these constructions are still rare. In these cases, the causer appears in the agent slot and the agent of the original construction (now the causee) becomes an undergoer.

- (44) *Na punhanun ḁaku aipi Kuhkuta patasʔiun*.
na pun-han-un [ḁaku]_{CSR/AG} [aiḁi]_{CSE/UN}
 IRR CAUS.ALL-go.to-UF 1S.N DEM.S.PROX
[Kuhku-ta]_{PLACE} pa-tasʔi-un
 K.-DEF.REF.DIST CAUS.DYN-make-UF
 ‘I will take this thing to Kuhku to have it fixed (by someone else).’
 (TVN-xx2-004:17)

3. Problems with transitivity

3.1 Philippine-style argument alignment systems

The analysis of argument alignment — and by extension the concept of transitivity — has been problematic for many languages with a Philippine-type system and this has led to intense discussions throughout the twentieth century (see French 1988: 265–388, Wouk & Ross 2002 and Arka & Ross 2005 for general overviews). Indicative of the problematic nature of these alignment systems is the fact that even the choice of a term to describe them creates controversy, the main contenders being ‘voice’ and ‘focus’ (Blust 2002). An important reason for the controversy is that in many of these languages argument marking on the verb exhibits a more-than-binary contrast targeting up to five different argument roles, and it is often not clear what the basic form is. Two general lines of thought have developed to deal with this unusual complexity (see Himmelmann 2002, Himmelmann 2005).

A first group considers the focus system to be a more complex version of a traditional voice system. Some older accounts try to analyse Tagalog and other Philippine languages as having a nominative-accusative system. The actor focus construction is taken to be the active voice, while all other focus forms are passive derivations (e.g. Bloomfield 1917; Blake 1925). Most linguists would now agree that this analysis does not correctly represent how these systems operate and, as Bloomfield himself implied, was largely the result of a Eurocentric approach towards linguistic analysis.

A number of more recent studies attempt to interpret Philippine-type alignment systems as ergative systems (e.g. Mithun 1994, Starosta 2002, Reid & Liao 2004, Ross & Teng 2005). In most proposals, the undergoer focus construction is considered the active construction, as in (46), and the actor focus is analysed as an antipassive derivation, as in (45).⁸

- (45) *q'emv*alup[=*aken*]_{AG} [*tua vavuy*]_{UN:PAT} [*i gadu*]_{LO}
 <AF>hunt=1S.ABS OBL pig LOC mountain
 Core NON-core NON-core
 ‘I hunt boar on the mountain.’ (Paiwan; Ross 2006)
- (46) _{AG}[*ku*=]qalup-en [*a vavuy*]_{UN:PAT} [*i gadu*]_{LO}
 1S.ERG=hunt-UF ABS pig LOC mountain
 Core Core Non-core
 ‘I hunt boar on the mountain.’ (id.)

The proposed status of other (locative, instrumental, etc.) focus types is variable and often unclear. In some proposals they are variants of the (active) undergoer construction (e.g. Ross & Teng 2005); in others they are considered to

be applicative derivations (e.g. Kroeger 1996). The main problem with these approaches is that they usually require a reformulation of the concept of ergativity as it is traditionally defined, e.g. in Dixon 1994. For instance, there is no morphologically unmarked voice in these analyses (or the antipassive actor focus voice is unmarked) and the actor focus voice is typically interpreted as an intransitive antipassive construction, despite the fact that it has no dedicated antipassive marker (Ross & Teng 2005: 750–751). Foley 2007 contains a detailed discussion of problems following from an ergative analysis of Philippine-style alignment systems; additional issues will appear in the discussion below.

The second line of thought considers Philippine-type alignment systems to be what Himmelmann (2002) calls symmetrical voice systems (e.g. McKaughan 1962, Schachter & Otanes 1972, Foley 1998, Foley 2007). The general assumption in these approaches is that rather than exhibiting an asymmetry between active and passive or antipassive voices, verbal affixes in a Philippine-style alignment system indicate choices that all have an equal morphosyntactic status. In its more extreme form, the symmetrical alignment model implies that focus morphology in Philippine-style systems does not mark voice, because it does not change the overall transitivity of a construction, but rather triggers a pragmatic realignment of the arguments in the predicate-argument complex by indicating that a certain functional-semantic role is the topic of the construction (Schachter & Otanes 1972, Schachter 1976). One problem with these approaches is that, to different extents, they abandon traditional concepts of voice and transitivity, thus excluding Philippine-style systems from a straightforward typological comparison with most other argument alignment systems in languages all over the world. It has also been argued that pragmatic or functional factors are a rather weak explanation for the structure of the predicate-argument complex.

The dual opposition above is a simplification. Many other analyses for Philippine-type languages have been proposed that do not neatly fall in one of the two camps. Also, there is considerable variation between the argument alignment systems of individual languages and it is unlikely that one unified approach will fit all cases. However, it is hard to deny that, whatever alignment system is postulated for a particular language, the fundamental question at the centre of each analysis will be the status of transitivity in an alignment system that allows for a manifold opposition between argument marking options.⁹ For instance, is it still possible to talk of intransitive constructions when many common subclasses of verbs, including stative and directional verbs, allow for both undergoer and locative referencing on the verb? And how does transitivity work when the many morphological mechanisms that contribute to argument realisation in these languages are all based on different formal or functional distinctions?

It is this general question about the validity of the concept of transitivity that will be of particular importance in the remainder of this article. In Section 4, we will return to it and I will try to formulate a tentative answer based on argument alignment in Takivatan Bunun. The remainder of this section explores how the behaviour of particular subsystems of Takivatan argument alignment, and discrepancies between their behaviours, poses particular problems to traditional approaches towards transitivity, which presuppose a strict opposition between transitive and intransitive constructions and often assume that languages have either an ergative-absolutive or a nominative-accusative system, or a mixture of both (see Comrie 1978; Dixon 1994).

3.2 Transitivity on the level of the lexicon

On a lexical level, differences between the grammatical behaviour of various verbs warrants a division of verbal roots into a number of major subclasses that largely appear to correspond to typical transitive and intransitive subclasses in other languages: there is a large class of dynamic verbs which is typically thought of as encoding for an agent and undergoer (dyadic verbs), and classes of adjectives and locative/directional verbs which are typically thought of as having only an agent-like semantic role (both monadic verb types).

Table 5. Examples of typical members of verbal subclasses

Dyadic dynamic	Monadic adjectival	Monadic locative/directional
<i>saiν</i> 'give'	<i>sihal</i> '(be) good'	<i>han</i> 'be at, go to'
<i>daŋað</i> 'help'	<i>taiklas</i> '(be) intelligent'	<i>zita</i> '(be) there'
<i>patað</i> 'kill'	<i>naskal</i> '(be) glad'	<i>baʔav</i> '(be) in a higher location'

Each of these subclasses exhibits its particular syntactic behaviour. For instance, neutral (i.e. non-causative) AF forms of adjectives only have an agent, and maybe a locative argument, but never an undergoer. This means that AF constructions such as (48), which involve an adjective and expresses a meaning like 'I am good-ing you', are not allowed.

(47) *ma-sihal-ʔak*
 STAT-good-1S.TOP
 'I am good.'

(48) **ma-sihal-ʔak* *suʔu*
 STAT-good-1S.TOP 2S.N

However, it is possible to render a meaning like the above by using a UF construction.

- (49) *sihal-un-ʔas*
 good-UF-2s.TOP
 ‘You are made good / put in a good position / ...’ (lit: ‘You are good-ed’)

We also saw in 2.4 that, although focus marking can occur on any type of verb, there are differences in the effect they have. UF *-un* does not change the overall semantics of a construction with a dyadic dynamic verb, but it appears to trigger a causative interpretation in adjectives and locative/directional verbs. The most straightforward conclusion is that the differences in the behaviour of verbal subclasses are caused by effects which largely correspond to transitivity in many other languages.

3.3 Verbal morphology and transitivity

3.3.1 *Focus suffixes*

Section 2.4 illustrates that the only generally observable effect of focus suffixes on argument realisation is that they change case assignment in personal pronouns. They do not influence argument order and do not force or block the overt expression of arguments (although they influence the likelihood that certain arguments are expressed). With the exception of certain rare causative-like UF constructions of stative and locative verbs, which introduce a causer argument, they are not valency-changing and can therefore not be interpreted as voice markers (see Dixon & Aikhenvald 2000: 7–11).

Even if we would disregard this fact and analyse focus as voice, the result would not fit in well with established notions of transitivity. Interpreting UF *-un* and LF *-an* as voice markers would imply that a ternary distinction exists between agent (AG), undergoer (UN) and locative argument (LO) rather than the binary distinction between A/S and O or between A and S/O in an accusative or ergative system respectively. Since voice typically operates on core arguments, the consequences for transitivity would be that:

- i. Dyadic dynamic verbs are typically ditransitive, as they can occur in AF, UF and LF and as a consequence must have AG, UN and LO as core arguments.
- ii. Adjectives are either transitive or ditransitive, as they occur in AF, UF, and LF.
- iii. Locative/directional verbs have the potential to be transitive, as they can occur in AF and UF and therefore have AG and UN as core arguments.

It has been suggested that the locative argument is a peripheral argument. This would imply that LF *-an* is an applicative suffix, because it would raise a peripheral

argument to core status (see Peterson 2007: 1–2). This analysis gets rid of the profusion of ditransitives, but it does not solve the overall problem. All major verb classes, including adjectives and locative/directional verbs, would still have two voices (AF and UF voice) and would therefore be transitive. No class of intransitive verbs would exist in the language. In addition, it is difficult to explain why applicative LF *-an* would appear in the same morphological slot as voice marker UF *-un* and why both would exist in complementary distribution. Foley 2007 points out a number of additional inconsistencies in applicative interpretations of focus affixes.

Various ergative analyses of argument alignment in Austronesian languages of Taiwan and the Philippines have been proposed. We will focus here on Ross 2006, which considers AF constructions to be intransitive antipassive derivations of the transitive UF construction (see exx. (45)–(46)). Locative and instrumental focus (exx. (50)–(51)) are analysed as variants of the undergoer voice,¹⁰ but probably need to be interpreted as applicative derivations, since they demote the patient to an oblique position.

- (50) $_{AG}[ku=]qalup-an [a \text{ } gadu]_{LO} [tua \text{ } vavuy]_{UN:PAT}$
 1S.ERG=hunt-LF ABS mountain OBL pig
 ‘I hunt boar on the mountain.’ (Paiwan; Ross 2006)

- (51) $_{AG}[ku=]si-qalup [a \text{ } vuLuq]_{UN:INSTR} [tua \text{ } vavuy]_{UN:PAT}$
 1S.ERG=IF-hunt ABS spear OBL pig
 ‘I hunt boar with a spear.’ (Paiwan; Ross 2006)

At first sight, the ergative analysis is attractive because it reduces the profusion of voices and core arguments, but it has a number of problematic consequences. The problem with interpreting one or more of the focus affixes as applicatives has been pointed out above. More seriously, an ergative analysis assumes that UF constructions are the neutral choice while AF constructions are antipassive derivations, despite the fact that there is no morphological evidence to back this up: in the Paiwan examples, the active UF construction (46) is marked by a suffix *-en* and the antipassive AF by an infix ** (this is in fact acknowledged by Ross & Teng 2005: 750–752). In Takivatan, the actor focus is morphologically unmarked and all other focus types are marked; see e.g. (1)–(3). This excludes an ergative analysis altogether.

It is also not clear to me that the analysis of the undergoer as a peripheral argument in AF constructions such as (45) is motivated by anything else than a theoretical need to create an intransitive construction. It is marked with a noun phrase particle, but so are all free noun phrases, and unlike many demoted objects in the antipassives of other languages, it is not omitted very often; in fact, it is the most commonly expressed argument in the examples in Ross 2006. Finally, even

if an ergative analysis of Takivatan Bunun argument alignment were feasible, it would still not solve the problem stated at the onset of this section, as it would not account for the fact that stative and locative/directional verbs can be marked by UF *-un* and LF *-an*.

In Takivatan, any analysis of focus as voice is problematic because voice is a valency-changing process (see Dixon & Aikhenvald 2000: 6–8). There is no evidence that any of the focus suffixes consistently change the valency of any construction, since they normally do not trigger the deletion or addition of any core argument and have no influence on the argument order. Taking this into account, the most straightforward conclusion is that Takivatan focus morphology is not voice. The simplest analysis of the paradigm is that it is a tripartite system that cross-references agents, undergoers and locations and is generally applicable to most subclasses of verbs. Such a system does not fit into traditional models of transitivity and argument alignment.

3.3.2 *Participant-orientation prefixes*

It is tempting to interpret the PO prefixes INSTR *is-*, BEN *ki-* and RES.OBJ *sin-* as applicative-like morphemes, since they raise instruments, beneficiaries and resultative objects to what would be the position of the topical agent in a neutral AF construction. The problem with such an analysis is parallel to that for a voice analysis of focus suffixes: applicatives are typically valency-changing devices (Dixon & Aikhenvald 2000: 13–16, Haspelmath & Müller-Bardey 2004). On the other hand, PO prefixes do not demonstrably add any arguments to a construction and they do not raise peripheral arguments to core argument status or demote core arguments to the periphery.

Traditionally, the instrumental prefix *is-* and the dynamic verbal prefix *ma-* have been considered part of the focus paradigm. De Busser (2009: 266–271) discusses why this is not a good idea for Takivatan Bunun. Although PO prefixes are functionally similar to focus suffixes, they can co-occur with the latter on the same host verb and their grammatical behaviour is quite distinct: they change both case and argument order, whereas focus suffixes only change case and never influence the syntactic position of any argument. Considering one or more PO prefixes with the focus suffixes to be part of a single voice paradigm would imply that instruments, beneficiaries and resultative objects are all core arguments, making many verb classes potentially penta- and hexa-transitive.

However, if PO prefixes do not mark voice and are not applicatives, their exact function needs to be determined, since it is obvious that they influence argument alignment. Again, a clash with established interpretations of transitivity seems unavoidable.

3.3.3 *Causatives*

Causative constructions in Takivatan often do not allow for the introduction of an explicit causer (see 2.6). This has implications for the determination of the transitivity value of the constructions in which they occur, as causatives are typically thought to be valency-increasing operations (Comrie 1976, Dixon & Aikhenvald 2000, *pace* Kittilä 2009). Furthermore, they tend to co-occur with UF *-un*, as in (42)–(44) above. The presence of a UF suffix leaves the agent of the non-causative construction in the agent (causee) slot of the causative construction and blocks the realization of an explicit causer. In such environments, causative prefixes can be deleted when they are recoverable from the pragmatic context (i.e. they are optional).

The evidence suggests that focus suffixes mediate in the realisation of causative constructions, in complex interaction with causative morphology. At this moment, it is not clear how and if this can be explained through established approaches to valency-changing morphology.

3.4 Argument realisation and transitivity

3.4.1 *Core versus periphery*

In 2.1.3, we saw a list of syntactic criteria that justifies the division of arguments into one group that includes agents, undergoers (patients, beneficiaries and instruments) and locative arguments, and another that includes arguments expressing place, time and manner. From a syntactic point of view, it makes sense to consider the former group to be core arguments: they can be marked on the verb, can be topicalised, and are never realised as prepositional clauses. By the same criteria, the latter group then have to be interpreted as peripheral arguments. This is unusual from a general typological perspective because it supposes that, apart from agents and patients, arguments representing semantic roles such as the beneficiary, instrument and location belong to the core argument set (and as a consequence to the valency) of all Takivatan verb classes.

Traditionally, the set of core arguments includes three argument roles, S, A and O (see Dixon 1994), in ditransitive constructions sometimes expanded with one or more extended arguments, which typically correspond to the beneficiary or instrument (E in Dixon 1994; T[theme] and R[recipient] in Haspelmath 2005). With the exception of Austronesian languages of Taiwan and the Philippines, I am not aware of languages where locative arguments are commonly analysed as belonging to the set of core arguments for all verb classes.

3.4.2 *Restrictions on argument realisation*

Some restrictions on the expression of arguments are determined by mechanisms unrelated to transitivity. For instance, we saw that in most situations speakers do

not express more than two free noun phrase arguments on a single verb. In most cases, when there is a need to realise two or more noun phrases in a single clause, as in (40), speakers prefer to distribute the free noun phrases across two verbs in a complex verb phrase.

- (52) *Makusiazak viati nazispaluzlu? bunun.*
ma-kusia-[zak]_{AG} [via-ti]_{UN:PAT}
 DYN-use-1S.TOP knife-DEF.REF.PROX
na-is-pa-luzlu? [bunun]_{UN:PAT}
 IRR-INSTR-CAUS.DYN-wound people
 ‘I use a knife to wound him.’ (adapted from TVN-xx2-008:38)

A consequence is that, when the two noun phrase slots are filled by non-topical arguments, the argument that is targeted by verbal morphology can not appear in the clause. Thus, the number of arguments that can explicitly be realised in a clause is partly determined by purely formal restrictions on the maximum complexity of the predicate-argument structure. This number is never greater than three free NP arguments on a single verb, but usually there is no more than one argument (as is common in Philippine-type languages; see Foley 2007:23).

4. Towards an analysis of Takivatan argument alignment

In the introduction to Section 2, the separation of the argument alignment system in morphological and syntactic subsystems was motivated by a desire to reduce the complexity of the overall analysis. There was an expectation that there would ultimately be an opening to reintegrate the various analyses of these grammatical subsystems into a single, unified model of argument alignment.

However, reintegration is only possible when the modules to be integrated are aligned along similar semantic and/or morphosyntactic divisions. We have seen that instead, there is little conformity:

- i. Focus suffixes show a tripartite distinction and cross-reference AG, UN, and LO.
- ii. PO prefixes show a multiple distinction between different subtypes of under-goer (minimally between instrument, beneficiary and resultative object), but do not mark agents and locations.
- iii. Free pronouns distinguish between a topical agent form and a neutral form for all other cases.
- iv. Bound pronouns mainly mark topical arguments, but also have a rare form marking non-topical agents.

- v. Argument order distinguishes between agent, instrument, beneficiary, patient and location, but there is no separate slot for the resultative object.
- vi. The number of overt arguments per clause is restricted to three and this can block the expression of an argument that is marked on the verb.

Even in isolation, none of these divisions straightforwardly corresponds to distinctions in traditional argument alignment systems. More worryingly, it is not clear how they can be recombined into a single coherent system, as each subsystem divides the set of arguments in a different way and some of the subdivisions are mutually incompatible. A reasonable conclusion is then that argument alignment in Takivatan Bunun is not governed by a singular grammatical principle, such as nominativity or ergativity or transitivity. Instead, the evidence suggests that argument alignment emerges from a complicated and sometimes imperfect interaction of various morphosyntactic subsystems.

This implies that the notion of transitivity as a basic, indivisible concept in Takivatan grammar is no longer tenable: if no singular grammatical mechanism controls argument alignment, there cannot be a unitary principle of transitivity that is valid in all argument alignment subsystems. What remains is a system in which transitivity is at best epiphenomenal, an idealised artefact that is the result of our observations as linguists, or language users, of a number of imperfectly interacting argument alignment subsystems.

5. Conclusion

In this article, I have given a description of the different morphological and syntactic subsystems that contribute to argument alignment in the Takivatan Bunun predicate-argument complex. I have demonstrated that the divisions made by these individual subsystems and their interactions challenge traditional notions of transitivity and argument alignment. Rather than attempting to come to a holistic account of the resulting system, I argue that it is more opportune to consider argument alignment as the result of the imperfect interaction between relatively independent subsystems. Such an analysis suggests that transitivity is epiphenomenal, as it results from our idealised observation of these interactions.

The proposed solution has been formulated in a tentative manner and more research is needed to determine how these different grammatical subsystems interact precisely and how they result in the creation of an argument alignment system that is perceived as coherent by actual language users. It should also be stressed that the analysis proposed in this article is tailored to the Takivatan Bunun argument alignment problem. It might be more generally applicable to other

Philippine-type argument alignment systems, but then again it might not. However, it does illustrate that in some languages it is not possible to treat argument alignment and, by extension, transitivity as axiomatic grammatical properties.

List of abbreviations

Argument marking

A	transitive subject	O	transitive object
AG	agent	PAT	patient
BEN	beneficiary	PLACE	place (peripheral)
CSE	cause	R	recipient
CSR	causer	RES.OBJ	resultative object
E	extended argument	S	intransitive subject
INSTR	instrument	T	theme
LO	location	UN	undergoer

Interlinear glosses

1S	first person singular	LO	locative case
2S	second person singular	LOC	locative particle
3P	third person plural	MAKE	verbalising prefix with meaning 'make'
ABS	absolutive	MED	medial
AF	actor focus	N	neutral case
ALL	allative	NEG	negative
BECOME	inchoative	NTOP	non-topic
BEN	beneficiary	OBL	oblique
CAUS	causative	PN	personal name
COMPL	complementiser	PO	participant orientation
constr.	constructed example	POSS	possessive
DEF	definiteness marker	PROX	proximal
DEFIN	definitional construction	PRT	particle
DEM	demonstrative pronoun	PRV	perfective
DIST	distal	REF	referential definiteness marker
DYN	dynamic	REP	repetitive
EMPH	emphatic	RES.OBJ	resultative object
ERG	ergative	S	singular
HL.AG	high agency	SIT	situational definiteness marker
I	first person inclusive	STAT	stative
INSTR	instrumental	TOP	topic
IRR	irrealis	TRANS	transfer
LDIS	left-dislocator	UF	undergoer focus
LF	locative focus	VIS	visual
LNK	linking element		

Notes

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2. De Busser 2009 records more than 200 distinct verbal affixes, the majority prefixes.
3. Blust 1999 uses differences in causative variants between dynamic and stative *ma-* as an argument for homophony in Pazeh, another Austronesian language of Taiwan. See also Himmelmann 2006 on the functions of *ma-* in Tagalog.
4. The only exception is the core locative argument, which sometimes appears after other arguments, but in some situations also in second position, immediately after the verb and before the agent slot.
5. Note that the causative construction in English is an artifact of the translation.
6. As in other Formosan languages, a productive process exists in Takivatan which combines reference to the notional undergoer of an event with a derivational prefix to encode the event as a whole, e.g. *puvanis* ‘hunt for wild pig’ (← *vanis* ‘wild pig’), *pisusaq* ‘shed tears’ (← *usaq* ‘tear’).
7. Literally ‘... buy our clothes there.’ The inclusive pronoun in the example refers to a second person singular, in this case a child. The construction is similar to English constructions such as ‘how are we today?’.
8. The glosses were adapted to the better fit the general typological literature. It is common in the study of Philippine-type languages to refer to the bound ergative pronoun as the genitive pronoun and to the absolutive case as the nominative case.
9. Transitivity is here interpreted as the property of the predicate-argument structure and of subclasses of verbs that determines the number of core arguments they typically occur with. In contrast, the terms *monadic* and *dyadic* are used to refer to the number of indispensable participants that are typically thought to belong to the event encoded by the verb.
10. Ross marks them as UV2 and UV3 (undergoer voice 2 and 3).

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Questions on transitivity

Iatmul and beyond

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This paper presents those areas of Iatmul morphosyntax that are relevant to a discussion of transitivity. Evidence for the syntactic status of subject and direct object as core arguments comes from S=O ambitransitive verbs, S/O pivots in complex predicates, switch reference, relative clause formation, agreement marking, and obligatory focus marking. In contrast, there is no evidence for the concept of an “indirect object”. Other relevant phenomena to be explored are case marking, verbs whose morphological make-up correlates with transitivity, zero anaphora, and coalescent nouns in complex predicates. In summary, if languages can be characterized by the extent to which they have grammaticalized the control cline between actor and undergoer, Iatmul can be located in the middle field, with a clear subject category, and a more variable direct object function, whose instantiation is primarily determined by semantic and pragmatic factors.

Keywords: Iatmul, Papuan, transitivity, valency, linguistic typology

1. Introduction

Iatmul is a Papuan language of the Ndu family, spoken in the East Sepik Province of Papua New Guinea. If we add up all dialect groups and the urban diaspora, the total number of speakers may well exceed 40,000. The language is endangered, as young people now grow up with Tok Pisin as their first language, although many of them later learn Iatmul as their second language.

The morphosyntax of Iatmul is moderately synthetic and mildly fusional, with bound morphology being predominantly suffixing. Basic constituent order is AOV/SV, and subjects (S/A) appear unmarked for case and are cross-referenced on the verb. The data for this paper come from my own fieldwork of about 14 months, distributed over four trips taking place between May 2005 and December 2008; I spent most of my time in *Koloku* village (also spelled *Korogo* or *Korogu*),

where Western Iatmul is spoken, with some influence from the neighbouring central dialect. Previous descriptions of Iatmul morphosyntax are Jendraschek (2009a, 2009b, 2009c) and Staalsen (1965, 1972, no date); some of Staalsen's data were reproduced and interpreted in Foley (1986).

In §2, I will discuss certain theoretical prerequisites for a discussion of transitivity. §3 will then present constructions, verbs, and markers from Iatmul that are relevant to a discussion of the role of transitivity in that language. §4 discusses some theoretical implications, looking beyond Iatmul.

2. Theoretical prerequisites

When dealing with transitivity, we can start at the higher syntactic levels, and from there work our way down to see the effects on the lower levels of syntax and morphology. The converse perspective would be a bottom-up approach which would take the behaviour of verb roots and case relators as the starting point and explore their role on the higher levels. These two approaches reflect two different aspects of transitivity. The top-down approach explores how the characteristics of a situation are expressed by the morphosyntax of the language. This is essentially an onomasiological perspective. The bottom-up approach in contrast takes the synchronic morphosyntax for granted and is more relevant if we want to study linguistic structures in isolation, as in a lexicon which describes the morphosyntactic behaviour of individual verbs. Such an approach is more akin to a semasiological perspective, as we describe the potential uses of different classes of verbs and relators, rather than the functional motivations underlying those uses.

In my view, the best approach is a combination of the two, as it takes into account the absence of biuniqueness, that is the fact that there is no one-to-one mapping between functions and forms. This point is very relevant for the Iatmul data. We must also keep in mind that a term such as “transitive verb” is only a shortcut for “a verb that can be used in transitive constructions”, in the same way as “transitive subject” is a shortcut for “subject NP that appears in a transitive construction”. In many languages, including Iatmul, phenomena such as zero anaphora and indefinite object deletion blur the distinction between transitive and intransitive constructions.

A transitive clause has two “syntactically privileged” arguments (Næss 2007: 6), commonly labelled A and O. While these or similar labels have become a common notational convention, it still seems useful to briefly discuss them here. Dixon (1979: 60) defines S, A, and O as “universal syntactic-semantic primitives” or “the three core semantico-syntactic relations” (1979: 61). Næss (2007: 7) adopts Dixon's labels S, A, and O to refer to core participants, S being the single participant of an

intransitive clause, and A as the most agent-like participant of a two-participant clause. A is typically encoded as the subject. O is defined — semantically — as that “argument whose referent is most likely to be saliently affected by the activity” (Dixon 2010: 116). This corresponds — syntactically — to that argument which in languages having a case system is marked with accusative or absolutive case. Lazard (1994, 1997, 1998, 2002) also identifies the “major” bivalent construction by semantic criteria, as “the morphosyntactic correlate of the prototypical action” (2002: 180) with a controlling agent and an affected patient. Finally, Hopper & Thompson (1980) use the labels A and O while being primarily concerned with pragmatic or discourse phenomena. In essence, thus, A and O correspond to thematic macro-roles in the sense of Lehmann (2005: 154). They are neither cognitive categories nor language-specific realizations of them, but a methodological artefact at the typological level, where A is the prototypical, or idealized, morphosyntactic manifestation of the macro-role “actor”, and O that of the “undergoer” — in the sense of Lehmann (2005: 158–160), where these two macro-roles are defined as the two participants at both ends of the control cline. Lehmann’s terminology and definition go back to Foley & Van Valin (1984: 29), who characterize the undergoer “as the argument which expresses the participant which does not perform, initiate, or control any situation but rather is affected by it in some way”.

Dixon’s (2010: 116–117) “E” argument (for “extension”) corresponds to Lehmann’s (2005: 160) thematic macro-role “indirectus”, as both authors independently agree that its prototypical semantic role in three-participant situations is that of a recipient, and that its prototypical morphosyntactic realization is the dative-marked indirect object.

A and O are quite unlike S in that they have a clear semantic basis. This definitional bias accounts for the confusion surrounding those labels, but it can be overcome if we use S, A, O, and E as “comparative concepts” in the sense of Haspelmath (2010):

[...] comparative concepts [...] are used for cross-linguistic comparison and are specifically created by typologists for the purposes of comparison. [...] comparative concepts [...] allow us to identify comparable phenomena across languages and to formulate cross-linguistic generalizations.[...] Comparative concepts are not always purely semantically-based concepts, but [...] they usually contain a semantic component.

In conclusion, a clause symbolically represented as AVO is a highly abstract representation of a “prototypical action” (Lazard 2002: 152). Being a prototype, it has fuzzy edges, and corresponds to a variety of realizations, both across languages and within one language. At the language-specific level, there may be a variety of morphosyntactic instantiations for A or for O, or for the verb controlling them.

The question for the descriptive linguist will not so much be whether a given clause is transitive or not, but (a) which morphosyntactic instantiation corresponds to higher vs. lower transitivity and (b) how rigid the syntactic constraints and the morphological marking are. This is how I will use these labels, keeping in mind their mixed semantic and syntactic basis and relevance. They will be written in capital letters. As for E, I will argue in §3 that there is no core argument instantiating the indirectus in Iatmul, so there will be no need for the label E at that point. For arguments other than S/A, and O, the best practice will be to refer to them by their participant (=semantic) role such as goal or recipient.

3. Transitivity issues in Iatmul

In this section, I will present those areas of Iatmul morphosyntax that are relevant for a discussion of transitivity, in other words, the grammatical manifestations of the control cline between A and O. This exploration can provide answers to questions of descriptive and theoretical interest such as: Which factors determine case-marking and how can we summarize the function of a given marker? To what extent are we dealing with morphosyntax, and where do semantic and pragmatic factors come in? How do we identify participants in discourse and how do they relate to the situation core? How can we describe the relationship between predicates of various types and the NPs in the clause?

§3.1 presents the Iatmul case markers, and illustrates the polysemy of the dative. §3.2 discusses semantic and pragmatic factors determining differential object marking. In §3.3, I will argue that the abstract semantic bases of the Iatmul dative and locative can be explained by the two parameters transitivity and involvement. In §3.4, we will see a subclass of verbs where the fossilization of verb-verb compounds into manner prefixes has led to transitivity being morphologically marked on those verbs. In §3.5, I will show that Iatmul uses zero anaphora for referentially activated complements, which can make it difficult to distinguish transitive and intransitive use of verbs. §3.6 deals with ambitransitivity and ditransitivity, presenting relevant criteria showing that ditransitive verbs need not be recognized for Iatmul. In §3.7, we will see that the weak status of valency requirements can lead to syntactic ambiguities. A zero-marked constituent for example can be S, A, O, or goal. In §3.8, we will see how arguments can coalesce with the verb and thereby lose their argument status; the syntactic autonomy of the coalescent nouns is reduced, but not as much as we would expect if we had noun incorporation. Finally, §3.9 will provide some examples where two verbs share (some of) their arguments. If the argument frames of the two verbs differ, the same participant can have more than one syntactic role.

3.1 Polysemy of relators

Iatmul has the following case suffixes:¹ *-kak* ‘dative’, *-(na)ba* ‘locative’, *-ak* ‘allative’, *-akwi~okwi* ‘comitative-instrumental’, and *-ala~na(la)* ‘comitative’. We could include \emptyset and label it ‘nominative’, but we should keep in mind that an NP without a case marker can be S/A, non-specific O, or goal. My occasional use of \emptyset does not imply any theoretical claim that this is a zero morpheme in the strict sense, that is, a signified without a signifier. It is just a descriptive convenience to contrast different NPs, in particular those with a case suffix and those without. The symbol \emptyset will therefore not be used in glossed examples. Iatmul illustrates the complementarity of head- and dependent-marking (cf. Nichols 1986: 77–78): the subject (S/A) is the only syntactic role that is never case-marked (unlike the differential marking for some other roles), and at the same time the only argument cross-referenced on main clause predicates by bound morphemes indicating person (1/2/3), number (SG/DU/PL), and gender (M/F, only for 2SG and 3SG). There is no dedicated case to mark O, i.e. ‘accusative’; instead the dative and locative can mark O and a variety of adjuncts, depending on various factors that will be discussed shortly. Case marking operates on the phrase level, i.e. noun phrases are only marked once, namely on the last element of the NP.

Iatmul exhibits differential object marking (cf. Lazard 1994: 228–232; see also §3.2). Unlike common nouns, pronouns (1) and proper nouns (2) in O function are always marked with the dative suffix *-kak*.

- (1) *di'-kak kut-taa gepma kiya-ikiya-li*
 3SG.M-DAT do/take-CONSEC village bring-IRR-1DU
 ‘We will take him and bring him to the village.’
- (2) *Pali'bei-kak si'-j-a-n*
 Palimbei-DAT spear-3PL-SR-NR
 ‘when they speared the [people from] Palimbei’

The nominal hierarchy is not always the determining factor for the presence of the dative marker, in particular when marking NPs whose referents have other semantic roles, such as addressee (*nameikat* ‘to my mother’ in (3) as the addressee of ‘ask’) and theme (*wuna naabikat* ‘about my age’, here in post-verbal antitopic position). The allomorphs *-kak* and *-kat* of the dative suffix were originally in diatopic variation (Western vs. Central Iatmul), but their distribution has become more random because of an increasingly mixed population in Koloku village.

- (3) *namei-kat yi-ka wakala-kiya-wun wun-a naabi-kat*
 mother-DAT go-DEP ask-IRR-1SG 1SG-GEN year-DAT
 ‘I will go and ask my mother about my age.’

In (4), *-kak* marks the topic of the conversation.

- (4) *jula tau-li'-j-a* *kava-kak gabu-li'-ka-ni'n*
 net put.upright-IPFV-3PL-SR place-DAT speak-IPFV-PRS-1PL
 'We're talking about the place where they put their nets.'

As *-kak* is not limited to marking one semantic role, ambiguity is expected. In (5), the marked NP *nyaan* 'child' can be interpreted as addressee, but it can also be the theme of the message, with the addressee being left unspecified. It is usually clear from the context which role is meant.

- (5) *li'l-a* *nyaan-kak wa-wun*
 3SG.F-GEN child-DAT say-1SG
 a. 'I said it to her child.'
 b. 'I was talking about/referring to her child.'

Adjunct NPs indicating a reason can also be marked by *-kak* (6). In that case, *-kak* is a short version of the complex postposition *-kak ti'-ka* '-DAT stay-DEP', which is explicitly causal. In (6), it goes on the demonstrative² *wugi* 'that', which refers back to the preceding clause.

- (6) *Wun-a nyagei-kak taba Waji'mauk klada-ka-di'*.
 1SG-GEN sister-DAT already water.spirit get:descend-PRS-3SG.M
 'Wajimauk has pulled down my sister.'

Wugi-kak gla-li'-ka-wun wa-di'.
 D3.SG.M.NR-DAT cry-IPFV-PRS-1SG say-3SG.M
 That's why (because of that), I'm crying, he said.'

Finally, *-kak* can mark goal NPs that depend on a motion verb. The marker *-kak* is systematically used when the goal is animate, as illustrated by (7).

- (7) *nyi'n-kak ya-wun*
 2SG.F-DAT come-1SG
 'I came to/for/because of you.'

This example shows again that *-kak* can correspond to various semantic roles, such as goal, beneficiary, or reason. Another way to look at this "polysemy" is to say that in Iatmul the marking is not polysemous, but has a prototypical, albeit abstract meaning, namely that of marking a relatively central participant which is not controlling the situation, but typically affected by it (see also §3.3).

The goal is not marked with *-kak* when it is a mere location. However, *-kak* is used on goal NPs corresponding to a purpose. Note the difference between (8), where 'school' is interpreted as a concrete location (the school as a building) and

(9), where it is an activity (an abstract entity, where ‘go to school’ means ‘receive an education’).

- (8) *sule yi-li²-niⁿ*
 school go-IPFV-1PL³
 ‘We went to the school (building).’
- (9) *sule-kak yi-li²-niⁿ*
 school-DAT go-IPFV-1PL
 ‘We went to school (activity).’

There is a third case to mark goals, the allative suffix *-ak* (or *-at*). Whether a goal NP can be zero-marked depends on the semantics of both the noun and the verb. In (10), the verb is *kwakla* ‘leave (tr.), let go’. A zero-marked second argument would have to be interpreted as a patient, in this case the entity that is being left behind. This is different from verbs like *yi* ‘go’ or *ya* ‘come’, which are motion verbs inherently oriented towards a location as their goal. To indicate that a dependent NP is a goal of a non-motion verb like *kwakla*, allative-marking is obligatory, while dative marking is excluded for locations that are goals (in contrast to purposes and animate goals).

- (10) *wan wa³-k-kak gu-ak kwakla-li³*
 D3.SG.M crocodile-DAT water-ALL leave-3SG.F
 ‘She let go/sent that crocodile into the water.’

The allative on *gu* cannot be left out here; at best, a sentence like *wan wa³-kkak gu kwaklali³* could mean something like ‘she left some water for that crocodile’. Another interesting feature of the Iatmul case system is what we might call “differential recipient marking”, as the locative marker *-ba* is also used to mark (animate) recipients. In this function, it alternates with *-kak*, the difference being that only *-ba* can be used if the referent is not the final recipient, but rather perceived as a location where something is temporarily left.

- (11) *saanya Yavi-ba kwi-wun*
 money Yavi-LOC give-1SG
 ‘I left the money with Yavi (but it may not be for him).’
- (12) *saanya Yavi-kak kwi-wun*
 money Yavi-DAT give-1SG
 ‘I gave the money to Yavi (and it would normally be for him).’

It also matters which role is highlighted: If the noun phrase is marked with the locative *-ba*, the role as location is highlighted (whether the transferred object is intended for the recipient or not), if it is marked with *-kak*, the recipient is at

the same time a beneficiary. This brings us to the next subsection, the differential marking of semantic roles.

3.2 Semantic and pragmatic conditioning of relators

A given syntactic role can be expressed by more than one relator, e.g. O can be zero-marked, carry the dative case *-kak*, and in other contexts the locative *-ba*. Such differential object marking depends on various factors such as the individuation and affectedness of O, the control and volition of A, and the semantics of the predicate. In my use of the terms ‘individuation’ and ‘affectedness’, I follow Hopper & Thompson (1980: 252–253). In this section, we will look at the marking of affected participants and the factors determining the selection of either \emptyset , the dative *-kak*, or the locative *-ba* to mark them.

3.2.1 *Individuation, affectedness, involvement*

One factor determining case-marking is the nominal hierarchy. The nominal hierarchy distinguishes various kinds of referents according to their potentiality for being A rather than O, i.e. to be the controller of an event (Dixon 1994: 84). With respect to Iatmul, this hierarchy can be represented in a simplified way as in Figure 1.

pronouns > proper noun > human > animate > inanimate

Figure 1. Nominal hierarchy

A human is more individuated (here more accurately: empathy-inducing) than a pig. From a human perspective, humans are eaters and pigs are to be eaten. This is why the O-marking suffix *-kak* on *bâk* ‘pig’ in (14) sounds odd: a pig is (perceived as) less affected by being eaten than a human.

(13) *wa’k du-kak taba ki’-di’*
 crocodile man-DAT already eat-3SG.M
 ‘The crocodile has eaten the man.’

(14) **wun bâk-kak taba ki’-wun*
 1SG pig-DAT already eat-1SG
 ‘I have eaten the pig.’

Case-marking also correlates with different degrees of referentiality. A specific, empathy-inducing undergoer is marked with *-kak*, as in (13), whereas a non-referential undergoer is zero-marked, as in (15).

- (15) *wa'k taba du ki'-di'*
 crocodile already man eat-3SG.M
 'The crocodile has eaten (a) man.' (non-referential O)

The O in (13) is interpreted as definite, as it contrasts with *du ki'ta-kak* 'man one-DAT', which would highlight indefiniteness of O. So while the numeral *ki'ta* 'one' is pressed into service as an indefinite singular article, the zero-marked O in (15) receives a transnumeral interpretation. Locative *-ba* is used to background the O, as in (16). Where it contrasts with *-kak*, this construction is functionally equivalent to the antipassive of ergative languages, as it demotes the O to a more peripheral status. Demotion is defined here as the deviation from a basic AOV construction with an individuated and maximally affected patient as in (13). (16) can also be subsumed under "oblique constructions", in which "the object is marginalized" and "treated like adverbials, locational, instrumental, or other" (Lazard 2002: 164). Note that the subject referent *wa'k* triggers singular agreement on the verb regardless of the number of crocodiles, due to its relatively low position on the empathy hierarchy.

- (16) *wa'k du-ba ki'-li'-ka-di'*
 crocodile man-LOC eat-IPFV-PRS-3SG.M
 'The crocodiles feed themselves on men.' (demoted O)

Semantically, the marking with *-ba* in (16) indicates that the patient is considered to be a regular source of food, akin to an instrument (the role of instrument is also encoded by *-ba*). If the actor eats that food regularly, *N-ba ki'* expresses the concept of 'to feed on' (where, interestingly, English also marks the food like a location). Humans are not considered to be a regular source of food for any animal, which explained the hesitation to accept *-ba* in (16). Such a construction is nevertheless imaginable for speakers, if there were, for example, crocodiles that survived by eating humans. Note however that an O marked with *ba* is not necessarily non-referential, as in *wugi bapba ki'ka* 'eating from that pig', where *bak* (the coda of which assimilates here to the onset of the suffix) is modified by the demonstrative *wugi* 'that' (and the pig had been repeatedly mentioned in the story). We will get back to a comparison of the different constructions in §3.2.3.

While demotion to a more peripheral role is primarily a syntactic process, the alternation may have semantic correlates and express simultaneous reduction of involvement and affectedness. This can also be seen in (17), where *-ba* on *nau* indicates that the sago is only moderately affected, while having at the same time the more peripheral role of an instrument; a similar effect can be obtained if we translate *-ba* into English as 'with'. Note that dative-marking on the NP *wugi nau*

‘that sago’ would be ungrammatical for lack of individuation, as was the case for *bák* ‘pig’ in (14).

- (17) *wugi nau-ba sau-di*
 D3.SG.M.NR sago-LOC fry-3PL
 ‘They fried (with) that sago’; ‘They used that sago to fry it’

On definite common nouns with human referents, *-kak* is not obligatory, but preferred. In (18), the presence or absence of *-kak* has no semantic effect: the noun *ta’kwa* is already marked as definite and identifiable because of *wuna* ‘my’.

- (18) *wun-a ta’kwa vi’-mi’n?*
 1SG-GEN woman see-2SG.M
 ‘Have you seen my wife?’

When the referent is not human, but still animate (i.e. an animal), only definite Os can be marked with *-kak*. As in (18), this is not obligatory, so that definiteness is only a prerequisite for marking. The marking on such referents has a more specific function of explicitly singling out and pragmatically foregrounding a referent. The optionality of case-marking in those cases where the referent is an animal, definite, but not singled out, entails that without *-kak* it is not clear whether we are talking about a specific dog or any dog. (19) and (20) illustrate this ambiguity with predicates involving different semantic roles (stimulus/impression vs. patient for O).

- (19) *wa’la vi’-mi’n?*
 dog see-2SG.M
 ‘Have you seen a/the dog?’
- (20) *wa’la vatnya-di*
 dog kill-3PL
 ‘They killed a/the dog.’

Whether marking with *-kak* is possible or obligatory also depends on the predicate. The NP representing the stimulus of the verb *vaak* ‘to fear’ is always dative-marked regardless of its position in the nominal hierarchy. This is plausibly due to the fact that *vaak* is not the best example of a typical transitive construction, as a stimulus is not an affected participant, but rather an affector (cf. Lazard 1994: 41). If we follow this argumentation, then the Iatmul construction would correspond to ‘I’m afraid because of X’, rather than ‘I fear X’. Other than for the conspicuous case-marking, it is difficult to put forward evidence for this claim, as this admittedly leads to a somewhat circular argumentation. We would be saying that the construction is intransitive because of the empathy-insensitive dative-marking; and at the same time explain the case-marking by the atypical transitivity profile of the situation.

Whereas dative-marking is obligatory for the second argument of *vaak* ‘be afraid’, it is restricted for the patient of a verb like *ki* ‘eat’. We have seen that an animal, especially one that is dead, is not perceived as empathy-inducing enough to trigger marking with *-kak* as the O of *ki*. Such dative-marking on an O becomes (more) acceptable however if the O is further modified, e.g. by a relative clause (21).

- (21) *wan gusi'ga-ba t-a da-kak ki'-ka li'-di'*
 [D3.SG.M box-LOC stay-SR]_{RC} thing-DAT eat-DEP stay-3SG.M
 ‘He was eating the things that were in that box.’

The possibility of dative-marking in such inanimate Os was a recurrent topic in the linguistic sessions I had with speakers. The dative-marking always seemed unnatural to them at first, but became more acceptable the more we talked about an example. In the end, they would usually concede that dative-marking would be acceptable if the speaker really wanted to insist on the identity of that O. It had to reach a degree of individuation that would normally be reserved for humans. In other words, the differential object marking would reflect discursive salience.

While dative-marking on non-humans is restricted with the predicate ‘eat’, the situation is different with the verb *vi* ‘see’. In (22), the O receives dative marking if it is foregrounded, e.g. in a situation where the fish has just been caught and is the only fish I have caught that day. I would not be looking for just any fish, but for the specific fish I caught.

- (22) *kaami-kak vi'-mi'n?*
 fish-DAT see-2SG.M
 ‘Have you seen that fish?’

3.2.2 *Intensity and volitionality*

Since the dative is a very versatile case, further factors are involved in its distribution. Dative-marking on NPs lower on the nominal hierarchy not only singles out a specific referent, but also seems to express a high intensity of the action expressed by the verb. Take (23), where *vi* implies more than just ‘seeing’, namely the more intensive and controlled ‘look for’.

- (23) *yau tu-laa taka-laa wuba kamino-kak vi'-ka-ni'n*
 rope tie-CONSEC put-CONSEC D3:LOC bait-DAT see-PRS-IPL
 ‘After tying the rope, we then look for a bait.’

And in (24), the crocodile hunters are not just seeing the trail, but are looking for it, which plays a central role in the following discourse.

- (24) *di'n-a yim-kak vi'-ka, yim ki'ba li'-ka-di' wa-laa*
 3SG.M-GEN trail-DAT see-DEP trail D1:LOC stay-PRS-3SG.M say-CONSEC
 'Looking for its (the crocodile's) tracks, confirming that these are its tracks'
 [...] *wuba giyabak sugwa taka-ka-ni'n*
 D3:LOC that's.all fishing.rod put-PRS-1PL
 '[...], that's where we set the trap.'

Finally, (25) is from a story about growing up in the old days, and the narrator explains what his generation used to do when they reached a certain age. One of those things was to choose, i.e. to 'look around for' a wife. (25) contains another instance of *-kak*: *vaalakak mi'niba vi'ka* 'watching [how to make] a canoe with [our own] eyes'. Here, *vi'* translates best as 'watch'. In all these cases, the case-marking on the O correlates with control and volition of the A.

- (25) *taba gusa viya-a vaala-kak mi'ni-ba vi'-ka,*
 already paddle hit-DEP canoe-DAT eye-LOC see-DEP
 'Making paddles, watching how to make canoes'
vaala-vadi' kla-a gusa-vadi' kla-a
 canoe-design get-DEP paddle-design get-DEP
 'acquiring the knowledge of how to make canoes and paddles'
wupmâ yi-ka gaai kuk-ka, ja'bi' viya-a
 D3:ADV go-DEP house do-DEP table hit-DEP
 'then going on to make a house, making a floor'
wupmâ ti'-ka yi-ka laba ta'kwa-kak vi'-ka-ni'n
 D3:ADV stay-DEP go-DEP already woman-DAT see-PRS-1PL
 'staying on like this we start looking for a wife'

Note that *ta'kwakak* does not correspond to a definite or referential participant here, so that this is clear evidence that *-kak* does not express individuation of O in this case, but volitionality of A. Another factor involved here is the interpretation of the situation as telic, i.e. as having an endpoint corresponding to an achievement; in (25), that achievement would be to find a wife and marry her. Similarly, for *vaala-kak vi'* 'canoe-DAT see' from the first line, the achievement is to acquire the knowledge of making canoes. In summary, the different examples have shown that dative-marking on O indicates high transitivity according to several of the parameters of transitivity in Hopper & Thompson (1980: 252).

3.2.3 From tripolar to bipolar constructions: the transitivity gradient

We are now in a position to rank the different constructions according to their transitivity. In the most transitive pattern (in terms of individuation and affectedness

of O) the patient is dative-marked. The least transitive pattern occurs when there is no direct object at all. In between, we find constructions with a zero-marked O (weakly transitive) and with a locative-marked patient (more transitive). So while (13), (15), and (16) are all transitive, they are not transitive in the same way. Rather, there is a transitivity gradient correlating with marking by *-kak>-ba>-Ø*, as we are moving from a ‘tripolar’ (A-O-V) to a ‘bipolar’ (AOV) construction (Lazard 1994: 247; 1998: 235). In the tripolar construction, the two central participants are treated as equally individuated, whereas in the bipolar construction one of them is in some way marginalized so that the construction approaches the morphosyntax of intransitive constructions. Along a continuum of transitivity, the bipolar construction can be located between the canonical transitive and the single-participant intransitive construction (Lazard 1994: 247). As for the application of such a hierarchy to Iatmul, we have seen that *kak* is found on highly individuated or otherwise salient Os, that is NPs which constitute maximally autonomous constituents: the construction is tripolar and therefore the most transitive in this respect. The locative marked O is also autonomous, does not coalesce with the verb, but marks the NP as more peripheral. Finally, the zero-marked NP is typically characterized by low individuation and reduced autonomy. Its status as a constituent (and therefore ‘pole’ in this model) is weak, which explains its tendency to coalesce “into” the predicate; see §3.8. This construction is therefore the least transitive. In the case of a coalescent O, the distance between V and O is small; in the case of a locative-marked O, that distance is large. Transitivity is highest in between (Lazard 1994: 253).

3.3 The semantic basis of the Iatmul dative and locative

Which semantic basis can we reconstruct for the different uses of *-kak* and *-ba*? As for the first, it marks the second most salient participant after that represented as the subject. This saliency is due to either a high position on the nominal hierarchy, or such situational characteristics as volitionality, control, involvement, telicity, or affectedness, i.e. high transitivity in the sense of Hopper & Thompson (1980: 252–253). In other words, *-kak* marks an “anti-A”, a participant that is involved, salient, or individuated enough to compete with the typical A on these scales, and by virtue of such properties could be interpreted as A, or has the potential to affect the actual A. While we would expect these two constellations to correlate, they are in fact to be distinguished. The former construction refers to case-marking as a way to distinguish otherwise similar participants, or to signal participants in an unexpected role. The second constellation seems counter-intuitive at first glance, as we have a mark on O apparently signalling characteristics of A. However, what is signalled is rather a particular type of interaction between the two core participants,

and marking the nature of such a relation on the more peripheral member of the relation is one cross-linguistic option of differential marking among others.

Now consider the situation where A acts on a participant that is not individuated, or if the predicate is low in transitivity, e.g. ‘see’ as opposed to ‘look for’. In that case, the completion of the event does not affect A to the same extent. We have seen that the Iatmul dative also marks purpose (9), and the semantically related roles reason (6) and theme (3), (5). Here too, the A is affected, as it would be the beneficiary if the purpose eventuates.

At the other end of the spectrum, *-kak* contrasts with locative *-ba*, which overlaps with *-kak* for marking themes and as we go further towards the periphery becomes the default marker for roles that do not qualify for dative marking, e.g. less individuated or salient participants, such as locations or instruments (cf. Stalsen 1972: 56).

If we tried to obtain an even more abstract description of the semantic basis of the dative and the locative (at the cost of disregarding the remaining markers including \emptyset on O and goals for that purpose), we may reduce the parameters to two, transitivity as defined by the parameters in Hopper & Thompson (1980: 252) on the one hand, and involvement as defined in Lehmann (2005: 156–158) on the other. A combination of these parameters yields Figure 2.

	transitivity	
involvement	high	low
high	\emptyset	<i>-kak</i>
low	<i>-kak</i>	<i>-ba</i>

Figure 2. Transitivity and involvement

While \emptyset (‘nominative’) marks the most central participant, the one that is most involved and “most responsible” for high transitivity and therefore encoded as subject, *-kak* (‘dative’) marks those roles which have certain characteristics of A without being A, with *-ba* (‘locative’) marking roles associated with low transitivity and involvement.

This situation is reminiscent of a “Split-O” system (Bowden 2001: 165–166), except that the Iatmul situation is more “fluid”, as there are more options, and there is often more than one option for the same role. Nevertheless, the parallels between the Iatmul system described above and the system in Taba are striking, and Bowden’s terminological choice to distinguish between a “close undergoer” vs. “remote undergoer” could be applied to Iatmul *-kak* vs. *-ba*. In Taba, the close undergoer includes objects of affect, non-instigating themes, recipients, and stimuli

of emotion, while the remote undergoer includes the roles instrument and location (Bowden's terminology). Under the label "close undergoer", we find some of the roles mentioned above for Iatmul, where they are all marked by *-kak*. The stimulus of emotion would be the second argument of a verb like *vaak* 'to be afraid, to fear', which is indeed marked by *-kak*. As for the remote undergoer, instrument and location are marked identically in Iatmul as well. To conclude, *-kak* can be said to mark a close undergoer, *-ba* a remote undergoer (more accurately, the argument NPs expressing these roles). The mapping of marking onto semantic roles is thus very similar in both languages. Although one could try to find glossing labels to reflect this property, I will, for the sake of convenience, keep the more traditional labels "dative" for *-kak* and "locative" for *-ba*. One should keep in mind that these labels are not intended to reflect the functional range of the two markers.

3.4 Transitivity and verbal morphology

We have so far been looking at the morphological marking of noun phrases to determine how this reflects the transitivity profile of the clause. As for the predicate, there is a small class of verbs whose morphological make-up correlates with transitivity. These verbs contain manner prefixes which specify the manner in which something is done, such as an instrument used, or the extent of control the actor had over the situation.

Verbs with manner prefixes originated as verb-verb compounds, and Table 1 contains putative etymologies with varying plausibility. While the semantic and phonological transparency linking *vai-* to *va'i* is obvious, the etymology of *vi'* is doubtful. The phonologically closest etymon would be the homophonous verb *vi'* 'see', but from a semantic point of view *viya* 'hit' makes more sense, with *vi'k* 'cut' being an intermediate candidate. Similar examples in the related language Manambu (Aikhenvald 2008:345) would support the etymology with *viya* 'hit'. Verbs with manner prefixes are largely fossilized as the base verb does not always co-exist as a free form, paradigms are incomplete, and the resulting forms are lexicalized with semantic idiosyncrasies.

Table 1. Manner affixes: meaning and origin

prefix	instrument	origin
<i>kV-</i>	hand	? <i>kuk</i> 'hold, touch'
<i>vai-</i>	foot	<i>va'i</i> 'step on'
<i>si'</i>	long object	<i>si'</i> 'shoot, stab, poke'
<i>vi'</i>	by hitting	? <i>vi'k</i> 'cut'; ? <i>viya</i> 'hit'
<i>tV-~lV-</i>	by itself	<i>ti'~li'</i> 'be, stay'

What is relevant for transitivity is that the first four prefixes yield transitive stems, while only the last one yields intransitive stems. This means that manner affixes can be used to form intransitive and transitive versions of the same verb root. The root itself may be a free form or always bound. In (26) and (27), we see intransitive and transitive derivations of the root *balaku*, which can itself be a free form. It happens to be intransitive, as is the derivation *li'balaku*, whose use is illustrated in (28).

intransitive:

- (26) *balaku* 'roll'
li'balaku 'turn around' ('stay-roll')

transitive:

- (27) *kubalaku* 'turn around (sth flat, e.g. fish); translate' ('hold-roll')
si'balaku 'turn around (sth round, e.g. a log)' ('stab-roll')
vi'balaku 'roll' (tr.) ('hit-roll')

- (28) *li'-balaku-ka kwa-a-li'*
 by.itself-roll-DEP lie-PRS-3SG.F
 'She turns around in her sleep.'

In the case of *tamak* vs. *kemak* 'stop', the root *-(a)mak* cannot appear by itself and therefore has only etymological relevance. The fused prefixes have no semantic content, so that we have here an ideal matching of morphological make-up with transitivity, *tamak* being the intransitive counterpart of transitive *kemak*. The use of the two forms is exemplified in (29); note that the coda of *kemak* and *tamak* (as that of *kulak* in (32)) assimilates to the following segment.

- (29) *mi'n-kak kemat-j-ay-a-n, tamak-kiya-mi'n*
 2SG.M-DAT stop:TR-3PL-IRR-SR-NR stop:INTR-IRR-2SG.M
 'If they stop you, you will stop.'

3.5 Zero anaphora of complements

Complements of verbs are generally optional when they are clear from the context. A deletion test can therefore not diagnose complements.

It is difficult to distinguish (S=A) ambitransitive use of a verb from transitive verbs with omitted Os. In intransitive use, any inferred patient (you always eat *something*) would be non-referential. An omitted O in contrast would have been introduced to the context and therefore be definite (you eat *it*). This corresponds to the distinction in Næss (2007: 124–125) between “context-independent object deletion” or “indefinite object deletion” (where an assumed patient would be non-referential) vs. “context-dependent object deletion” (i.e. zero anaphora).

(30) shows intransitive use of *ki* 'eat'. No patient has been introduced.

- (30) *wupmâ kut-ti'-di, nyakage kuk-ka ki'-li'-di*
 D3:ADV do-IPFV-3PL dry.season do-DEP eat-IPFV-3PL
 'That's what they used to do, how they ate (=obtained food) during the dry season.'

Næss (2007: 126–138) discusses various factors favouring an indefinite object interpretation in such cases, such as the semantics and aspect of the verb, as well as the affectedness and distinctness of participants. Example (31) shows an omitted (definite) O; the verb is used transitively. The O has been introduced several clauses earlier, but is still referentially activated.

[Marta went there and came back saying that the snake was hanging there in my net, and she left it there. Later she got it and went to the market, where she sold it to a Sawos man.]

- (31) *di'-kak kwi-ni'n ti'-ka kut-taa kali-ka yi-ka*
 3SG.M-DAT give-1PL stay-DEP do/take-CONSEC carry-DEP go-DEP
vi'tti'ti'k-ka kwala-laa ki'-di'
 cut.into.pieces-DEP boil-CONSEC eat-3SG.M
 'After we gave [it] to him, he took [it], cut [it] into pieces, boiled [it], and ate [it].'

It follows from there that the difference between S=A ambitransitive use and transitive use with a specific, but omitted, O is only pragmatic, and has no morpho-syntactic correlates.

3.6 Ambitransitivity and ditransitivity

S=A ambitransitivity refers to verbs which can be used transitively with an overt O (the subject is then A) or intransitively (whereby the A of the transitive construction corresponds to the S of the intransitive clause). Such ambitransitivity is difficult to diagnose in Iatmul unless it correlates with a change of meaning, but may ultimately be an analytical artefact. We saw in §3.5 that S=A ambitransitivity is difficult to distinguish from zero anaphora. Figuring out which verbs are S=A ambitransitive would thus require discourse studies for every single transitive verb in order to check whether it can refer back to a participant mentioned several clauses earlier or otherwise referred to in the context. It seems therefore reasonable to restrict the concept of S=A ambitransitivity to those verbs where there is a change in meaning, as with *kulak* whose transitive meaning is 'win (something), win against, surpass, exceed' (32) vs. intransitive 'be successful, be the winner' (33).

transitive use of *kulak*

- (32) *Mosbi Lae-kak kulat-ti'-ka'di'*
 Mosbi Lae-DAT win-IPFV-PRS-3SG.M
 'Mosbi surpasses Lae.' (=is bigger, more important)

intransitive use of *kulak*

- (33) *kada-di kulak-ka?*
 who-3PL win-PRS:SR
 'Who is winning?'

Another case of such S=A ambitransitivity is *viya*, whose transitive meaning is 'hit, beat', the intransitive meaning being 'to fight'.

- (34) *li'-kak viya-di*
 3SG-DAT hit-3PL
 'They beat her.'

- (35) *viya-di*
 hit-3PL
 'They were beating each other (i.e. fighting).'

It should be noted here that the intransitive interpretation also relies on a pragmatic inference. The marking of the verb is the same in both examples, and the undergoer in (34) could be left out (cf. §3.5), so the interpretation in (35) is based on knowledge of the particular context. The reciprocal interpretation of (35) is part of the intransitive "meaning" of *viya*. The dedicated way of forming reciprocals would be with an adverb *awaksawak* 'each other', a reduplication of *awak* 'in (re)turn'. Reflexives are marked by the adverb *avla* 'self'.

There is a small class of S=O ambitransitive verbs (see Table 2). Here, a participant role that would be the O when the verb is used transitively appears as the S when the verb is used intransitively (the form *to* in (37) is a reduced allomorph of *tau*; this variation is irrelevant for our discussion).

transitive: *tau* 'set up'

- (36) *jula yi-ka tau-wun*
 [net]_O go-DEP put.upright-1SG_A
 'I went to set the net.'

intransitive: *tau* 'stand'

- (37) *John wun-a abukaidaan-ba to-laa li'-ka-di'*
 [John]_S 1SG-GEN left.side-LOC stand-CONSEC stay-PRS-3SG.M
 'John is standing to my left.'

Particularly interesting is the verb *ti'*, which can be used transitively as a verb of possession, or intransitively as a verb of existence. It has the allomorph *li'*, which can appear in intervocalic position as a result of onset lenition. (38) and (39) exemplify the transitive use; in (39), *ti'* is the head of a same-subject relative clause, therefore 'house' is the underlying A of *ti'*, with 'four side posts' being the O.

- transitive: *li'* 'have'
- (38) *kakkakkwali'k ainak ti'-kiya gaai to-laa*
 [side.post four]_O have-IRR:SR [house]_A put.upright-CONSEC
 'having built a house that will have four side posts'
- (39) *gaai o ki'pma o ali'pma ti'-ba-wun*
 [house or ground or all]_O have-OPT-1SG_A
 'I shall have a house, or ground, or all that stuff'
- intransitive: *li'* 'stay'
- (40) *gusa ana li'-di'*
 [paddle]_S NEG stay-3SG.M
 'There was no paddle.'

Table 2 lists the most common S=O ambitransitive verbs.

The recognition of trivalent, i.e. ditransitive, verbs is problematic. Promising candidates would be verbs like *kwi* 'give', *buk* 'tell', *taaka* 'put'. However, the usual criteria for the recognition of complements (cf. Lehmann 1983, 1985) do not yield satisfying results:

Table 2. S=O ambitransitive verbs

verb	intransitive	transitive
<i>kabuluk</i>	'capsize (intr.)'	'capsize (tr.)'
<i>ku</i>	'get into the canoe'	'put into the canoe'
<i>laak</i>	'stand up'	'bring up'
<i>lavwak</i>	'come off'	'peel off, tear off'
<i>ti'</i>	'stay, exist, be'	'have'
<i>paaku</i>	'be hiding'	'hide (tr.)'
<i>sukwik</i>	'(fire) go out'	'extinguish'
<i>tau</i>	'stand up(right)'	'put upright'
<i>vatnya</i>	'get killed'	'kill'
<i>vi'</i>	'look (like)'	'look (at)'
<i>waak</i>	'go up'	'take/hang up'
<i>ya'ki</i>	'overflow'	'throw'

Obligatoriness: No, arguments are never obligatorily overt.

Only one possible relator: No, because case-markers are not governed by the argument frame of the verb, but depend to a large extent on semantic and pragmatic factors.

Slot can only be filled once: No, several arguments with the same relator can occur, as in (3). Identically case-marked NPs may have different (semantic) roles, but morphosyntax does not help with their assignment.

3.7 Ambiguity of syntactic relations

The characteristics listed above — optionality of arguments, polysemy of relators, different relators for the same semantico-syntactic role — mean that inference has to play an important role in recovering unexpressed arguments, resolve ambiguities, and deal with polysemy.

In (41), the verb *daai* can be used intransitively with *gu* as its S. The person-marking on the verb shows agreement with the S.

- (41) *gu* *daai-di'*
 [water]_{S/GOAL} descend-3SG.M
 a. 'The water has gone down.'
 b. 'He went down to the water.'

Alternatively, the person-marking can anaphorically refer to an S not represented in the clause itself. The NP *gu* would then be interpreted as a goal. As goals are generally not case-marked when they are dependents of common motion verbs, *gu* cannot be distinguished from a subject, as in the a.-version of (41).

Similar ambiguity arises with transitive verbs when an indefinite direct object is not case-marked, and the subject is not overtly represented. (42) has a transitive verb *vatnya* 'to kill', person-marked by *-di'*. This marker may be interpreted as indicating agreement with an overtly expressed A, which would be *bâk* 'pig'. The O of the verb *vatnya* need not be expressed, not even by a pronoun, if identifiable from the context.

- (42) *bâk* *vatnya-di'*
 [pig]_{A/O} kill-3SG.M
 a. 'The pig killed [X].'
 b. 'He killed a pig.'

In the interpretation corresponding to b., the person-marker on the verb would refer to a referent outside the clause, while *bâk* would be the O.

3.8 Coalescent noun phrases in lexicalized complex predicates

Some noun-verb predicates have lexicalized so that the erstwhile non-subject argument has coalesced with the verb. The result can be transitive, so that a new O slot becomes available, as in (43)–(46):

- (43) *wega kla*
 market get
 ‘sell’
- (44) *wa’gu laaka*
 hole put
 ‘bury’
- (45) *sugwa laaka*
 fishing.rod put
 ‘catch with a fishing rod’
- (46) *kaula sugwa laaka, wupmâ kut-ti’-di*
 [fish.sp.]_O {fishing.rod put:DEP} D3:ADV do-IPFV-3PL
 ‘Catching kaula fish with a fishing line, that’s what they used to do.’

The Iatmul noun-verb complex predicates are reminiscent of noun incorporation. However, the noun retains its syntactic autonomy to some extent, as the sequence can be broken up (47) or permuted without meaning change (48). The coalescent noun can even be modified as in (49), although this is rare. Examples (47)–(49) contain the lexicalized complex predicates *gu yaaku* ‘wash; bathe’ and *sudu kwa* ‘sleep’.

- (47) *gu yi-ka yaaku*
 water go-DEP wash(IMP)
 ‘Go and wash!’
- (48) *a-kwa sudu*
 IMP-lie sleep
 ‘Sleep!’
- (49) *wan gu ke yaaku-ka*
 D3.SG.M water PROH wash-PROH
 ‘Don’t wash in that water!’

Another argument against an analysis of these constructions as noun incorporation is that the coalescent noun can be put in focus. The focused NP is clefted and the extrafocal part is formally subordinate. However, the focus is not restricted to the clefted constituent, but has scope over the complex predicate as a whole, with a

reading of current relevance; see Jendraschek (2009b: 358) for details. Moreover, (50) constitutes a single prosodic unit.

- (50) *gu-a yaaku-li'-m-a?*
 water-FOC wash-IPFV-2SG.M-SR
 'Are you bathing (as we speak)?'

The *Iatmul* construction is thus reminiscent of the Persian construction consisting of an unmarked object and verb, which “are to a certain extent coalescent” so that “the construction is close to [but still different from, GJ] incorporation” (Lazard 2002: 164).

3.9 Multi-verb predicates with switch reference mechanism

Verbs with different argument frames can be combined in a subclausal linkage. Such non-nominalized dependent verb forms operate on a switch reference basis whereby a verb must indicate whether the following verb/clause to which it is linked shares the same subject referent or not (cf. Jendraschek 2009a). We shall first see a simple example with two intransitive verbs. In (51), the verbs *ka* ‘paddle’ and *wakwai* ‘advance’ share the same subject. The suffix *-ka* on the first verb indicates that the following verb has the same subject referent; the latter is cross-referenced only on *wakwaiwun*, the final verb of the chain.

- (51) *ka-ka wakwai-wun ni'di' sak'-ak.*
 paddle-DEP advance-1SG middle lake-ALL
 ‘I paddled (lit.: advanced paddling) towards the middle of the lake.’

Now compare (52) and (53); both contain forms of the verbs *paaku* ‘hide’ (here its short bound allomorph *paku-*) and *ki* ‘eat, drink, smoke’. Example (52) again contains the generic linker *-ka*, which can express a wide range of interpositional relations. In contrast, (53) contains the suffix *-kakwi*, whose semantics is more specific, as it highlights that the events expressed by the linked verbs happen simultaneously. The different semantics of the two suffixes lead to a different syntactic representation of verb-argument relations, which I symbolize by the labels in the first line.

- (52) S=A O intr. verb tr. verb
maatnyan-gu yaki paku-ka ki'-li'-ka-di
 child-PL tobacco hide-DEP eat-IPFV-PRS-3PL
 ‘the children, while hiding, smoke cigarettes’
 ‘the children smoke secretly’

- (53) A O tr. verb tr. verb
maatnyan-gu yaki paku-kakwi ki'-li'-ka-di
 child-PL tobacco hide-SIM eat-IPFV-PRS-3PL
 'the children [hide and smoke] cigarettes'
 (i.e. they smoke some of the cigarettes straight away and hide some to
 smoke later)

In (52), *paaku* is used intransitively: the children hide while smoking cigarettes. In (53), however, the same verb is interpreted as transitive: the children hide cigarettes, while at the same time smoking cigarettes. The interpretation of *pakuka* as intransitive is favoured by the versatility of the linker *-ka*. It is not only used for clause chains, but also to create verb forms equivalent to adverbs; the form *pakuka* is therefore the Iatmul equivalent of the adverb 'secretly'.

Another possibility is for the first verb to be transitive and the second to be intransitive. The two verbs can either share the same subject referent (54), or have different subjects (55) and (56). Subject cross-reference on both verbs in such a linkage indicates that the two verbs have different subject referents.

- (54) O tr. verb intr. verb
di-kak yalavi'k-ka li'-ka-wun
 3PL-DAT think-DEP stay-PRS-1SG
 'I am (staying here) thinking about them.'
- (55) S=O tr. verb intr. verb
da'mage laavwi-di li'-ka-di'
 door open-3PL stay-PRS-3SG.M
 'They left the door open.'
 lit.: 'They opened the door (and it) stays (open).'
- (56) S=O tr. verb intr. verb
vaala ada-ba kawidi kwa-a-di'
 canoe which-LOC park-3PL lie-PRS-3SG.M
 'Where is the canoe lying (after) they parked (it)?'

The construction in (54) bears similarity to periphrastic tense-aspect expressions, and can therefore be translated into English as a progressive. In Iatmul, however, the finite verb is not grammaticalized to an auxiliary, as a) there is no semantic bleaching; the semantics of *li'* implies that the subject referent is not moving; and b) it does not become obligatory, maintaining its paradigmatic relation to similar intransitive verbs such as 'sit' or 'lie'; see *kwa* 'lie' in (56).

The different-subject complex predicate construction in (55) and (56) has no equivalent in European languages, as it results from the combination of switch reference and zero anaphora. It is to some extent comparable to so-called pivotal

constructions in Mandarin, where an NP can be the object of one verb and at the same time the subject of another verb (cf. Yue 2004: 238). Note that in Iatmul the first verb in (55), ‘they opened’, is subordinate to the second, ‘it stays’, just as the non-finite form ‘thinking’ in (54) is subordinate to the finite verb ‘I stay’. Thus, the two constructions are parallel, the only difference being same vs. different subject linking. For a discussion of and evidence for the subordinate status of switch reference marked verbs and clauses in Iatmul, see Jendraschek (2009a: 1332–1334).

The subordinate status of the first verb in a chain can be clearly seen in the relative clause in (57), which contains a linkage of the two verbs *taaka* ‘put’ and *ti* ‘stay’.

- | | | | |
|------|--|---|----------------------------|
| | tr. | intr. | O=S |
| (57) | <i>ankwi</i> | <i>taaka-mi'n</i> | <i>ti'-ka nyou</i> |
| | D2.NR.M.SG | [[put-2SG.M] [stay-PRS:SR]] _{RC} | shell |
| | <i>kla-laa</i> | <i>ya-a</i> | <i>di'n-a kwap-ba waak</i> |
| | get-CONSEC | come-DEP | 3SG.M-GEN neck-LOC ascend |
| | ‘Get that shell that you put (and that stays) there, | | |
| | and come and hang it around his neck.’ | | |

The first verb is subordinated to the second inside the relative clause. The head noun *nyou* ‘shell’ corresponds to the O of *taaka* ‘put’, but the S of *ti* ‘stay’. The two verbs have different subjects. Although both verbs are part of the relative clause, only the last verb of the chain, *ti'ka*, has relative clause morphology; relative clauses are marked by the subordinating suffix *-a*, which here fuses with the present tense suffix *-ka*.

4. Theoretical implications

4.1 The status of core arguments

Many Iatmul verbs allow both intransitive use (no recoverable O) and transitive use with non-overt O (recoverable from context). This means that the absence of an overt NP representing O corresponds to two quite different constellations, one where there simply is no second participant, and another where the second participant is pragmatically present without syntactic representation. Only context can disambiguate the two constellations (cf. §3.6). This problem shows that any attempt to limit a discussion on transitivity to morphosyntactic criteria will be unsuccessful. Since the difference between non-overt Os and ambitransitive use is also a matter of how the event is conceptualized, I only recognize cases where the

intransitive use implies a change of meaning, such as *kulak* ‘win (sth./against)’ vs. ‘be successful’, or *viya* ‘hit; beat’ vs. ‘fight’.

Admittedly, a criterion such as “change of meaning” is more subjective than would be some morphosyntactic change. As with many semantic issues in typological linguistics, it is difficult to decide whether we have distinctive constructions in the language, or whether we have instead an artificial distinction imposed on the data, an artefact of interpreting data through the eyes of the metalanguage. It also remains unclear whether S=A ambitransitive verbs have two different valency frames, as the discussion in Næss (2007: 145–151) suggests that indefinite object deletion is a syntactic phenomenon involving detransitivization (with a whole array of semantic and pragmatic correlates) rather than a lexical property of a class of verbs.

The situation is clearer with S=O ambitransitives, of which Iatmul has a small class. The ability of S/A and O to be the pivot in a) such valency alternations and b) in the verb chains described in §3.9 shows their status as syntactic core arguments. The distinction subject vs. non-subject is further important for switch-reference constructions and relative clause formation. The central position of S/A — and thereby the grammaticalized status of a subject category — is also shown by agreement-marking. Another criterion showing the core status of direct object complements is obligatory focus marking of interrogative pronouns in direct object function (58), as opposed to interrogative constituents in a peripheral function (59); cf. Jendraschek (2009b: 355). Note that the focus marker has the allomorph *-na* after the interrogatives *mi'da* ‘what’ and *kada* ‘who’.

- (58) *mi'da-na kut-ti'-m-a?*
 what-FOC do-IPFV-2SG-SR
 ‘What are you doing?’

- (59) *mi'da-kak kut-ti'-ka-mi'n*
 what-DAT do-IPFV-PRS-2SG
 ‘What are you doing it for?’

In contrast, I have found no evidence in favour of recognizing the concept of “indirect object” as a third core argument, as the NPs representing recipients are best described as adjuncts.

Typologically, S=O ambitransitivity has to be distinguished from argument-rearranging operations like mediopassives. In contrast to S=O ambitransitive verbs, which have two primary argument frames — one transitive, the other intransitive — the mediopassive is a secondary (derived, marked) construction. It is generally incompatible with commands, for example. Iatmul has no argument-rearranging operations like passive or mediopassive.

The paper has illustrated that Iatmul case-marking on non-subject NPs is to a large extent determined by semantic and pragmatic factors. Syntactic disambiguation is not a priority in such a system, as the various marking options make it rather more difficult to associate an NP with a semantico-syntactic role: a zero-marked NP might be S, A, O, or with certain verbs, goal. Dative-marking, while sometimes signalling that a highly individuated participant is not the subject, can represent a patient, a recipient, a theme, stimulus, reason, purpose, etc. One major function of the system is instead to express the degree and type of involvement of participants in the situation. Often, the semantico-syntactic role can only be identified by simultaneously taking into account the properties of the participants and those of the predicate — and by applying contextual knowledge.

4.2 The grammaticalization of transitivity

Transitivity and valency are only weakly conventionalized in Iatmul grammar: While the status of S/A as the subject is clear, the status of a second core argument, i.e. its presence and its marking, is determined by various semantic and pragmatic factors rather than syntactic requirements. Another symptom of weak grammaticalization of core argument relations other than the subject is the absence of syntactic operations to rearrange argument-configurations (e.g. passive, mediopassive, antipassive) and of valency-changing derivations such as causative, deagentive/anti-causative, applicative, introversive, etc. While a bit weak on the morphosyntactic side, this system allows the language to express fine semantic distinctions such as temporary vs. final recipient (locative vs. dative), backgrounded vs. foregrounded patient (locative vs. dative), or goals that are locations vs. those that are activities (zero vs. dative).

Syntax and semantics seem indissociable in a discussion of transitivity, but it would help to keep different analytical levels apart. Comparative concepts, such as S, A, and O, and descriptive categories are not on the same level, as the former are postulated on the level of language types, whereas the latter are on the level of specific languages. Figure 3 illustrates a model of five levels, from the universal to the specific.⁴ For reasons of space I cannot provide a lengthy justification for Figure 3; see Jendraschek (2007: 24–31) for explanations.

The passage from level 1 to 5 illustrates the codification of communication. Recurrent situations on level 1 are prone to conventionalization, leading from a cognitive strategy on level 2 to a linguistic strategy on level 3, and ultimately lexicalize and grammaticalize on levels 4 and 5. Applied to transitivity, this means that at the functional level we are surrounded by people manipulating other entities, and consider it relevant on the cognitive level. On the typological level then, the comparative concepts of A and O emerge, and may ultimately be grammaticalized

	level	scope	type of entities
1	functional	mostly universal	extralinguistic situation
2	cognitive	interprets level 1, often in terms of level 3	mental representation
3	typological	subset of languages, rarely universal	comparative concepts
4	semantic	language-specific instantiations of levels 1–3	signified of descriptive category
5	structural	language-specific instantiations of level 4	manifestations of signifiers

Figure 3. Levels of linguistic analysis

in individual languages to ergative and accusative. Like other grammaticalized constructs, S, A and O and their language-particular instantiations undergo the correlates of grammaticalization, such as structural rigidification, and phonological and semantic erosion. The gradual nature of semantic erosion in particular explains why the question whether these labels refer to syntactic functions or semantic roles is difficult to answer, for it depends on the degree of desemanticization. As LaPolla (1993:760) puts it, syntactic functions represent “particular restricted neutralizations of semantic roles in particular syntactic environments”. It is no coincidence that there is no comparative concept of a dedicated case to signal S, as S tends to side with the least marked member of the case system whose primary function is to mark either A or O (cf. Dixon 1979:69). S is the most grammaticalized of the primitives, the one that is defined syntactically, because its status has been shaped by its syntactic rather than semantic context. Next on the grammaticalization hierarchy come A and O, which have both syntactic and semantic characteristics. Then comes E, typically marked by dative case, but less wide-spread as a grammaticalized syntactic primitive with core argument status than S, A, and O. *Iatmul* is one such language without “indirect objects”. E has a clear semantic basis, namely the *indirectus* (Lehmann 2005:160).

As we are dealing with syntactically more peripheral functions, we find the even less grammaticalized adjunct roles there. These are either differentiated in case systems, whence the term “semantic cases” (locative, allative, ablative, instrumental, etc.) or marked by an inventory of adpositions that do not belong to the case paradigm. Head-marking is the converse of dependent-marking, so more explicit case-marking tends to correlate with less cross-reference marking on the verb (cf. Nichols 1986:71–78). This cross-linguistic tendency to have head-marking for core argument relations but dependent-marking for less central NPs is motivated by the different locus of relationality. In the verb-complement relation, it is the verb which is relational; in the verb-adjunct relation, it is the adjunct.

The relation tends to be marked on that member of the relation that carries the slot for the other member (Lehmann 1983: 371–372; see also Croft 2001: 273). As for Iatmul, we have seen a clear example of this principle in the subject relation, which is consistently head-marked, whereas the more peripheral roles are dependent-marked. As for the goal argument of a motion verb such as *yi* ‘go’, it can be argued that the former is not case-marked because it is inherent in the meaning of the latter. In syntactic terms, this would entail that the goal argument be governed. We could hence posit zero-marked goal complements for a subclass of Iatmul verbs.

The point of this discussion is to make clear that it is not at all inconsistent to say that a given relator can mark O and goal, as I have for both the dative and zero marking in Iatmul. This simply means that it can be the conventional signifier of different nominal roles which may differ in their degree of grammaticalization. These nominal roles are located along a continuum of grammaticalization, as shown in Figure 4. Note that Figure 4 contains both E and recipient as roles, as E is a more grammaticalized, and therefore more central, role than recipient.

The nominal role hierarchy unifies two separate hierarchies, that of (semantic) participant roles and that of syntactic functions; cf. Lehmann & Shin & Verhoeven ([2000]2004: 7–12) on the two hierarchies and Lehmann ([1982]2002: 66, 96) on how they are connected by grammaticalization scales. The correlation between the two hierarchies underlies the nominal role hierarchy. This theoretical background is essential for a proper understanding of the semantico-syntactic roles appearing in Figure 4 and used in this paper. Syntactic and semantic hierarchies are connected to such an extent that they are merely two perspectives on the same phenomenon. From an onomasiological perspective, we would look for the prototypical morphosyntactic instantiation of a given semantic role, finding e.g. that the agent is typically encoded as the (transitive) subject (*if there is a grammaticalized subject category in the language; see below*). From a semasiological perspective, we would describe the semantic characteristics of a given morphosyntactic strategy, finding e.g. that A is typically occupied by agents. The correlations will be the same from both perspectives, but the comparison of the two perspectives will

	S > A > O > E > recipient, place, goal, source, instrument etc.	
	<— degree of grammaticalization	
function	syntactic	semantic
centrality	core	periphery
relationality	governed	modifying
head marking	often cross-referenced	rarely cross-referenced
dependent marking	no dependent marking > synthetic marking > analytic marking	

Figure 4. Nominal role hierarchy

reveal the lack of biuniqueness, and also the greater tendency of the core roles to grammaticalize.

That we are dealing with two perspectives rather than two systems explains the subtle differences between Næss and Dixon in their use of A and O. Næss (2007:7) insists that “S, A, and O will be used to refer to participants rather than syntactic arguments; that is, to entities entering into certain types of semantically definable relations in an event”, but Dixon (2010:116) also in fact states that “[a]llocating functions A and O to the two core arguments in a transitive clause has a semantic basis”. The difference, then, lies in the extent to which Dixon presupposes the universality of the grammaticalization of semantic relations into syntactic functions: “There are three basic syntactic-semantic categories — A, S, and O; these are true universals, being applicable to every type of sentence in every language” (Dixon 1979: 109).

It is interesting to compare this statement with Foley & Van Valin (1984:32), who concur with Dixon on two points, (a) the semantic basis of syntactic functions, and (b) the universality of (at least two) core argument/participant roles. As for the first point, they conclude that “actor and undergoer [...] have both semantic and syntactic significance” and “constitute an interface between syntactic relations [...] and semantic relations”. As for the second point, they claim that actor and undergoer are “universal semantic relations, and as such part of the grammar of every language”. The important difference to Dixon is however that they “make no such assumption with respect to grammatical relations such as subject and direct object”, something that Dixon explicitly does when he spells out A as “transitive subject”.

S, A, O refer to comparative concepts belonging to the realm of language types. It follows from there that we have to account for types of languages where S/A and O are not grammaticalized to syntactic functions. Diller (1988:277) for example argues with regards to the concepts of subject and direct object that “it would be difficult to defend such notions as autonomous grammatical relations for Thai along the lines that such relations have been argued for in English”, and that the behaviour and interpretation of noun phrases is determined by semantic and pragmatic factors. In the same vein, LaPolla (1993:760) argues “that there has been no grammaticalization of syntactic functions in Chinese” and that instead the “correct assignment of semantic roles to the constituents of a discourse is done by the listener on the basis of the discourse structure and pragmatics”. And he concludes that “Chinese has not grammaticalized either an accusative or an ergative pattern, and so the syntactic categories ‘subject’ and ‘direct object’ simply do not exist in Chinese” (LaPolla 1993:804).

Diachronic phenomena such as the grammaticalization of case markers and the establishment of verbal cross-reference are signs of an emerging syntactic

identity of S, A, and O (and sometimes E) as core arguments. They come under the syntactic control of the verb, which in the process becomes subcategorized for the number, role, and marking of its complements. As with all cases of grammaticalization, this process is more advanced in some languages, and has not taken place in others. Transitivity as a clause-level phenomenon is the input to the grammaticalization process; to the extent that this process takes place, it will be reflected in verbal valency. This entails that in a given language, the relation between clausal transitivity and verbal valency can be tight or loose. If it is tight, the argument frame of a given verb stem is generally obvious and rigid; complements are often obligatorily realized, and there will be derivational operations to change the number or the morphosyntactic status of the verbal dependents. If the relation is loose, verbal dependents tend to be optional and the distinction between complements and adjuncts is weak, if not inapplicable. In such cases, the number of overt dependents that come with a verb, and their marking is more a matter of semantics and pragmatics, rather than syntax, or to put it differently, the syntax will be less rigid, as transitivity is less grammaticalized. In Diller's (1988:274) words, such languages have "pragmatically organized syntax". To a large extent, this is true for Iatmul.

Abbreviations

A	transitive subject	LOC	locative
ADV	adverbial	M	masculine
ALL	allative	NEG	negator
CONSEC	consecutive	NR	nominalizer
D	demonstrative	O	transitive object
DAT	dative	PL	plural
DEP	dependent verb form	PROH	prohibitive
DU	dual	PRS	present tense
F	feminine	S	intransitive subject
GEN	genitive	SG	singular
IMP	imperative	SIM	simultaneous
INTR	intransitive	SR	subordinator
IPFV	imperfective		
IRR	irrealis		

Notes

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1. Iatmul data are presented in the orthography used in Jendraschek (2008). The major differences from the International Phonetic Alphabet are as follows (allophones in complementary distribution are separated by a comma, those in free variation by a tilde): *a* [a], [a]~[ʋ]; *a'* [aʔ]~[a]~[aʔ]; *a'i* [ai]~[ai]; *aa* [aʔ]; *b* [ᵐb]; *d* [ᵐd]; *g* [ᵐg]; *i'* [i]; *j* [ᵐdʒ]; *k'* [kʰ]; *l* [l]~[r]; *n'* [ŋ]; *ny* [ɲ]; *tt* [t]; *v* [β].
2. Iatmul demonstratives are morphologically extremely complex. Their first segment (*k~a~w*) indicates the deictic degree (proximate, distal, anaphoric), further segments mark gender and number, nominalness, direction, remoteness, and function in the clause (NP, locative, manner). Demonstratives precede their head noun, but certain demonstratives can also head an NP.
3. Note that past tense is zero-marked (present (*k*)*a*, irrealis (*i*)*kiya*). The imperfective aspect marking expresses that the going was either progressive or habitual: it has no influence on the interpretation of the NP.
4. A previous version of this model was first presented in Jendraschek (2007: 30), which in turn had been developed on the basis of a similar model in Lehmann, Shin & Verhoeven (2000: 3; 37). A model with three different levels can be found in Lehmann (2005: 154).

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Transitivity in Abui

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This paper explores transitivity-related features in Abui, a language with fluid semantic alignment (after Donohue and Wichmann 2008). Many known semantically aligned languages distinguish between two argument roles: ACTOR and UNDERGOER (e.g. Merlan 1985; Durie 1987; Mithun 1991, Donohue and Wichmann 2008 and papers therein). Abui system is unusual; it offers seven coding options for both single-argument and two-argument clauses. A rich set of semantic features (specificity, animacy, individuation, instigation, control, volition, affectedness, change, and change of state) drive the differential realisation of arguments. These features are known to be relevant to transitivity, differential argument marking, and split intransitivity. The paper presents a detailed analysis of these features, and explores their ranking, correlations, and clustering. Based on the Abui system, the paper characterises transitivity as a scalar and constructional phenomenon (refining Hopper and Thompson 1980; Rozwadowska 1988; and Næss 2007) applying only to a subset of two-argument clauses because there is no clear default two-argument construction that contains both actor and undergoer arguments.

Keywords: Transitivity, semantic alignment, differential argument marking, affectedness, Papuan, Timor-Alor-Pantar family

1. Introduction

This paper discusses the coding of arguments in Abui, a non-Austronesian (Papuan) language of Eastern Indonesia. The data is relevant to three interrelated debates in linguistics. The first one is the debate about the semantics underlying transitivity. The second one is the debate on differential argument marking (both subject and object), which revolves around features driving differential marking of arguments in mostly two or three-argument clauses. The third one is the discussion of semantic alignment systems (concerned with the coding options of the intransitive argument, also known as split intransitivity). Arkadiev (2008:102) points out that the problem of interrelatedness of semantic features driving semantic alignment

has not been resolved. This paper will relate discussions of semantic alignment, differential marking, and semantic transitivity to Abui data and address the issue of interrelatedness formulated in Arkadiev (2008).

1.1 Structure of the paper

The paper is organised in the following fashion. This section clarifies the terminology adopted and sketches a brief typological profile of Abui. Section 2 lays out the basic patterns of Abui argument realisation and places them in a cross-linguistic perspective. My analysis of semantic features driving the Abui argument realisation is laid out in Section 3. Finally, Section 4 tests the validity of my analysis in other domains of the grammatical system of Abui. Section 5 links my findings to the discussions of semantic features underlying transitivity available in the literature.

1.2 Language profile

Abui is a non-Austronesian (Papuan) language spoken in southeastern Indonesia.² It is a head-final and head-marking language. Pronominal prefixes refer to possessors on possessed nouns and to (maximally two) undergoer arguments on verbs. Siewierska (2011) reports that only about 7% of her sample manifests the marking of the undergoer argument alone (without also marking the actor argument). Although the undergoer-only marking on verbs is typologically rare, it is a common trait in the Alor-Pantar group. Actors are not marked on the verb but can be expressed by free pronouns. Abui nominal morphology is simple, restricted to possessor inflection; number, case and gender inflections do not appear. Verbal morphology is elaborate, including person (undergoer), aspect inflection and noun incorporation. Arguments and adjuncts precede the verb.

Abui argument realisation is complex, with differential realisation of both acting and affected argument closely tracking semantic features of the participants. Recently, Donohue and Wichmann (2008, and papers therein) have coined the term *semantic alignment* for similar systems. The term ‘semantic alignment’ refers to a system in which the intransitive arguments can be realised as both transitive clause arguments. Such system has traditionally been known as active, active-stative, agent-patient, split-S, or split intransitive (see Wichmann 2008 for a comprehensive overview of the topic).

In better-known examples of semantic alignment, such as Lakhota, Central Pomo, or Caddo, there are typically two options for coding the intransitive argument (as agent-like argument vs. patient-like argument). In Abui, there are five coding possibilities for the affected argument and multiple possibilities for the

acting argument. This means that there are not just two but many coding options for the intransitive argument. Systems with more than two coding possibilities of the intransitive argument are rare. A well-known example with more than two coding options is found in Choctaw-Chickasaw (Munro and Gordon 1982:84; Davies 1986). It seems that Choctaw-Chickasaw is typologically the closest that Abui can be compared with outside the Alor-Pantar family. Because Abui allows more than two realisations of the intransitive argument, my usage of the term ‘fluid semantic alignment’ is broader than that in Donohue and Wichmann (2008).³

In Section 4, I will show that there are no syntactic pivots and no controllers. Topical constituents precede focused ones and persist as topics in the subsequent clauses, unless marked otherwise. Topics are often left-dislocated, marked with *ba*, without a resumptive pronoun. Clause chains are the most common type of complex sentences. Clauses within the clause chain have to be ordered according to their temporal sequence.

2. Basic morphosyntactic oppositions

Both two-argument and single-argument clauses in Abui display differential marking of arguments. There is no default transitive or intransitive argument role but arguments can appear in one of the following seven argument roles: ACTOR (A), PATIENT (PAT), RECIPIENT (REC), LOCATION (LOC), GOAL (GOAL), BENEFACTIVE (BEN), and NEUTRAL (N). The labels for the argument roles (or grammatical relations) indicate which thematic roles they are typically associated with but do not imply one-to-one correspondence (cf. Bickel 2011). Instead, I will argue that the argument roles correspond to different combinations of semantic features such as specificity [SPC], control [CTRL], affectedness [AFF], individuation [IND], change [CHANGE], and change of state [COS]. Figure 1 gives a schematic overview of these features. I will present their definitions and my analysis in Section 3.

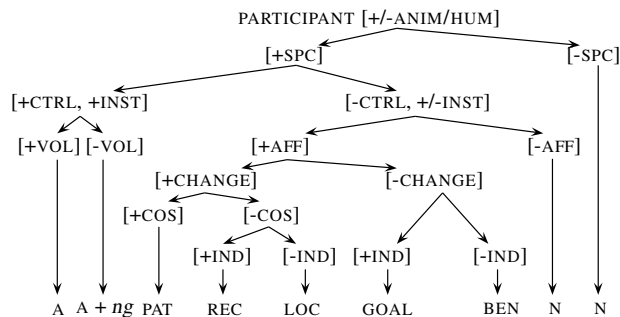


Figure 1. Semantic features driving Abui argument realisation

Table 1 summarises Abui argument types, their morphosyntactic realisation, and referential properties. Free pronouns and optional noun phrases express A arguments. Pronominal prefixes with optional noun phrases express PAT, REC, LOC, GOAL, and BEN arguments (I occasionally use the term “undergoer” to refer to all of them). All these arguments must be specific, with the exception of NEUTRAL arguments.

Table 1. Abui argument types, their realisation and referential properties

	argument type	label	realisation	specificity
a.	ACTOR	A	(NP +) free pronoun	+
b.	PATIENT	PAT	(NP +) PAT prefix	+
c.	RECIPIENT	REC	(NP +) REC prefix	+
d.	LOCATION	LOC	(NP +) LOC prefix	+
e.	GOAL	GOAL	(NP +) GOAL prefix	+
f.	BENEFACTIVE	BEN	(NP +) BEN prefix	+
g.	NEUTRAL	N	NP	±

As shown in Table 1, the first six argument roles correspond to six distinct pronominal paradigms. These pronominal paradigms are listed in Table 2.

Table 2. Abui pronominal paradigm

PERSON	A	PAT	REC	LOC	GOAL	BEN
1S	<i>na</i>	<i>na-</i>	<i>no-</i>	<i>ne-</i>	<i>noo-</i>	<i>nee-</i>
2S	<i>a</i>	<i>a-</i>	<i>o-</i>	<i>e-</i>	<i>oo-</i>	<i>ee-</i>
1PE	<i>ni</i>	<i>ni-</i>	<i>nu-</i>	<i>ni-</i>	<i>nuu-</i>	<i>nii-</i>
1PI	<i>pi</i>	<i>pi-</i>	<i>pu-/po-</i>	<i>pi-</i>	<i>puu-/poo-</i>	<i>pii-</i>
2P	<i>ri</i>	<i>ri-</i>	<i>ro-/ru-</i>	<i>ri-</i>	<i>ruu-/roo-</i>	<i>rii-</i>
3	-	<i>ha-</i>	<i>ho-</i>	<i>he-</i>	<i>hoo-</i>	<i>hee-</i>
3I	<i>di</i>	<i>da-</i>	<i>do-</i>	<i>de-</i>	<i>doo-</i>	<i>dee-</i>
DISTR	-	<i>ta-</i>	<i>to-</i>	<i>te-</i>	<i>too-</i>	<i>tee-</i>

Finally, NEUTRAL arguments can be expressed only as NPs and their referential properties are not restricted. The NP template is given in (1). Except the head noun (N), all other constituents are optional. The anaphoric demonstratives (DEM_A) mark constituents that are specific.

- (1) [DEM_S N_{POSS} N MOD QUANT DEM_A]

I will now exemplify the use of the pronominal forms listed in Table 2 and then turn to the semantic features driving the differential marking.

2.1 Use of pronominal forms in two-argument clauses

Abui pronouns listed in Table 2 can be used in both two-argument and single-argument clauses. In this subsection I will exemplify the use of pronouns in two-argument clauses and turn to single-argument clauses in Section 2.4.

Clauses that have two arguments usually (but not always) contain an ACTOR argument, such as the free pronoun *na* in (2a, 2e). The ACTOR pronouns (highlighted in bold face in examples) are free and must precede the verb. When we compare examples (2b) and (2d), we can see that only one of the human participants is realised with the ACTOR free pronoun. In my analysis, plain NPs (which do not combine with a free pronoun) are analysed as NEUTRAL arguments, semantically distinct from ACTOR and UNDERGOER arguments (see Section 4.1 for more details). The bracketing in the gloss line of (2d) shows my analysis the free pronoun *di*: the optional NP (such as *Simon di* in 2d) and the free pronoun *di* co-instantiate the ACTOR argument.⁴ The second argument is either an UNDERGOER or a NEUTRAL argument. In (2a), the prefix *a-* is a PATIENT; prefix *no-* in (2b) is a RECIPIENT; LOCATION prefix *ne-* can be seen in (2c); the prefix *noo-* in (2d) is a GOAL; and finally in (2e) the BENEFACTIVE prefix *ee-* can be seen. Prefixes (in bold face) can attach to simple verbs (2a, 2d, 2e) or to complex predicates (2b, 2c). For the ease of data parsing, I have included abbreviation of the types of arguments involved, at the right edge of the translation line, such as (A-PAT) in (2a).

- (2) a. **na** *a-ruidi*
 [1sA]_A 2s.PAT-wake.up.CPL
 'I woke you up' (A-PAT)
- b. *Fanmalei no-k yai*
 [name]_N 1s.REC-THROW laugh.CPL
 'Fanmalei laughed at me' (N-REC)
- c. **di** *palootang mi ne-l bol*
 [3A]_A rattan take 1s.LOC-GIVE hit
 'he hit me with a rattan (stick)' (A-LOC)
- d. **Simon di** *noo-dik*
 [name 3A]_A 1s.GOAL-prick
 'Simon is poking me' (A-GOAL)
- e. **ma na ee-bol**
 be.PRX [1sA]_A 2s.BEN-hit
 'let I hit instead of you' (A-BEN)

2.2 Selection of argument types and fluidity

The selection of argument roles for a particular verb is not entirely lexicalised; the system is relatively flexible. Example (3) illustrates the argument roles compatible with the verb *fanga* ‘say’ and the semantic shifts that the resulting predicate undergoes. Examples (3g, 3h, 3i) are multi-verb constructions, which will not be considered in this paper.

- (3) a. *na ha-fanga mare di mi ne-r-i*
 [1SA]_A 3.PAT-say.CNT if 3A take 1S.LOC-reach-IPFV
 ‘If I just asked it, he gave it to me’ (A-PAT)
- b. *di me kafaak fanga*
 [3a]_A come [tobacco]_N say.CNT
 ‘he came asking for tobacco’ (A-N)
- c. *a kafaak o-fangi yaa ba lol-e*
 [2sA]_A [tobacco]_N 2s.REC-say.CPL go SIM walk-IPFV
 ‘you are always asking for tobacco’ (A-N-REC)
- d. *bataa ba it do ama*
 [tree LNK that.INANIM PRX]_{LOC} [person]_N
te-wi-r he-fanga?
 where-like.MD.CPL-REACH 3.LOC-say.CNT
 ‘how do people call that tree?’ (N-LOC)
- e. *di noo-fanga ba de-ina doo-fanga,*
 [3A]_A 1S.GOAL-say.CNT SIM 3I.AL-self 3I.GOAL-say.CNT
ha-d-a sama
 3.PAT-GET.CNT same
 ‘if he is scolding me or himself, it’s the same’ (A-GOAL_(i))
- f. *na ho-pa-ng we ba kafaak fanga*
 [1SA]_A 3.REC-TOUCH.CNT-see leave SIM [tobacco]_N say.CNT
no-kaleng hare a we nee-fangi-te
 1S.REC-refuse so [2SA]_A leave 1S.BEN-say.CPL-INCH
 ‘I do not want to go ask him for tobacco, so you go ask for me’ (A-BEN)
- g. *a we moku he-l fangi ba me, na*
 [2sA]_A leave [kid]_{LOC} 3.LOC-GIVE say.CPL SIM come [1SA]_A
ha-buuk-e
 3.PAT-brace-IPFV
 ‘go and ask for that child, bring her and I will hold her (in my arms)’ (A-LOC)
- h. *a ho-k fangi-te ba di aleeka me*
 2SA 3.REC-THROW say.CPL-INCP SIM 3A quick come
 ‘tell him to come quickly’ (A-REC)

- i. *ee e-ura wee hee-no-k fanga*
 before [2s.AL-sibling.OS PL]_N 3.BEN-1s.REC-THROW say.CNT
hu ne-hee-maran-i
 T_{SPEC.AD} 1s.LOC-3.BEN-come.up.CPL-PFV
 ‘your brothers told me about it (as you know), I had to come up because
 of that’ (N-BEN-REC)

The range of meanings that an inflected verb may cover is large, the used glosses are the best approximations of its meaning. The meaning of the verbal root can shift significantly, especially when the verb combines with the PAT prefix.

Table 3 shows more minimal pairs, illustrating the meaning of each prefix. Some combinations are not attested. Abui speakers deem them either ungrammatical (asterisk) or not idiomatic (question mark).⁵ Note that the English translation does not always do justice to the differences in affectedness that the pronominal prefixes encode. For example the distinction between *he-faaling* ‘listen to it’ and *noo-faaling* ‘listen to me’ is very hard to capture with a simple English translation. The form *he-faaling* implies an affected argument, such as a song or story, which is listened to from its beginning to the end. The listening participant has heard the entire song or story. However, the form *noo-faaling* refers to the listening of bits and pieces of someone’s speech, as in eavesdropping. The entire system can be better understood in light of my analysis of affectedness presented in Section 3.2.

2.3 Differential realisation of arguments

As can be seen above, Abui — as many languages — displays differential realisation of arguments. This phenomenon is known as ‘differential case marking’ or ‘differential subject/object marking’ because it has been most intensively studied in languages with case. Typically, animate or definite arguments receive different case from inanimate and indefinite ones. Well-known examples come from Romance languages, Turkish or Malayalam; other specific examples include the Sinhalese optional case marking reserved to animate objects and the Hebrew obligatory case-marking of definite objects (see Aissen 2003 for further details).

Despite the variety of its manifestations, differential realisation of arguments is a highly principled phenomenon attested in hundreds of languages (Aissen 2003:436; Bossong 1983:8). Initially, it was thought that differential realisation is more likely to be found in transitive patients (differential object marking, DOM) than in transitive agents (Bossong 1983:18).

De Hoop and Malchukov (2008:567) have pointed out that DOM is found mostly in accusative languages while the mirror phenomenon of differential subject marking (DSM) is characteristic of ergative languages. Both head-marking and

dependent-marking languages share a bias in differential realisation of animate and specific arguments. In dependent-marking languages, DOM is found pervasively (Bossong 1983; Aissen 2003; Malchukov 2005; Kittilä 2006; de Swart 2007). In head-marking languages, differential case marking is found in both subject and object (de Swart 2007). Because there is no nominal case in Abui and the notions of 'subject' and 'object' are problematic, I will use a more neutral term 'differential realisation of arguments' here. I will explore manifestations of this phenomenon in Abui in the following sections.

Table 3. Distribution of Abui pronominal prefixes

verb	PAT	REC	LOC	GOAL	BEN
a. <i>fanga</i> 'say'	<i>ha-fanga</i> 'request him'	<i>do-fanga</i> 'ask for him-self'	<i>he-fanga</i> 'say it'	<i>noo-fanga</i> 'scold me'	<i>nee-fanga</i> 'say for me'
b. <i>liya</i> 'fly'	<i>ha-liya</i> 'shoot it'	<i>do-liya</i> 'fly on his own'	<i>he-liya</i> 'fly on it'	<i>noo-liya</i> 'fly to me'	<i>nee-liya</i> 'fly for me'
c. <i>faaling</i> 'listen'	* <i>ha-faaling</i>	<i>do-faaling</i> 'listen for himself'	<i>he-faaling</i> 'listen to it'	<i>noo-faaling</i> 'listen to me'	<i>nee-faaling</i> 'listen for me'
d. <i>wik</i> 'carry'	<i>ha-wik</i> 'carry him (child)'	<i>no-wik</i> 'carry for myself'	<i>he-wik</i> 'carry it'	<i>noo-wik</i> 'let me carry'	<i>nee-wik</i> 'carry for me'
e. <i>rumai</i> 'strong'	<i>ha-rumai</i> 'strengthen it'	<i>no-rumai</i> 'I feel strong'	<i>he-rumai</i> 'it is strong'	<i>noo-rumai</i> 'rely on me'	<i>nee-rumai</i> 'strong for me'
f. <i>fahak</i> 'embrace'	* <i>ha-fahak</i>	* <i>ho-fahak</i>	<i>he-fahak</i> 'embrace it'	<i>noo-fahak</i> 'hug me'	<i>nee-fahak</i> 'hug for me'
g. <i>dik</i> 'stab'	<i>ha-dik</i> 'pierce it (through)'	<i>no-dik</i> 'I am stabbing'	<i>he-dik</i> 'stab (at) it'	<i>noo-dik</i> 'poke him'	<i>hee-dik</i> 'stab for him'
h. <i>tang</i> 'hand'	<i>ha-tang</i> 'set it free'	? <i>no-tang</i>	<i>he-tang</i> 'pass it along'	<i>noo-tang</i> 'hand to me'	<i>hee-tang</i> 'pay for me'
i. <i>natet</i> 'stand'	* <i>ha-natet</i>	<i>no-natet</i> 'I halted'	? <i>he-natet</i>	? <i>noo-natet</i>	<i>hee-natet</i> 'wait for me'
j. <i>lel</i> 'threaten'	* <i>ha-lel</i>	? <i>no-lel</i>	<i>he-lel</i> 'almost do it'	<i>noo-lel</i> 'threaten me'	<i>nee-lel</i> 'threaten for me'
k. <i>kafia</i> 'scratch'	* <i>ha-kafia</i>	? <i>no-kafia</i> 'I scratch myself'	<i>he-kafia</i> 'scrape it'	<i>hoo-kafia</i> 'scratch him'	<i>nee-kafia</i> 'scratch for me'

Table 3. (continued)

	verb	PAT	REC	LOC	GOAL	BEN
l.	<i>tak</i>	<i>ha-tak</i>	<i>?no-tak</i>	<i>he-tak</i>	<i>hoo-tak</i>	<i>nee-kafia</i>
	'drop'	'shoot down'		'prevent it'	'stop him'	'stop for me'
m.	<i>bol</i>	<i>*ha-bol</i>	<i>ho-bol</i>	<i>he-bol</i>	<i>hoo-bol</i>	<i>nee-bol</i>
	'hit'		'him him'	'hit it'	'dust him off'	'hit for me'
n.	<i>kol</i>	<i>ha-kol</i>	<i>no-kol</i>	<i>he-kol</i>	<i>hoo-kol</i>	<i>nee-kol</i>
	'bind'	'bind it up'	'bind onto me'	'bind it'	'bind to him'	'bind for me'
o.	<i>dak</i>	<i>ha-dak</i>	<i>?no-dak</i>	<i>he-dak</i>	<i>hoo-dak</i>	<i>nee-dak</i>
	'clasp'	'clutch it'		'measure it'	'measure on him'	'measure for me'
p.	<i>beeka</i>	<i>*ha-beeka</i>	<i>no-beeka</i>	<i>he-beeka</i>	<i>noo-beeka</i>	<i>nee-beeka</i>
	'bad'		'I die'	'it's bad'	'I don't like'	'pity me'
q.	<i>beekda</i>	<i>ha-beekda</i>	<i>no-beekda</i>	<i>he-beekda</i>	<i>noo-beekda</i>	<i>nee-beeka</i>
	'get bad'	'damage it'	'I deteriorate'	'look after him'	'alienate me'	'accuse me'

2.4 Use of pronominal forms in single-argument clauses

As can be seen in (4), the argument type of the single argument in intransitive clauses varies. It can be A (4a), PAT (4b), REC (4c), LOC (4d), GOAL (4e) or NEUTRAL (4f). However, I have not found a single-argument clause with a BEN argument.

- (4) a. *ri oro luut-i*
 [2PA]_A DST dance.CPL-PFV
 'you were dancing over there' (A)
- b. *na-kaai*
 1S.PAT-drop.CPL
 'I stumbled' (PAT)
- c. *no-bui*
 1S.REC-short
 'I am short' (REC)
- d. *he-beeka*
 3.LOC-bad
 'it is bad' (LOC)
- e. *noo-lila*
 1S.GOAL-hot
 'I am hot, I feel hot' (GOAL)

- f. *he-fala do fak-i*
 [3.AL-house PRX]_N break-PFV
 'his house is broken' (N)

2.5 Semantic alignment systems

Grammatical systems traditionally known as active, active-stative, agent-patient, split-S, or split intransitive (Merlan 1985; Van Valin 1990; Mithun 1991, 2008 and references therein) are systems where the intransitive arguments can be coded in the same way as either transitive argument. In these systems the single argument of an unergative verb may be coded in the same way as the acting argument of a transitive clause while the single argument of an unaccusative verb may be encoded in the same way as the affected argument in a transitive clause.⁶

The coding of the intransitive argument is reported to be sensitive to various semantic features and can be either lexicalised or display various degrees of fluidity. Leaving the precise definitions for later, in Table 4 I list semantic features that are known to determine the argument role of the intransitive argument in various languages.

Table 4. Semantic features known to affect coding of intransitive argument

semantic feature	examples
a. Stative/dynamic	Colloquial Guaraní, Caddo (Mithun 1991), Loma (Arkadiev 2008) Taba, Dobel (Klamer 2008)
b. Telicity	Georgian (Arkadiev 2008)
c. Agency	Lakhota (Mithun 1991)
d. Control	Central Pomo, Mohawk (Mithun 1991)
e. Volitionality	Bats, Tabassaran (Arkadiev 2008) Kambera, Larike (Klamer 2008)
f. Affectedness	Central Pomo, Caddo, Mohawk (Mithun 1991)
g. Change of state	Tanglapui, Klón (Klamer 2008)
g. Patientivity	Western Basque (Aldai 2008)

As could be seen in examples (2, 4), Abui is different from most familiar languages in that there are not just two realisation options for the intransitive argument, but six different ones. The Abui system is more complex than most of the better known semantic alignment systems.⁷ Systems similar to Abui have been reported for its immediate neighbours, such as Klón (Baird 2005, 2008), Western Pantar (Holton 2010), Kamang (Schapper 2011), Kula (Tanglapui, reported in Donohue

1996), Sawila or Subo (own fieldnotes). I have indicated in Figure 1 that multiple semantic features drive the Abui argument realisation. Abui system offers a unique opportunity to study the interrelatedness and test the universality of the semantic features listed in Table 4.

2.6 Interim summary

I have shown that the arguments in both one- and two-argument clauses can be realised as seven distinct argument types. These types are A, PAT, REC, LOC, GOAL, BEN, and N. As could be seen in example (3) and Table 3, Abui verb stems do not select a single argument type but occur in various combinations and their meaning may shift in result. Example (3) shows that a single verb may combine with up to two pronominal prefixes. The Abui verb template is given in (5). The PAT prefix must always occur in the first prefix slot but the remaining prefixes may occur in both slots.

- (5) Abui verb template: PREFIX.2-PREFIX.1-VERB.STEM-ASPECT
 PREFIX.1: PAT, REC, LOC, GOAL, BEN
 PREFIX.2: REC, LOC, GOAL, BEN

I have not come across the following combinations: REC-BEN, GOAL-LOC, GOAL-REC, LOC-BEN, BEN-LOC, GOAL-BEN, and combinations of two roles of the same type but all remaining logical combinations are possible.

3. Analysis

In the previous section, I have mentioned that differential argument realisation and semantic alignment are sensitive to various semantic features. Most of the semantic features listed in Table 4 are relevant for Abui argument realisation and are discussed in turn below.⁸ Figure 1 (repeated here as Figure 2) shows semantic

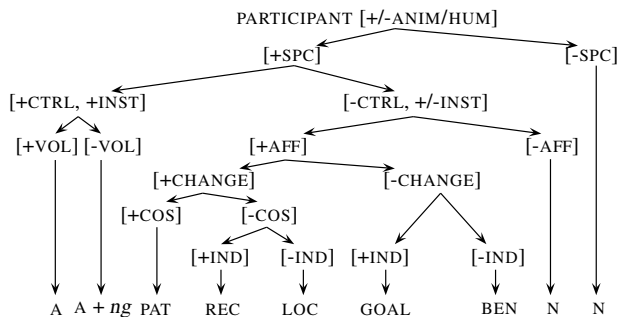


Figure 2. Semantic features driving Abui argument realisation

features that are essential in Abui argument realisation. The figure represents the respective ranking of the features, as well as their correlation, anticipated in Tsunoda (1985:395) and Arkadiev (2008:102). Features that play a role are animacy/humanness, specificity [\pm SPC](Section 3.1), control [\pm CTRL] and volition [\pm VOL] (Section 3.5), affectedness [\pm AFF] in increasing degrees such as change [\pm CHANGE] and change of state [\pm COS] (Section 3.2), and finally individuation [\pm IND] (Section 3.4).

3.1 Specificity and incorporation

Abui argument realisation system is a hierarchical one, where the first and second person participants sometimes pattern differently from third person participants, distributed in accordance to Silverstein's animacy hierarchy (Silverstein 1976:122–9). I will now briefly discuss the role of three semantic features responsible for the differentiation: specificity, control and instantiation.

As shown in Table 1, affectedness [\pm AFF] can only be assessed in specific [+SPC] participants; non-specific participants are not compatible with pronominal marking and are realised as NEUTRAL arguments with NPS. While first and second person participants are by default specific (and therefore never realised as NEUTRAL arguments), third person participants vary in specificity. Example (6) shows two possible realisations of the participant *bataa* 'wood'. In (6a), the NP *bataa* 'wood' has a generic reference and so is not marked. In (6b), the NP *bataa* refers to a specific quantity of 'wood' needed for cooking and is expressed as the LOC prefix *he-* on the verb *fakda* 'chop'.⁹

- (6) a. *maama bataa fak-d-a*
 [father]_N [wood]_N break-GET-DUR
 'father (habitually) chops wood' (N-N)
- b. *maama bataa he-fak-d-a*
 [father]_N [wood]_{LOC} 3.LOC-break-GET-DUR
 'father (habitually) chops the wood (for cooking)' (N-LOC)

We have seen that specificity is a necessary condition for assessing affectedness, but it does not follow that all NEUTRAL arguments have to be non-specific. [+SPC] participants that are not sufficiently affected [$-$ AFF] are not marked on the verb, as shown in (7). The verb *mia* 'take' in (7a) does not combine with a pronominal prefix when 'taking, picking up' is referred to, although the NP *o ket do* 'the comb underneath' is definite. The pronominal prefix will only appear when the 'taking' is considered to affect the participant more significantly and entail some change, as in (7b), where betel nuts and betel wine offered during marriage negotiations are accepted (literally, taken away).

- (7) a. *da-táng do ha-tol ba sei o*
 [3I.INAL-hand PRX]_{PAT} 3.PAT-reach LNK come.down.CNT [MD.L
ket do mi-a
 comb PRX]_N take-DUR
 ‘he stretches out his hand to pick up the comb underneath’ (N-N)
- b. *fu-meeting nu na he-mi yaa nu*
 [betel.nut-betel.vine SPC]_{LOC} [1SA]_A 3.LOC-take go T_{SPC}
 ‘I took away(accepted)betel nuts and betel vine’ (A-LOC)

NEUTRAL arguments are the default second argument in the majority of Abui verbs of locomotion, impact, posture, and stative verbs (see Kratochvíl 2007:87–98).

Specificity also interacts with the way acting participants are expressed and is one of the factors responsible for their differential realisation. Specific third person A arguments are realised as the pronominal form *di*. Their non-specific counterparts are typically realised as NEUTRAL arguments too, as can be seen in (8a) where the NP *kaai* is a differential realisation of *kaai di* shown in (8b).

- (8) a. *kaai afu loku ha-ful*
 [dog]_N [fish PL]_{PAT} 3PAT-swallow
 ‘dogs swallow the fish (that was thrown away)’ or ‘the (thrown away)
 fish is swallowed by dogs’ (N-PAT)
- b. *kaai di afu loku ha-ful*
 [dog 3A]_A [fish PL]_{PAT} 3PAT-swallow
 ‘the dog/s is/are swallowing the fish (that was thrown away)’ (A-PAT)

The acting participant *maama* ‘father’ in (6) is also realised as a NEUTRAL argument. The absence of the free pronoun *di* is not triggered by specificity (kinship terms are specific) but marks a non-instantiated habitual event. Although the marking is absent, the direction of the event can still be inferred from the difference in animacy between the two participants.

All three semantic features (specificity, control, and instantiation) can vary in the description of similar events, as can be seen in (9). The affected specific [+SPC] argument *adik* ‘mat’ in (9a) is expressed as an NP and the LOC prefix *he-* and contrasts with the non-specific [–SPC] argument in (9b). When the free pronoun *di* is absent, as in (9c), the construction refers to a non-instantiated event. Finally, as shown in (9d), where the REC prefix *do-* attaches in front of the noun *adik* ‘mat’, non-referential arguments may be incorporated in the predicate. This construction is an equivalent of middles in other languages and presents the ‘mat-weaving’ as affecting the actor who is entirely preoccupied with the activity.

- (9) a. *niya di adik he-tineei*
 [mother 3A]_A [mat]_{LOC} [3.LOC-weave.CPL]_{PREDICATE}
 ‘my mother wove a mat’ (A-LOC)
- b. *niya di adik tinei-a ba yai paneng*
 [mother 3A]_A [mat]_N [weave-DUR]_{PREDICATE} SIM song make
 ‘my mother is mat-weaving and singing’ (A-N)
- c. *niya adik tinei-a ba yai paneng*
 [mother]_N [mat]_N [weave-DUR]_{PREDICATE} SIM song make
 ‘my mother is usually mat-weaving and singing’ (N-N)
- d. *niya do-adik tinei-a ba yai paneng*
 [mother]_{REC} [3I.REC-mat weave-DUR]_{PREDICATE} SIM song make
 ‘my mother is (usually) mat-weaving (for herself) and singing’ (REC_I)

Similar phenomenon has been observed in some ergative languages where the absence of the ergative marker in transitive clauses is grammatical and meaningful (McGregor 2010 and other papers in the same volume). McGregor (2010:1630–2) reports it for various Australian, Papuan, Indo-European, Tibeto-Burman, and Caucasian languages. Typically, the argument in neutral case differs in semantic properties from the argument in ergative case (McGregor 2010:1614). This alternation has been referred to as “optional ergative marking (OEM)” or “differential ergative case marking (DEM)”. McGregor (2010:1622) identifies two global types of meaning encoded by the absence of expected ergative marking: (i) referential status of the agent concerning the agent’s identity (specificity in Abui), and (ii) semantic status concerning the agent’s semantic properties such as volitionality and control (instantiation and control in Abui).

3.2 Affectedness

Affectedness [\pm AFF], i.e. the property of having undergone a change (Fillmore 1970:125), is an important notion in studies of transitivity, differential argument marking, and semantic alignment. Yet, despite its frequent appearance in various studies, a precise and well-motivated definition is rarely given (Beavers 2011:335). Affectedness is known to be gradual (e.g. Hopper 1985:67; Tsunoda 1985:386–390). Beavers (2011:336) gives the following examples, where the *apple* is decreasingly affected from (10a) to (10d).

- (10) a. John ate the apple up. (Apple is completely gone)
 b. John cut the apple. (Apple cut, not necessarily to a particular degree)
 c. John kicked the apple. (Apple impinged, not necessarily affected)
 d. John touched the apple. (Apple manipulated, not necessarily impinged)

Definitions of affectedness usually contain a reference to its degree, such as those by Hopper and Thompson (1980) or Beavers (2011).¹⁰

- (11) a. ‘The degree to which an action is transferred to a patient is a function of how completely that patient is AFFECTED; it is done more effectively in, say, *I drank up the milk* than in *I drank some of the milk*.’ (Hopper and Thompson 1980:252-3)
- b. ‘... all types of change can be defined as a transition of a theme along a scale that defines the change.’ (Beavers, 2011:350)

Beavers (2011:339) makes an explicit reference to a property scale and offers some examples. These are given in Table 5.

Table 5. Affected property scales (Beavers, 2011:339)

property type	examples
a. x changes in some observable property	clean, paint, delouse, fix, break x
b. x transforms into something else	turn, carve, change, transform x into y
c. x moves to and stays at some location	move, push, angle, roll x into y
d. x is impinged upon	hit, kick, punch, rub, slap, wipe, scrub, sweep x
e. x goes out of existence	destroy, eliminate, delete, eat, consume, reduce x
f. x comes into existence	build, design, construct, create, fashion x

There is a clear advantage in including the property scale in the definition because tests can be constructed to determine the degree of affectedness. There are not many known affectedness tests. Cruse (1973:13) in his discussion of agentivity gives a test for *happen-clauses* with highly affected participants in English. *The vase broke* is a *happen-clause* because it is possible to say *what happened to the vase was that it broke*. However, the agentive clause *what the vase did was break* is somewhat odd (Cruse 1973:13). The test can be used also for transitive sentences such as *John marched the prisoners*, which can be rephrased as *what happened to the prisoners was that John marched them*. The agentive clause *what the prisoners did was that John marched them* is odd (Cruse 1973:14). Verbs in example (10) and in Table 5 pass this test as well, including verbs such as *threaten*, which do not entail any physical contact.

Beavers (2011:339–345) proposes a set of tests for affectedness. Some of the tests are given in Table 6. These tests help to establish the degree of affectedness in English by measuring telicity, truth-value of change (entailments and results) and other constructional properties. The idea is that in these tests, clauses with highly affected participants such as (10a) pattern differently from clauses with less affected participants such as (10d). Based on the outcome of the tests in Table 6,

Table 6. Diagnostic tests of degrees of affectedness (after Beavers 2011:359)

diagnostic test	I	II	III	IV	example
Telic (quantised theme)	+	-	-	-	<i>John ate the apple up.</i>
Change entailed	+	+	-	-	<i>John cut the apple, *but nothing is different about it.</i>
Permit DP preposing	+	+	±	-	<i>The apple cuts easily. *The apple touches easily.</i>
Permit result XP	+	+	±	-	<i>John cut the apple into thin slices.</i>
Happened/did to	+	+	+	-	<i>What happened to the apple was that John cut it.</i>
Dynamic	+	+	+	+	<i>John touched the apple. *The apple is touched.</i>
Result XP variation	+	+	+	-	<i>John cut the apple finely/ into a mash/ in 20 pieces. *John touched the apple dirty.</i>

Beavers (2011:359) proposes four degrees of affectedness in English: quantised (I), non-quantised (II), potential (III), and unspecified (IV).

3.3 Degrees of affectedness in Abui

Morphological marking of affected arguments suggests that Abui distinguishes four degrees of affectedness. As presented above, Beavers (2011) also identifies four degrees of affectedness. If Beavers' analysis is correct, in the ideal case, the four degrees in affectedness reflected in Abui morphological marking would correspond to Beavers' four degrees of affectedness. This can be verified by testing the predictions of Beavers' analysis on Abui. However, such testing will require ungrammatical sentences, which my corpus does not contain in sufficient amount as the corpus contains mainly spontaneous speech. Such predictions will be presented below. I will leave their verification for future research.

3.3.1 Unspecified affectedness

Undergoing participants of locomotion, impact, posture, and states and non-specific participants are *unspecified* for affectedness and realised as NEUTRAL arguments, as can be seen in examples (3b, 3c, 4f, 6a, 7a, 9b, 9c). More examples with NEUTRAL arguments can be found in Section 4.1. Beavers' hypothesis predicts that Abui predicates with NEUTRAL arguments will be incompatible with result XPs.

Result XPs in Abui always follow the main verb but are formally not distinct from other types of predicate-modifying constituents such as aspectual or manner phrases. Result XPs (12a, 12b) can be distinguished from purpose clauses —

typically linked with *ba*, as in (12c). Result XPs also formally differ from manner clauses, typically linked with *ba* as well, as in (12d).

- (12) a. *fala do lik-d-i, ama ho-k fangi*
 [house PRX]_{N/PAT} slanty-GET-PFV [person]_N 3.REC-THROW tell.CPL
ba ha-fik-i ha-mulang-d-i-a
 SIM 3.PAT-pull.away-PFV [3.PAT-straight-GET-PFV-DUR]_{resultXP}
 ‘the house is leaning sideways, tell people to pull it straight’ (N-PAT)
- b. *anui beeka noo-saai ya na-rik-i*
 [rain bad]_N 1s.GOAL-come.down.CPL SEQ 1s.PAT-hurt-PFV
no-beeka
 [1s.REC-bad]_{resultXP}
 ‘I got caught in a bad rain and got gravely sick [predicting to lead to death]’ (PAT)
- c. *wiil mayol di daweng mi de-wiil*
 [child woman 3A]_A [medicine]_N take [3I.AL-child]_{PAT}
ha-beek-d-i ba do-mong
 3.PAT-bad-GET-PFV SIM [3I.REC-die]_{purpose}
 ‘a girl poisoned her own child to kill it’ (A-PAT)
- d. *ne-muknehi he-isi do fok-d-i ba la*
 [1s.AL-sibling.ss 3.AL-body PRX]_N big-GET-PFV SIM [DYN]_{MD}
mi=ng ha-ai
 IN=SEE 3.PAT-add.to]_{manner}
 ‘my brother’s body got big and keeps growing fatter and fatter’ (N)

3.3.2 Potential affectedness

Abui GOAL and BEN arguments express participants at the endpoint of a chain of force transmission (see Rappaport Hovav and Levin 2001:787; Beavers 2011:357–358). They are typically goals, sources, experiencers, or benefactives. These participants are characterised by *potential* degree of affectedness. Beavers’ hypothesis predicts that predicates with GOAL and BEN arguments do not entail change [–CHANGE] and are compatible with the clause *but nothing is different about it*. The test is somewhat problematic because of the ambiguity of the word *different*. An Abui-based test will have to be identified.

Examples of the use of GOAL and BEN arguments can be seen in examples (3e, 3f, 3i, 4e), in Table 3, and in Section 4.1. The distinction between GOAL and BEN is discussed in Section 3.4.

3.3.3 Non-quantised affectedness

Non-quantised affectedness, unlike the two previous degrees, entails change. In Abui, non-quantised affectedness characterises REC and LOC arguments, which

express undergoers changing in some property (abstract or physical path). Examples can be seen in (3c, 3d, 4c, 4d, 6b, 7b, 9a, 9d) and in Table 3. Beavers' framework (2011:359) predicts that predicates with these two argument types will entail change and therefore be compatible with the clauses *something is different about x* and *x is somewhere else*. The second one was well illustrated in (7b).

Beavers (2011:338) assumes that change can only be found in dynamic predicates. This assumption does not seem to hold for the Abui data given in (13) where stative and perfect verbs can combine with the LOC prefix.

- (13) a. *he-lunga*
 3.LOC-long
 'it is long, it stretches out' (LOC)
- b. *ruwol he-pok-u*
 [chicken]_{LOC} 3.LOC-crack-PRF
 'the chick hatched' (LOC)

It is yet unclear, whether the function of the LOC prefix on the verb *lunga* 'long' is pragmatic — i.e. expressing speaker's stance rather than the degree of affectedness.

3.3.4 Quantised affectedness

Beavers (2011:358) characterises participants that undergo a change of state as undergoing a *quantised* change. In his definition, these participants have been affected to the extent that they have reached a goal state, whose existence is only entailed in non-quantised and quantised degree of affectedness. Participants that undergo a change of state are realised as PAT arguments and can be seen in examples (2a, 3a, 4b, 8) and in Table 3. The non-existing combinations in Table 3 are usually not available with those verbs that refer to activities and cannot entail a change of state.

In example (14), participants affected to various degrees are exemplified. Applying the characterisation of various degrees of affectedness explained above, the meaning recorded in each of the below constructions can be better understood. In (14a) the human participant is potentially affected by the 'binding'; its success is not guaranteed. The 'hand' and the 'thief' in (14b) and (14c) change as result of 'binding'. The 'wounded' hand is covered with a dressing and the 'thief' is tied to a 'goat'. Finally, the 'wood' in (14d) undergoes a change of state because it reaches the goal state of 'binding', i.e. to be bound up.

- (14) a. *kaang-kaang mi noo-kor-te!*
 RED[good] take 1S.GOAL-bind.CPL-INCP
 'bind it to me properly (a rope for climbing)' ([A]-GOAL)
- b. *ha-táng ba namu-r nu he-kor-te!*
 [3.INAL-hand LNK wounded-REACH SPC]_{LOC} 3.LOC-bind.CPL-INCH
 'bind up his hand that is wounded' ([A]-LOC)

- c. *kafiei ba di takaafi nu la mi ba ho-kol-e!*
 [goat LNK 3A steal.CPL-PFV SPC]_N DEO_{MD} take LNK 3.REC-bind-IPFV
 ‘that goat that he stole ought to be bound onto him’ (customary law)
 ([A]-REC)
- d. *maama di tila mi ba bataa ha-kol*
 [father 3A]_A rope take SIM [wood]_{PAT} 3.PAT-bind
 ‘father binds up the wood with a rope’ (A-PAT)

Verbal paradigms and gaps in them listed in Table 3 can be explained in the same way. As already shown in (4b), the PAT argument occurs also in single argument constructions. Example (15) illustrates, that the single participant reaches the end of the affectedness scale by being ‘calm’ in (15a), ‘fallen’ (15b), or ‘ill (completely in pain)’ (15c).

- (15) a. *a-ran-r-i*
 2S.PAT-quiet-REACH-PFV
 ‘you calmed down’ (PAT)
- b. *ha-yeei*
 3.PAT-fall.CPL
 ‘he/it/they fell’ (PAT)
- c. *na-rik*
 1S.PAT-hurt
 ‘I am ill’ (PAT)

Predicates describing events in which participants that undergo a *quantised* change are compatible with result XPS. A number of examples were given in (12).

3.4 Individuation

Semantic approaches to transitivity and studies of differential argument realisation converge on a number of semantic features, which are held responsible for alternations in argument realisation. One of these features, since Hopper and Thompson (1980), is referred to as individuation, which they defined as referring to both “...the distinctness of the patient from the A ...and to its distinctness from its own background” (p.253).¹¹ In Abui, individuation [+IND] is responsible for the alternations of REC/LOC and GOAL/BEN arguments.¹²

Individuation is a characteristic of highly salient participants (Silverstein 1981:240) that are ranked high on the animacy hierarchy and perceived as independent entities.¹³ Individuated participants are involved in the event in their entirety, yet do not necessarily reach the maximum degree of affectedness.

Minimal pairs illustrating the REC~LOC alternation can be seen in (3c, 3d) and (14b, 14c). Minimal pairs illustrating the GOAL~BEN alternation were given in (3e, 3f). Further examples can be found in Table 3 and in Kratochvíl (2007:187–199).

A set of minimal pairs contrasting the potential and non-quantised affectedness (REC~LOC~GOAL~BEN) in both individuated [+IND] and non-individuated [–IND] participants is given in (16) for the verb *beeka* ‘bad’.

- (16) a. *no-beeka*
 1S.REC-bad
 ‘I am dying’ (REC)
- b. *ni-lik-ni-fala* *he-beeka*
 [1PE.INAL-platform-1PE.INAL-house]_{LOC} 3.LOC-bad
 ‘our house [household] is in a poor condition’ (LOC)
- c. *noo-beeka*
 1S.GOAL-bad
 ‘I feel bad, I dislike (it)’ (GOAL)
- d. *o-mi nee-beeka*
 2S.REC-IN 1SG.BEN-bad
 ‘you are kind to me, you have mercy with me’ (REC-BEN)

Example (17) enriches the minimal pairs given in (16) with the minimal pairs of the verb *fak* ‘break’ illustrating the contrast between potential and non-quantised affectedness (REC~LOC~GOAL~BEN) in both individuated [+IND] and non-individuated [–IND] participants.

- (17) a. *ho-fak*
 3.REC-break
 ‘he collapses’ (REC)
- b. *wiil neng nuku di miyei ya de-toku mi ba ara*
 [child man one 3A]_A come.CPL SEQ 3I.AL-leg take SIM [wood]_N
he-fak-i
 3.LOC-break-PFV
 ‘a boy came and broke the branch [by stepping on it] with his leg’ (A-LOC)
- c. *do-hoo-fak*
 3I.REC-3.GOAL-break
 ‘he makes himself fall on her’ (REC_I-GOAL)
- d. *nedo kabei ahel-te, hare a nee-fak-e*
 1S.FOC little breathe-INCH so 2SA 1S.BEN-break-IPFV
 ‘I will rest a bit, so you break [the wood] for me’ (A-BEN)

Table 7 summarises realisations of affected arguments and their semantic characteristics. The table shows that there are six basic options to realise affected

arguments in Abui. The plus symbols in the *AFF.DEGREE* column indicate the increasing degree of affectedness — unspecified (–), potential (+), non-quantised (++) and quantised (+++) affectedness. In Figure 2, various degrees of affectedness are represented as follows: unspecified [–*AFF*], potential [+*AFF*, –*CHANGE*, ±*IND*], non-quantised [+*AFF*, +*CHANGE*, –*COS*, ±*IND*], and quantised [+*AFF*, +*CHANGE*, +*COS*]. The right-most column records the increasing degree of affectedness as tracked in Abui in terms proposed in Beavers (2011).

Table 7. Clustering of semantic features of Abui affected arguments

	type	realisation	SPC	AFF.DEGREE	IND	Beavers 2011
a.	NEUTRAL	NP	±	–	–	unspecified
b.	BENEFACTIVE	(NP +) BEN prefix	+	+	–	potential
c.	GOAL	(NP +) GOAL prefix	+	+	+	potential
d.	LOCATION	(NP +) LOC prefix	+	++	–	non-quantised
e.	RECIPIENT	(NP +) REC prefix	+	++	+	non-quantised
f.	PATIENT	(NP +) PAT prefix	+	+++	+	quantised

3.5 Volition and control

As we have seen in Section 3.1, specificity [+*SPC*], control [+*CTRL*], and instantiation characterise the *A* argument. Control [+*CTRL*] (agency in terms of Hopper and Thompson 1980) and volition usually correlate (Tsunoda 1985:392, 394). As in other languages, Abui *A* arguments are usually volitional [+*VOL*]. The evidence for this claim comes from paradigms such as (18). When the *A* argument refers to an actor lacking volition, a construction with the generic verb *ng* ‘see’ is used. The free pronouns has to cliticise to the verb *ng*, as in (18b, 18d). The meaning expressed in this construction borders on dynamic modality, which evaluates the capacity of a participant to ‘control’ an event (Nuyts 2005:7). As can be seen in (18e), the construction with *ng* ‘see’ can also be used to express the participant not only lacking volition, but also control. Multi-verb constructions are beyond the scope of this paper, but further details can be found in Kratochvíl (2007:376–401).

- (18) a. *na wan ananri*
 [1sA]_A already talk.CPL
 ‘I have already told’ (A)
- b. *na=ng wan ananri*
 1sA=SEE already talk.CPL
 ‘I had to tell it (against my will)’ (A-VOL)

- c. *a mit do*
 [2SA]_A sit T_{PRX}
 'you sit down' (A)
- d. *a=ng mit do*
 2SA=SEE sit T_{PRX}
 'you (unintentionally) sat down' (A-VOL)
- e. *e-ng mit do*
 2S.LOC-SEE sit T_{PRX}
 'you had to sit down' (LOC)

The *A=ng* realisation of a non-volitional [-VOL] actor is quite common and appears also in contexts where the actor performed an event by mistake. Speakers are effectively assessing the intentionality of the actor's actions. The alternation is not restricted to intransitive sentences; it also indicates unexpected and unintended outcomes in transitive constructions, as in (19).

- (19) a. *a kaang ha-paating-d-i*
 [2SA]a good 3.PAT-advice-HOLD-PFV
 'you have advised him well' (A-PAT)
- b. *a=ng kaang ha-paating-d-i*
 2SA=SEE good 3.PAT-advice-HOLD-PFV
 'you happened to have advised him well' (implying that this was not the original intention) (A-VOL-PAT)

The above examples show that Abui actor participants are characterised as specific and controlling [+SPC, +CTRL]. Indirect evidence from multi-verb constructions indicates that they are also volitional [+VOL]. Finally, the next section, dealing with the 3I set of pronominal prefixes, will show that Abui actors are also instigating [+INST].

3.6 Instigation

The notion of instigation is sometimes used interchangeably with control (e.g. Næss 2007:45). I take a narrower definition of both notions here, reflecting the distinction between responsibility for the onset of an event and for the responsibility for its execution: instigation refers to the former; control to the latter.¹⁴

Even in Abui, instigation, control (and volition) correlate in most parts of the grammar (cf. Tsunoda 1985). I make this distinction to account for the distribution of the *dV-* prefixes (*V* stands for vowel) — one of the two types of third person prefixes listed in Table 2. The *dV-* prefixes refer to affected participants that are themselves the primary cause of the event, i.e. responsible for the onset of an event. I will refer to the primary cause as instigation [+INST] and in the gloss use

an additional “I”, which stands for *instigation*. The *hV-* prefixes refer to affected participants that are not responsible for the onset of the event.¹⁵

The distinction between control and instigation is reflected in Abui morpho-syntactic oppositions: the controlling participants are expressed by free pronouns entailing instigation; instigating participants lacking control are expressed by bound pronouns and for the third person the 3I set has to be used. In (9d), the prefix *do-* refers to *niya* ‘our mother’. Similarly, the pronominal prefix *da-* in (20b) refers to *Fani*. However, the prefix *ha-* in (20a) refers to someone else than *Fani*. The 3I prefixes express equivalents of reflexives and middles in other languages, indicating that a participant instigating an event is also affected by it. In the first and second person, instigation [\pm INST] is not tracked by any dedicated form, as shown in (20c, 20d). Although instigation alternations are not encoded in the first and second person, instigation can be identified by a simple grammatical test of the compatibility of the pronominal prefix with the free pronoun of the corresponding person, shown in (20c). As shown in (20d), constructions without free pronouns (which entail instigation) are ambiguous.

- (20) a. *Fani di el ha-wel-i*
 [name 3A]_A before 3.PAT-pour-PFV
 ‘Fani has washed him’ (A-PAT)
- b. *Fani di el da-wel-i*
 [name 3A]_A before 3I.PAT-pour-PFV
 ‘Fani has washed himself’ (A-PAT_I)
- c. *na el na-wel-i*
 [1sA]_A before 1s.PAT-pour-PFV
 ‘I have washed myself’ (A-PAT_I)
- d. *el na-wel-i*
 before 1s.PAT-pour-PFV
 a. ‘I have washed myself’ (PAT_I)
 b. ‘I got washed’ (PAT)

As mentioned above, the distinction between instigating and non-instigating involvement of affected participants, which can only be seen in the third person forms, extends to single-argument constructions, as the minimal pairs in (21) illustrate.

- (21) a. *da-kaai*
 3I.PAT-drop.CPL
 ‘he stumbled’ [was not paying attention] (PAT_I)
- b. *ha-kaai*
 3.PAT-drop.CPL
 ‘she fell (only about children and non-humans not attributed ability to control their actions)’ (PAT)

- c. *do-kaang*
3I.REC-good
'he got better (no longer ill)' (REC_I)
- d. *ho-kaang*
3.REC-good
'he feels good (good mood)' (REC)

Instigating [+INST, +AFF] participants responsible for the onset of an event — for a fall or an improvement of health — are realised with the 3I prefix series in (21a, 21c). The *hV-* series prefixes in (21b, 21d) point to non-instigating affected [-INST, +AFF] participants. Constructions such as (21d) probably originate in two-argument constructions with an impersonal stimulus argument. This argument expressed the source of the good mood but has been omitted and the construction can be used with a single argument.

3.7 Fluidity in expression of the single participant

The intransitive argument realisation in Abui displays great fluidity, reflecting the semantic properties of the participant in the actual context. Example (22) illustrates six distinct involvements of a single participant in the event of *laak* 'leaving'. The participant can be identified as the actor (22a), non-volitional actor (22b), affected actor (22c), non-volitional affected actor (22d), and affected instigator (22e, 22f). In Abui, the expression of differences in volition and affectedness has been grammaticalised.

- (22) a. *di laak*
[3A]_A leave.for
'he leaves' (A)
- b. *di=ng laak*
3A=see leave.for
'he [accidentally] returns' (A-VOL)
- c. *di do-laak*
[3A]_A 3I.REC-leave.for
'he leaves (for himself)' (A=REC_I)
- d. *di=ng do-laak*
3A=see 3I.REC-leave.for
'he (unintentionally) needs to return' (A-VOL=REC_I)
- e. *de-lol de-laak*
3I.LOC-walk 3I.LOC-leave.for
'he goes his way' (N-LOC_I)
- f. *do-laak*
3I.REC-leave.for
'he (is forced to)leave (external cause)' (REC_I)

Examples (23, 24, 25) illustrate the tracking of control and affectedness. Participants of ‘scratching’ and ‘talking’ are controlling and volitional in (23a) and (24a) respectively. Examples (23b) and (24b) show marking of actors affected by their activity. Finally, impulsive or reflexive performance is referred to in constructions shown in (23c) and (24c).

- (23) a. *Ata di kafia*
 [name 3A]_A scratch.CNT
 ‘Ata is scratching’ (A)
- b. *Ata di do-kafia*
 [name 3A]_A 3I.REC-scratch.CNT
 ‘Ata is scratching himself’ (A=REC_I)
- c. *Ata do-kafia*
 [name]_{REC} 3I.REC-scratch.CNT
 ‘Ata is scratching (without conscious thought)’ (REC_I)
- (24) a. *di ananri*
 [3A]_A talk.CPL
 ‘he talks, tells’ (A)
- b. *di do-ananri*
 [3A]_A 3I.REC-talk.CPL
 ‘he talks for/to himself’ (A=REC_I)
- c. *do-ananri*
 3I.REC-talk.CPL
 ‘he mumbles’ (REC_I)

Some events, such as ‘laughing’, always involve an affected participant in Abui, as shown in (25a), yet instigation and control is still tracked (25b, 25c).

- (25) a. **na lal*
 [1sA]_A laugh
 intended reading: ‘I laugh’
- b. *na na-lal*
 [1sA]_A 1s.PAT-laugh
 ‘I laugh’ (A=PAT_I)
- c. *na-lal*
 1s.PAT-laugh
 ‘I smile (unconsciously)’ (PAT_I)

The subtle meaning change in (25c) is captured by the English ‘smile’, instead of ‘laugh’, to reflect the lack of control and volition. Verbs that behave in this way are verbs that refer to body actions, reciprocal events, emotions, cognitive events, and spontaneous events. More details can be found in Kratochvíl (2007:88–95).

Similar fluidity is found also in two-argument constructions described in Section 4.2. The constructions described in this section and in 4.2 can be characterised as middles (Kemmer 1993, 1994). Besides the alternations in the semantic features of the actor, the REC prefix often attaches to the verb, describing high commitment to the event, undivided attention as well as other pragmatic meanings. The construction is available to all verb classes identified in Kemmer (1994) as typically occurring in middle voice. These are verbs referring to (i) grooming, (ii) body care, (iii) change in body posture, (iv) translational motion, (v) reciprocal events, (vi) emotions, (vii) cognition, (viii) emotive speech actions, and (ix) spontaneous events.

The clustering of the semantic features exemplified in this section is schematically summarised in Table 8. There are five grammaticalised options to instigating single participants (typically actors).

Table 8. Clustering of semantic features of Abui actors

type	realisation	AFF	INST	CTRL	VOL
a. affected instigator	(3i) prefix	+	+	–	–
b. affected non-volitional actor	A + <i>ng</i> + (3i) prefix	+	+	+	–
c. affected actor	A + (3i) prefix	+	+	+	+
d. volitional actor	A	–	+	+	+
e. non-volitional actor	A + <i>ng</i>	–	+	+	–

4. Implications of fluid semantic alignment

My analysis of Abui outlined above predicts that all Abui clause types will display consistent semantically-driven argument realisation. I will show that a system resting so profoundly on semantic features allows a great variety clauses types, which may contain up to three arguments in various combinations reflecting the semantic features of the participants involved in the events. Such system also leaves little room for maintaining or developing syntactic categories such as pivots or controllers. In this section, I will test my claim by first reviewing various two and three argument constructions that do not require the A argument and then by surveying syntactic constructions known to be sensitive to syntactic transitivity.

4.1 Two-argument clauses without actor argument

Since Tsunoda, (1981, 1985) it is well-known that semantic features may determine the distribution of case over various verb types. Some bivalent verbs can take two arguments marked as objects and do not combine with a subject. This type is

commonly referred to as semitransitive (e.g. Tsunoda 1981:149–51, 1985:387–391; Dryer 2007:270–4; Næss 2007:189). In Abui, there are two major types of two-argument clauses that do not require an ACTOR argument.

The first type does not allow ACTOR arguments at all and describes events involving two independent participants that neither control the event nor are responsible for its instigation. So far, twelve distinct constructions were attested. They are summarised in Table 9. The constructions in the first half of the table (a–e) contain at least one NEUTRAL argument. Constructions in the second half (f–l) contain two affected arguments. The third column provides reference to the relevant examples and the last column lists some verbs attested in each construction.

Table 9. Two-argument clause types without ACTOR

	case pattern	example	attested verbs
a.	N-N	(26)	in, on, resemble
b.	N-GOAL	(27a)	break on sb., engulf sb. (smoke)
c.	N-LOC	(27b)	put in st., belong to sb., engulf st. (smoke)
d.	N-REC	(27c)	own st., get soaked by st. (rain)
e.	N-PAT	(27d, 27e)	hurt (body part), need to urinate, fall into st.
f.	REC-LOC	(28a)	feel like, angry at
g.	LOC-GOAL	(28b)	sated (of food)
h.	LOC-REC	(28c)	miss, fed up with
i.	BEN-PAT	(28d)	smell because of st.
j.	GOAL-PAT	(28e)	lean on sb., fall on sb., bend over sb.
k.	LOC-PAT	(28f)	lean on, fall on st., land at, smell of st., sick of
l.	REC-PAT	(28g)	smell on sb., rub, calm down, be given to marry

The N-N type in (26) involves located or compared participants. This type is semantically parallel to English copula constructions. The participants are neither affected nor controlling/instigating enough to qualify for a free pronominal form. Verbs such as *mia* ‘be in’ or *wida* ‘resemble, be alike’ require two NEUTRAL arguments.

- (26) a. *pingai pakai mi-a*
 [plate]_N [basket]_N in-DUR
 ‘plates are in the basket’ (N-N)
- b. *ha-moi na-moi wida*
 [3.INAL-voice]_N [1s.INAL-voice]_N alike.CNT
 ‘his voice resembles my voice’ (N-N)

Similarly in (27b), an owned object is not considered affected and fails to trigger pronominal marking despite being specific. In contrast, the owner is considered

affected and is expressed with the LOC prefix. Beavers' framework predicts that this type of clause should be compatible with the clauses such as *something is different about x*. The asymmetrical treatment of location (26a) and ownership (27b) shows the preference to mark animate locations over inanimate. There are other verbs of ownership such as *puna* 'hold, own', which denote more active ownership (owner can be expressed as the ACTOR argument), for example in animal husbandry.

Experiencers of bodily processes, emotions, or natural forces are always recorded as affected arguments (27c, 27d, 27e). The perceived stimuli are realised with an NP but are not compatible with the free pronoun *di*, which is reserved for controlling and volitional arguments. However, young children seem to generalise the free pronoun *di* also to natural forces such as wind or rain.

- (27) a. *ara tika hoo-lai*
 [fire smoke]_N 3.GOAL-spread
 'smoke engulfed him' (N-GOAL)
- b. *pelang buti nu raha he-i-i*
 [canoe four SPC]_N [chief]_{LOC} 3.LOC-put-PFV
 'these four canoes belong to the chief' (N-LOC)
- c. *múr no-kaang foka*
 [citrus]_N 1s.REC-good big.CNT
 'I really like oranges' (N-REC)
- d. *na-took na-rik*
 [1s.INAL-stomach]_N 1s.PAT-hurt
 'my belly hurts (me)' (N-PAT)
- e. *wai na-kuya*
 [urine]_N 1s.PAT-soak
 'I need to pee', lit.: 'urine soaks me' (N-PAT)

Constructions containing two affected arguments are exemplified in (28). These clauses describe perceived physical and cognitive events, which are not initiated by the experiencer. None of the participants can be expressed with the 3I prefix series, reserved for affected but instigating participants. Beavers' model adopted above predicts that both arguments in the constructions below can be asked about with the clause *what happened to x* and some entail change (*something is different about x*).

- (28) a. *o-ne-beei?*
 2s.REC-1s.LOC-angry
 'are you angry with me?' (REC-LOC)
- b. *sieng ma he-noo-maran-i*
 [rice cooked]_{LOC} 3.LOC-1s.GOAL-come.up.CPL-PFV
 'I am satiated with the rice' (LOC-GOAL)

- c. *ne-melang he-no-han-r-a*
 [1S.AL-village]_{LOC} 3.LOC-1S.REC-sad-REACH-DUR
 'I am missing my home' (LOC-REC)
- d. *a fuk naha ba, haba nala*
 2SA fart not say but [what]_{BEN}
hee-ha-mun-d-i-a?
 3.BEN-3.PAT-smell.CPL-get-PFV-DUR
 '(you say) you haven't farted, but why does it stink (here)?' (BEN-PAT)
- e. *bataa tuku oo-ha-yeei*
 [wood piece]_{PAT} 2S.GOAL-3.PAT-fall.CPL
 'a piece of wood fell on you' (GOAL-PAT)
- f. *nala he-ha-mun-i?*
 [what]_{LOC} 3.LOC-3.PAT-smell.CPL-PFV
 'what does it smell of (here)?' (LOC-PAT)
- g. *Fanmalei de-deki=ng aisi, hare dara*
 [name 3I.AL-trousers=SEE urinate.CPL]_{PAT} so still
ho-ha-mun
 3.REC-3.PAT-smell.CPL
 'Fanmalei peed his pants, so it's still stinking on him' (REC-PAT)

4.2 Two-argument clauses with instigating undergoers

The second major group of clause types with two affected arguments contains minimally one instigating and affected [+INST, +AFF] argument. In the third person, this argument is expressed with the 3I prefix series. The A argument referring to the same affected and acting participant appears when the features discussed in Section 3.1 are present (control, instantiation).

Table 10 lists construction types found in my corpus together with verbs occurring in them. The subscript "1" marks the instigating affected argument. This argument refers to the same participant as the optional A argument [A].

Type (a), exemplified in (29), involves two participants: the actor stealing for its own benefit and realised as the A and REC arguments and the stolen bananas, which are not sufficiently affected to qualify for pronominal marking. The REC prefix is chosen because the turtle is the individuated participant, who in its entirety will benefit from the stealing. In (29b), a fragment of a narrative is given where a zombie is attacking a woman by stretching himself up to the sky and then crushing down on her. The woman is trying to escape by climbing a steep mountain slope to the valley beyond. The zombie is realised with the REC prefix as the outer affected argument. The targeted woman is realised as the inner affected argument with the GOAL prefix. Example (29c) contains a transitive verb describing an event carried out for one's own benefit, as the REC prefix *nu-* indicates.

Table 10. Two-argument clause types with instigating affected arguments

case pattern	example	attested verbs
a. [A]-N-REC _I	(29a)	productive (reflexive/middle)
b. [A]-REC _I -GOAL	(29b)	productive (middle)
c. [A]-REC _I -PAT	(29c)	productive (middle)
d. [A]-BEN-REC _I	(30a)	cognition and emotion verbs
e. [A]-LOC-REC _I	(30b)	cognition and emotion verbs
f. [A]-BEN-PAT _I	(30c)	cognition and emotion verbs
f. [A]-LOC-PAT _I	(30d)	cognition and emotion verbs
g. [A]-BEN _I -PAT _I	(31a)	cognition and emotion verbs (pragmatic overtones)
h. [A]-LOC _I -PAT _I	(31b)	cognition and emotion verbs (pragmatic overtones)
i. [A]-GOAL _I -PAT _I	(31c)	cognition and emotion verbs (pragmatic overtones)
j. [A]-REC _I -PAT _I	(31d)	cognition and emotion verbs (pragmatic overtones)

- (29) a. *yoikoi do di ama he-baleei do-takai*
 [turtle PRX 3A]_A [person 3.AL-banana]_N 3I.REC-steal
 ‘the turtle steals someone’s bananas for himself’ (A-N-REC_I)
- b. *di do-hoo-fak masi, de-toku pe la=ng fak-e*
 [3a]_A 3I.REC-3.GOAL-break while 3I.AL-leg near be.MD=SEE break-IPFV
 ‘while intending to crash on her, he (zombie)breaks down to his own feet’ (A-REC_I-GOAL)
- c. *ni mayol moku nu-ha-pai*
 [1PEA]_A [woman kid]_{PAT} 1PE.REC-3.PAT-keep
 ‘we keep our daughter for ourselves’ (A-REC_I-PAT)

Types (d–f) are illustrated in (30). Experiences of thinking and remembering are identified as instigating, controlling, and affected; they are realised as both A and BEN/LOC arguments.

- (30) a. *na Simon hee-no-m-pang*
 [1sA]_A [name]_{BEN} 3.BEN-1s.REC-IN-reflect
 ‘I am thinking for Simon’ (to do something for him) (A-BEN-REC_I)
- b. *na Simon hee-no-m-pang*
 [1sA]_A [name]_{LOC} 3.LOC-1s.REC-IN-reflect
 ‘I am thinking about Simon’ (Simon is in my thoughts) (A-LOC-REC_I)
- c. *hen hee-na-minang ba na miyei*
 [that]_{BEN} 3.BEN-1s.PAT-remember SIM 1sA come.CPL
 ‘I remembered that and came’ (BEN-PAT_I)

- d. *na ne-wiil he-na-minang*
 [1SA]_A [1S.AL-child]_{LOC} 3.LOC-1S.PAT-remember
 'I remember my child' (A-LOC-PAT₁)

The last four constructions are exemplified in (31). In these constructions, a single participant is realised as two affected arguments tracking its multiple roles in the event. In (31b, 31a), the participant is both remembered and remembering. In (31c, 31d), the participant is instigating the self-directed laughter.

- (31) a. *ee-o-minang!*
 2S.BEN-2S.REC-remember
 'remind yourself (what you should be doing)!' (BEN₁-REC₁)
- b. *e-o-minang!*
 2S.LOC-2S.REC-remember
 'remind yourself (who you are)!' (LOC₁-REC₁)
- c. *doo-da-lal*
 3I.GOAL-3I.PAT-laugh
 'he is smiling at himself (in the mirror)' (GOAL₁-PAT₁)
- d. *do-da-lal-i-a*
 3I.REC-3I.PAT-laugh-PFV-DUR
 'he is giggling, lit. laughing for himself' (REC₁-PAT₁)

The semantics of these constructions is equivalent of middles in other languages (see Kemmer 1994). Besides the instigating 3I series are restricted to the third person, there is no formal distinction between these constructions in Abui and other constructions with two affected arguments. It is unclear whether the recurring person prefix can be taken as evidence of less-elaborated event structure, characteristic of marking of middles in many languages (Kemmer 1994:212). Acting participants are presented as acting for their own benefit or as affected by the event that they are responsible for [+INST]. The REC prefix in particular can be used in a non-referential way to express dynamic modality (31d). The REC prefix has pragmatic uses in stance marking to evaluate actions as selfish (29a, 29c) or to indicate their desirability (31b, 31a).

Verbs of cognition and emotion such as 'forget', 'dream', or 'pity' reveal yet another interesting detail about Abui argument realisation. The participants involved in these events are neither instigating nor volitional; at the same time, no obvious stimulus is available. In the case of dreaming, the participant acting within the dream is perceived as disjoint from the dreamer. The dreamer does not assume responsibility for the content of the dream. Instead, as shown in (32a), the noun *na-nooting* 'my soul' is used to express the participant of the dreamt events. Similarly, in (32b), the noun *hatána* 'his hand' is cast as responsible for forgetting the money because the human 'forgetter' is incompatible with the semantic properties of the

A argument. Instead body parts (eyes, hands, legs) and soul express the forgetter. When the speaker wants to say that he forgot where he saw something, it will be his eyes that forgot, and so on.¹⁶

Finally, as shown in (32c), the majority of Abui emotion and cognition predicates rely on various auxiliaries such as *mi* 'in' to realise the affected human participant.

- (32) a. *na piyei-l-a-ti na-nooting Kalangfat yaa ba*
 [1s.A]_A dream-GIVE-DUR-PHSL [1s.INAL-spirit]_N [name]_N go QT
 'I just dreamt I (my soul) went to Kalabahi' (N-N)
- b. *Simon seng ha-tána da-yongfi*
 [name money]_N [3.INAL-hand]_{PAT} 3I.PAT-forget.CPL
 'Simon forgot where he put his money' (N-PAT)
- c. *o-mi kul-te nee-beeka*
 2S.REC-IN must-INCH 1s.BEN-pity
 'you certainly pity me' (REC-AUX-BEN)

The 'unconscious' actor dilemma is limited to human participants. Solutions in the emotion and cognition predicates are highly idiomatic. Higher animals can be assigned some degree of consciousness in events such as 'the dog is chasing a rat'. However, the consciousness becomes inaccessible when intentions need to be qualified, as in 'the dog is sniffing for a rat'. Abui speakers reject the latter sentence with explanation that we do not know what intentions the sniffing dog might have. NPs expressing non-human participants rarely combine with the free pronoun *di*. However, in young speakers' language some of these distinctions seem to be fading.

4.3 Three argument clauses

We have seen in examples given in Section 4.2 that a single verb may combine with up to three arguments. Although rare in spoken language, such construction does occasionally occur, especially when all three arguments refer to a single participant. Example (33) gives two examples of three argument clauses, which refer to three distinct participants.

- (33) a. *ne-feela do di ama he-baleei noo-takai*
 [1s.AL-friend PRX 3A]_A [person 3.AL-banana]_N 3S.GOAL-steal
 'my friend steals someone's bananas from me' (A-N-GOAL)
- b. *ne-toku namu do fufai fa he-afai hare a*
 1s.AL-leg wounded PRX [fly]_{PAT} DYN_{MD,AD} 3.LOC-swarm so [2sA]_A
noo-ha-loi-te
 1s.GOAL-3.PAT-chase-INCH
 'flies swarm at my wounded leg (as you could see) so chase them
 from me' (A-GOAL-PAT)

Events involving more than two participants are usually described by multi-verb constructions (see Kratochvíl 2007:376–401).

4.4 Syntactic pivots

The grammaticalisation of transitivity regularly affects the syntax. In many languages, expressions of intransitive arguments have been neutralised and aligned with one of the transitive arguments. Depending on which two arguments are lumped together, accusative and ergative alignment are distinguished. The regularisation comes at the cost of semantic transparency, but is offset in syntax by establishing grammatical relations of subject and object, useful in keeping track of what is happening to significant participants. One of the functions, typically subject, is syntactically privileged in both clause and sentence. Subjects can control pronouns, become indispensable constituents, and become outputs of detransitivising processes such as passivisation. Various syntactic theories reflect the privileged position of subject by modelling it outside the VP.

This section examines syntactic properties of Abui argument types in syntactic environments known to be sensitive to syntactic pivots, such as raising, comparatives, relativisation, and cross-clause empty-pronoun control.¹⁷

4.4.1 Comparatives, subject raising

In Abui, comparatives are multi-clausal constructions of the following type: ‘*X is good, Y is very good*’, meaning ‘*Y is better than X*’, in which both participants are expressed as NEUTRAL arguments. In constructions of similarity, exemplified in (26b), two NEUTRAL arguments are combined with a verb such as ‘resemble’.

There is no passive construction in Abui. A clause consisting of just a verb with the appropriate head-marking is grammatical. None of the arguments is therefore indispensable.

There are no verbs like ‘seem’ or ‘appear’, which would enforce a dummy argument or require any argument to be raised. Instead, corresponding modals, such as *ma* (with scope over the rest of the clause), follow the topical argument, as can be seen in (34). Except for the word order adjustments, no other changes are required.

- (34) a. *maama di ma fu do mi he-r-i*
 [father 3A]_A EPI_{PRX} [betelnut PRX]_N take 3.LOC-reach-PFV
 ‘(our)father seems to have given him the betel nut’
- b. *fu do ma maama di mi he-r-i*
 [betelnut PRX]_N EPI_{PRX} [father 3A]_A take 3.LOC-reach-PFV
 ‘the betel nut seems to be given to him by (our)father’

- c. *ma maama di fu do mi he-r-i*
 EPI_{PRX} [father 3A]_A [betelnut PRX]_N take 3.LOC-reach-PFV
 ‘it seems (that our) father has given him the betelnut’

4.4.2 Relativisation and cross-clause government

In Abui, nouns can be modified by clauses, linked with the marker *ba*. However, the head of the complex noun phrase does not need to be in argument relationship with the modifier clause, which can precede or follow the head noun. The nominal head can have the following functions in the linked modifier constituent: (i) verbal argument, (ii) argument of a nominal predicate, similarity predicate, or spatial deictic form, (iii) spatial or temporal adjunct, (iv) possessor, and (v) dependant of an ordinal numeral. No special marking is required. Following Matsumoto (1997), I analyse such clauses as noun-modifying clauses, instead of relative clauses. For more details see Kratochvíl (2007:169–174).

In many languages, syntactic pivots govern empty pronouns across clausal boundaries. Although the expression of the single argument has not been neutralised in Abui, the empty pronoun in a single-argument clause could be governed by one of the arguments of the preceding transitive clause. Example (35) however shows that this is not the case. The empty pronoun (both empty and pronominal) may be coreferential with any argument role in the preceding two-argument clause and its meaning is inferred from the mutual semantic relevance of both clauses.

- (35) a. *ama la he-pun-a ba Ø mara*
 [person]_N DYN_{MD} 3.LOC-grab.CPL-DUR SIM go.up.CNT
 ‘people_i were just holding it and Ø_i went up’
- b. *di ko moku ayoku ho-r ba Ø miyei*
 3A soon [kid two]_{REC} 3.REC-call.CPL SIM come.CPL
 ‘he shall call the two kids_i and Ø_i (the two kids)_i will come’
- c. *Simon di Fanata bol-i ba he-kilempak-d-i*
 [name 3A]_A [name]_N hit-PFV SIM 3.LOC-rock-GET-PFV
 ‘Simon hit Fanata_i and he_i (Fanata) lost balance’
- d. *di e-bukomang do nee maiye, ho-kaan-r-a*
 [3A]_A [2s.AL-heart PRX]_N eat if 3.REC-good.CPL-REACH-DUR
 yo!
 AS_{MD,AD}
 ‘(my sick wife said), if she_i would eat your heart, she_i would get better!’

I conclude that there is no syntactic pivot in Abui. Instead, Abui discourse relies on pragmatic pivots. The topical arguments function as pivots throughout a clause chain, until a subsequent topic is established. In (36), the topical argument *kalieta*

loku ‘the ancestors’ continues to be reconfirmed as the pivot throughout the sentence by the marker *hel*.

- (36) *afe kalieta loku di ya wó Pido he-amakaang loku*
 before [old.person PL 3A]_A DYN_{DST} [DST.H name 3.AL-person PL]_{PAT}
ha-da taloi do, hel loku di mi=ng ananra-ti,
 3.PAT-GET.CNT war T_{PRX} [3.TOP PL 3A]_A IN=SEE talk.CNT-PHSL
di ya wó Sabone mi-a ama fen took-u
 [3A]_A DYN_{DST} [DST.H name]_N in-DUR [person]_N injure.CPL drop-PRF
ya, nuku yo hel loku do rowa ha-pun-i
 SEQ [one MD.AD]_{PAT} [3.TOP PL PRX]_N live 3.PAT-grab.CPL-PFV
 ‘in the past the ancestors_i got into a war with the Pido people from above
 (in the mountains), they_i talked about how they_i happened to slaughter the
 (Pido) people up in Sibone, and one of them they_i managed to catch alive’

4.5 Summary

Syntactic pivots are privileged grammatical arguments, which appear in every clause, receive a special treatment in clause-combining constructions, and may control pronouns. I have shown that in Abui there are no arguments with such properties. None of the seven basic argument roles in Abui is equivalent to subject or object. There are many actor-less clause types and various constellations of the seven basic argument roles are attested. It is clear that Abui has not grammaticalised a single ‘most prominent syntactic constituent’, around which voice alternations and other syntactic functions usually revolve.

This is consistent with my analysis of Abui as a language in which argument realisation is driven exclusively by semantic features. Syntactic pivots are in their nature neutralisations of various semantic properties so their absence in a semantically aligned language is not surprising. Similar facts have been reported for other semantically aligned languages such as Mohawk (Mithun 2006:199).

5. Discussion

In the previous sections, I have shown that Abui argument realisation is largely fluid and driven by semantic features of participants. I have presented my analysis of semantic features responsible for argument realisation and their interrelatedness. In this section, I will place my analysis in the broader perspective of semantic treatments of transitivity.

5.1 Diachronic perspective, lexicalisation

Little is known about the diachronic development of semantically aligned systems. While Mithun (1991) argues that such systems might be diachronically stable, more recent work has shown that such systems can be areal features and some possible scenarios of their development have been proposed (e.g. Holton 2008; Mithun 2008). There is some evidence that the intransitive split systems develop from impersonal or experiencer constructions (Malchukov 2005, 2008; Holton 2008).¹⁸

Lexicalisation may obscure the reasons for particular argument realisation. For example, the verb *ha-luol* 'follow him' does not occur without the pronominal prefix. The verb might be historically related to the verb *lol* 'walk around, wander, follow a path'. Similarly, the root *rik* originally means 'pain, hurt' and only in traditional poetry might occur without the PAT prefix. In its single-argument use, the meaning of *rik* has shifted somewhat and has come to refer to the state of being 'ill'. However, *rik* has not become a stative verb yet, as it still can be combined with resultatives such as *moni* 'died, dead' to mean 'terminally ill, sick to death, lit. ill died'. Finally, many complex predicates, such as (30a, 30b) have integrated the auxiliary into the verb root. The verb stem *-mpang* is derived from *mi* 'inside' and *pang* 'reflect'. Many emotion and cognition predicates show similar development. Such expressions are highly idiomatic and the argument realisation is not always predictable.

5.2 Semantic views of transitivity

To address the role of transitivity in Abui, a semantic approach proves useful. The feature-decompositional approach, developed over the past few decades, overcomes the problems of having an infinite number of thematic roles by decomposing them into a relatively small set of relevant semantic features. In what follows I will provide a brief overview on the feature-decompositional approaches formulated in Hopper and Thompson (1980), Reinhart (2003), Dowty (1991), Rozwadowska (1988), Næss (2007), and Kemmer (1994). Each of these approaches attempted to explain transitivity from various constellations of semantic features.

Hopper and Thompson (1980) propose a number of semantic features (parameters) directly related to transitivity, listed in Table 11. A number of these features relate to the participants (e, f, i, j), others relate to the semantic properties of the event (b, c, d), formal properties of the clause (a) or grammatical categories (f).¹⁹

The parameter list proposed by Hopper and Thompson (1980) was simplified to a set of binary features related exclusively to the participants by Reinhart (2003). Reinhart's set contains features such as cause change [$\pm c$] and mental state [$\pm m$] and their possible combinations to account for a variety of thematic roles. The features [$+c+m$] correspond directly to the agent role, [$+c-m$] cluster is consistent with

Table 11. Hopper & Thompson's Parameters of Transitivity (1980:252)

parameter	high	low
a. Participants	2 or more (A and O)	1
b. Kinesis	action	non-action
c. Aspect	telic	atelic
d. Punctuality	punctual	non-punctual
e. Volitionality	volitional	non-volitional
f. Affirmation	affirmative	negative
g. Mode	realis	irrealis
h. Agency	A high in potency	A low in potency
i. Affectedness of o	o totally affected	o not (totally) affected
j. o individuation	o highly individuated	o non-individuated

both the instrument and cause. $[-c+m]$ is a formalization of experiencer while the $[-c-m]$ cluster corresponds to the patient role.

Dowty (1991), although avoiding the feature-decomposition terminology, elaborates on the cluster-like nature of thematic roles. Dowty (1991:571–2) identifies two opposing prototypes dubbed as *PROTO-AGENT* and *PROTO-PATIENT*. The characteristic properties of the two roles are summarized in Table 12.

Rozwadowska (1988) proposes a set of three features: sentient (qualifying the volitional involvement of the participant), cause (referring to the instigation and execution of an act) and change (describing the psychological or physical effect of an action, process or state). These three features decompose a number of very general thematic roles, listed in Table 13.

Table 12. Dowty's (1991:572) Inventory of macro-role properties

Agent proto-role properties	Patient proto-role properties
a. volitional involvement in event or state	undergoes change of state
b. sentience (and/or perception)	incremental theme
c. causing an event or change of state in another participant	causally affected by another
d. movement (relative to position of another participant)	stationary (relative to position of another participant)
e. (exists independently of the event named by the verb)	(does not exist independently of the event, or not at all)

Table 13. Rozwadowska's (1988:159) decomposition of thematic relations

Sentient	Cause	Change	Thematic relation
+	+	+	Affected Agent (e.g., Agents of monotransitive verbs that undergo some change; traditionally referred to as Agents and Themes at the same time: <i>John rolled down the hill.</i>)
+	+	-	Agent (Agents of prototypical Agent-Patient verbs: <i>destroy, beat, kill, hit, write</i> etc.)
+	-	+	Experiencer, possibly Recipient and Possessor
?	+	-	Instruments
-	+	-	Object — Cause of emotion (i.e., Neutral, Rappaport's Experienced, Jackendoff's Percept)
-	-	+	Patient (i.e., affected objects of agentive verbs)
-	-	-	Neutral viewed as a mere object of the verb enter (in <i>John entered the room.</i>)

Næss (2007) simplified Rozwadowska's (1988) account. The Agent and Patient are presented as maximally distinct categories characterised by an opposite distribution of three features. The three features volitionality, instigation, and affectedness correspond to Rozwadowska's sentient, cause, and change. Table 14 presents the feature configuration of Agent and Patient. According to Næss (2007:44), this feature configuration defines the transitive prototype.

Table 14. Næss' (2007:44) Agent and Patient as maximally distinct categories

Feature	Agent	Patient
Volitionality	+	-
Instigation	+	-
Affectedness	-	+

Based on the semantic opposition of the Agent and Patient, Næss (2007:30) advances a definition of a transitive prototype as follows:

- (37) 'THE MAXIMALLY DISTINCT ARGUMENTS HYPOTHESIS: A prototypical transitive clause is one where the two participants are **maximally semantically distinct** in terms of their roles in the event described by the clause.' (Næss 2007:30, emphasis in original)

The hypothesis in (37) predicts that in some languages deviation from the feature configuration presented in Table 14 will lead to the use of structures distinct from the transitive prototype (Næss 2007:44–5). Differential marking (of subjects and objects) results from these deviations.

In Næss' (2007) view, events involving human undergoers represent the transitive prototype. An alternative view is taken by Kemmer (1994) who argues that the affected transitive argument refers to an inanimate participant:

- (38) A prototypical two-participant event is defined as a verbal event in which a human entity (an Agent) acts volitionally on an inanimate definite entity (a Patient) which is directly and completely affected by that event. Thus, there are two participants, and the relation between them involves some kind of transmission of force or energy from the animate participant to the second, affected participant. (Kemmer 1994:191)

These two approaches make incompatible predictions about which type of undergoers will be marked, but prove useful for unravelling the hierarchy of semantic features, as I will explain in the next section.

5.3 Relevance for semantic accounts of transitivity

I have shown that the Abui system reflects consistently semantic features of participants. I have identified eight primary semantic features that drive the argument realisation, listed in Table 15. The bracketed terms are those used in Beavers (2011).

It is a widely held view that actor and undergoer are cluster concepts (Cruse 1973; Dowty 1991; Hopper and Thompson 1980; Rozwadowska 1988; Reinhart 2003; Næss 2007; Creissels 2008:148). Abui offers insights in the internal structure of these clusters.

Control [+CTRL] and affectedness [+AFF] distinguish acting participants from affected ones in Abui. Affectedness and control represent the most significant difference between the two participants and each of them is further subdivided in subtypes. I have shown that control entails instigation [+INST] (Section 3.6) and is closely associated with volition [+VOL] (Section 3.5). In Section 3.2 I have argued

Table 15. Semantic features of relevance for Abui argument realisation

type	feature	abbreviation
a. referential	specificity	[±SPC]
b. actor	instigation	[±INST]
	control	[±CTRL]
	volition	[±VOL]
c. undergoer	affectedness (potential change)	[±AFF]
	individuation	[±IND]
	change (non-quantised)	[±CHANGE]
	change of state (quantised)	[±COS]

that affectedness is a gradable notion and at least four degrees can be distinguished in Abui: (i) unspecified affectedness [-AFF], (ii) potential affectedness [+AFF], (iii) change [+CHANGE], and (iv) change of state [+COS].

In my analysis, each argument role in Abui corresponds to a unique set of semantic features, schematically represented in Table 16.

Table 16. Semantic characteristics of Abui arguments

feature	A	PAT	REC	LOC	GOAL	BEN	N
specificity	+	+	+	+	+	+	±
control	+	-	-	-	-	-	-
volition	+	-	-	-	-	-	-
instigation	+	±	±	±	±	±	-
affectedness	-	+	+	+	+	+	-
individuation		+	+	-	+	-	-
change	-	+	+	+	-	-	-
change of state	-	+	-	-	-	-	-

Participants characterised by sets of semantic features not corresponding directly to any of the arguments types are expressed as multiple arguments and various multi-verb constructions can be used (their discussion is beyond the scope of this paper). Examples of this were shown in Sections 3.7 and 4.2.

6. Conclusions

The presented analysis of the Abui argument realisation has ramifications for semantic accounts of transitivity, differential marking, and semantic alignment systems, in which feature-decompositional approach is common. I have shown that it is possible to take up Arkadiev's (2008) challenge and characterise the interrelatedness of the semantic features (as listed in Hopper and Thompson 1980 and other accounts given in Section 5.2) related to transitivity, differential argument realisation, and semantic alignment. In Abui, all three domains are interrelated and displaying sensitivity to the same set of semantic features and should therefore be studied together, if the semantic underpinnings of argument realisations are to be uncovered.

From the Abui perspective, the account in Hopper and Thompson (1980) is the most complete, but does not address the hierarchy of features. The accounts in Reinhart (2003), Dowty (1991), and Rozwadowska (1988) have oversimplified the

feature inventory. The same holds for the proposal by Næss (2007), but its formulation has more predictive power for dealing with differential argument realisation.

I have shown that the fluid argument realisation makes it impossible for transitivity to be defined as a property of lexical verbs. In the absence of syntactic pivots (discussed in Section 4.4), transitivity cannot be defined as a syntactic notion either. The only possible view of transitivity in Abui is a semantic one, describing transitivity as a clausal property. I have considered a large number of clause types in Abui which contain two arguments. Transitivity can be maintained as a property that applies to a subset two-argument clauses, namely those that contain an acting and an affected argument. However, there is no default two-argument clause type, which contains an agent and an affected argument. Instead, there are five possible constructions: A-PAT, A-REC, A-LOC, A-GOAL, and A-BEN differing in the degree of affectedness characterising the affected participant.

The feature-decompositional approach to transitivity in Næss (2007:30) postulates the features [\pm VOL], [\pm CTRL], and [\pm AFF] to define the transitive prototype and account for the variation. To assess the role of transitivity in Abui, it becomes clear that the set of features has to be expanded but the existence of a prototype (as in both Næss 2007 and Kemmer 1994) remains problematic. In my view, transitivity in Abui is better understood as a constructional phenomenon, relevant to a subset of two-argument clauses, which can indeed be characterised semantically.

There are some open issues that will be addressed in future research. Most significant is the question whether Beavers' account of affectedness (2011) can be proven valid for Abui and whether the tests developed to assess the degree of affectedness are applicable to Abui. The nature of affectedness has to be investigated to determine whether its structure is indeed degree-like and if so, whether the same degrees, as those proposed in Beavers (2011), are encoded cross-linguistically and thus cognitively valid. Another issue is the diachronic development of the Abui system, addressed in Kratochvíl et al. (2011).

Abbreviations

This paper uses the conventions of the Leipzig Glossing Rules (available at <http://www.eva.mpg.de/lingua/resources/glossing-rules.php>). Only departures from these conventions are listed below.

3I	third person affected instigator	INTER	interjection
A	ACTOR argument role	L	low (demonstrative)
AD	addressee-based	LNK	linker
AFF	affected	LOC	LOCATION argument role
AL	alienable	MD	medial
AS	assertion marker	MOD	modifier
BEN	BENEFACTIVE argument role	N	NEUTRAL argument role
CHANGE	affected and changed	OS	(sibling of) opposite gender
CNT	continuative stem	PAT	PATIENT argument role
COS	change of state	PHSL	phasal aspect
CPL	completive stem	P	plural
CTRL	controlling	PL	plural quantifier
DEO	deontic modality marker	PNCT	punctual
DST	distal	PRX	proximal
DSTR	distributive	PURP	purpose linker
DYN	dynamic modality marker	QT	quotative marker
E	exclusive	QUANT	quantifier
EPI	epistemic modal marker	REC	RECIPIENT argument role
GOAL	GOAL argument role	RED	reduplication
H	high (spatial demonstrative)	SAY	hear-say marker
I	inclusive	S	singular
ICP	inceptive stem	SIM	simultaneous linker
INAL	inalienable	SPC	specific
INCH	inchoative aspect	SS	(sibling of) same gender
IND	individuated	T	(relative) tense marker
INST	instigating	VOL	volitional

Notes

1. I dedicate this paper to the memory of Bapak Timoteus Lanma (1943–2011), the chief of Takalelang and my kind host and mentor. I owe thanks to Randy LaPolla, Alec Coupe, Balthasar Bickel, two anonymous reviewers, Joanna Sio, Marian Klamer, Ger Reesink, Sebastian Fedden, Benediktus Delpada, Robert Borsley, Boban Arsenijević, and the RCLT members at La Trobe University for their valuable comments, suggestions and queries. Any remaining errors are mine. The data presented in this paper has been collected by the author between 2003–2011. Benediktus Delpada and Waksi Maufani assisted with transcribing, translating, and analysing the data. The research on Abui was supported by Leiden University through a grant from the Dutch Science Council (NWO), La Trobe University, and Nanyang Technological University, which I gratefully acknowledge.

2. Abui is a Papuan language spoken by about sixteen thousand people in the central valley and surrounding mountains of Alor Island. Together with another two dozen Papuan languages in the Timor-Alor-Pantar area, Abui is claimed to be a member of the Trans-New Guinea family. Pawley (2001) and Ross (2005) group the Timor-Alor-Pantar languages with the Trans-New Guinea family, while other specialists in the field dispute this hypothesis. The internal relationship of the Alor-Pantar group (AP) has been established (Holton, Klamer & Kratochvíl, 2009).

The precise genetic affiliation of the AP languages remains to be established. Linguistic descriptions of the northern Abui dialects are available (Stokhof 1984; Kratochvíl 2007). Alorese and Malay are the only Austronesian languages spoken in the area.

3. According to Wichmann (2008:4), the advantage of the term is that it does not make any assumptions about the factors in differential treatment of intransitive arguments except that they are semantic.

4. The free pronoun *di* and the optional NP form a single intonational constituent and are not separated by a pause in rapid speech. However, in a topic-comment construction, the NP can be left-dislocated and separated by a pause from *di* rendering meanings similar to English topic-comment constructions with a resumptive pronoun such as *Simon, he is poking me*.

5. The fluidity of Abui argument realisation may seem unusual, but great fluidity in selection of arguments has been reported even for English, based on conversational data (see Thompson and Hopper 2001, Section 4).

6. Split intransitive systems are reported to be more common in languages with pronominal marking on verbs (Dryer 2007:262; Creissels 2008:142). Mithun (2008) argues that semantic systems of this type might be prone to diffusion and not more diachronically stable than other systems (contra Mithun 1991a:524). Holton (2008) makes a similar claim for the languages of North Halmahera. Kratochvíl et al. (2011) discusses the innovation of the split systems in Klon, Abui, Kamang, Kula, and Sawila — montane languages of Alor pointing out their relative diachronic volatility.

7. A well-known case of a language coming near to the Abui system outside the Alor-Pantar family is that of Chocktaw-Chickasaw (Munro and Gordon 1982:84; Davies 1986).

8. The current analysis differs from Kratochvíl (2007) in that the original LOC and REC arguments have now been broken up into LOC/BEN and REC/GOAL respectively.

9. Note that no determiner is needed to indicate the specificity of the argument. Relational nouns such as *maama* ‘father’ are typically specific.

10. Besides the partitive alternation in (11a), other well-known examples constructions expressing distinction in affectedness are: (i) mismatches in syntactic and morphological transitivity in Oceanic languages such as Trukese, (ii) alternations of derivational suffixes *-i* and *-kan* in Indonesian, or (iii) the ergative and antipassive alternation in Kabardian (Hopper and Thompson 1980:262–9). Yet other examples of morphosyntactic correlates of the affectedness scale can be found in Tsunoda (1985:388). Abui pronominal prefix alternations resemble these better-known examples.

11. According to Tsunoda (1985:392), affectedness (in terms of Hopper and Thompson 1980) and individuation tend to correlate, but their link is weaker than that of volitionality and agency.

12. Fraurud (1996) discusses the effects of individuation in grammar showing that the human referents are much more likely to serve as antecedents to pronouns and definite NPs within the same or subsequent sentence than the non-human referents (p.67). Individuation is characterised as a one-to-one relationship between the NP and its anchor. Cross-linguistically, individuation is held responsible for differential marking (Comrie 1989:128; Malchukov 2006; Kittilä 2006).

13. Hopper and Thompson (1980) list oppositions characterising individuated and non-individuated participants: proper vs. common, human/animate vs. inanimate, concrete vs. abstract, singular vs. plural, count vs. mass, and referential/definite vs. non-referential. Hopper and Thompson (1980: 253) point out that “an action can be more effectively transferred to a patient which is individuated than to one which is not; thus a definite O is often viewed as more completely affected than an indefinite one”. This doesn’t seem to be the case in Abui where the REC/LOC and GOAL/BEN share the same degree of affectedness.
14. The distinction between instigation and control is constructed in analogy with the syllable structure. The agency consists of essentially two parts: onset (i.e. instigation) and coda (i.e. control). While onset here is the primary cause, the coda is the control throughout the event duration. Unfortunately, I have not been able to identify other languages making a similar distinction.
15. The contrasting non-speech-participant reference in Abui is somewhat different from other known systems (also known as fourth-person systems, e.g. proximate vs. obviative, coreference vs. disjoint reference, direct voice vs. inverse voice). Abui system tracks the semantic feature of instigation, while other fourth-person systems are based on syntax, discourse topicality, and/or relative animacy status of the antecedent. A comprehensive overview of the literature dealing with the topic can be found in Fleck (2008).
16. My Abui collaborator Mr Benediktus Delpada has collected about 400 emotion and cognition predicates involving body parts for his thesis. He is convinced that the body parts play a major role in Abui emotion and cognition lexicon.
17. I follow discussions of subjects in Acehnese (Durie 1987), Lakhota (Van Valin 1987), Chinese (LaPolla 1993), and Mohawk (Mithun 2006).
18. Abui pronominal prefixes have become integrated into the verb through a PRONOMINAL.PREFIX — AUXILIARY.VERB stage (Klamer and Kratochvíl 2006; Kratochvíl et al. 2011). The PAT series has been inherited, but the remaining series were innovated in Abui and some of its sister languages. The historical pronouns were most likely used to track human undergoers to prevent possible ambiguity. The system was gradually extended. At present, bound pronouns can refer to non-human participants which display some human characteristics (individuation, affectedness). Interestingly, the actor pronouns have not been integrated into the verb in Abui or in related languages of Alor and Pantar.
19. Note that aspect, volitionality, agency, and affectedness are also listed in Table 4 as responsible for semantic alignment of the intransitive argument.

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On transitivity in two Tibeto-Burman languages

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This paper presents the analyses of transitivity and questions about transitivity in two languages (Rawang and Qiang) that have been described using very different definitions of transitivity, with a view to showing that each language must be analysed on its own terms, and so the criteria used for identifying transitivity, if it is to be identified at all, might be different between languages. In the case of these two languages it is at least partly due to the two languages differing in terms of the degree of systematicity of the marking, with the Rawang marking being more systematic.

Keywords: Transitivity, Rawang, Qiang

o. Introduction¹

This paper presents alternative analyses of transitivity and questions about transitivity in two Tibeto-Burman languages I have personally worked on. The point here is not to argue for the analyses — that has been done elsewhere (see the references given below). The goal here is just to point out how the facts of different languages have led me to use very different criteria in identifying certain constructions in the languages as transitive or intransitive. Given the discussion in the introduction to this volume, showing that transitivity is a grammaticalised phenomenon and so differs in each language that manifests it, this is what we would expect.

1. Rawang

Rawang (Rvwang [rə'wàŋ]) is a Tibeto-Burman language spoken in the far north of Kachin State, Myanmar (Burma). The data are from the Mvtwang (Mvt River) dialect, and the analyses discussed are those of Morse (1962, 1963, 1965) and

LaPolla (2000, 2006, 2008a, 2008b, 2010a, 2010b; LaPolla & Poa 2001; LaPolla with Yang 2004, LaPolla & Yang 2007).²

Rawang is verb-final, agglutinative, and both head marking and dependent marking. Verbs can take hierarchical person marking, aspect marking, directional marking (which also marks aspect in some cases), and tense marking. Unlike many other Sino-Tibetan languages, in Rawang transitivity is a very salient concept and absolutely necessary for understanding the patterns in the grammar. All verbs are clearly distinguished (even in citation) by their morphology in terms of what has been analysed as transitivity, and there are a number of different affixes for increasing or decreasing valency (see LaPolla 2000 on valency-changing derivations). The citation form for verbs is third person non-past affirmative/declarative:

- Intransitives take the non-past affirmative/declarative marker (*ē*) alone in the non-past (e.g. *ngōē* ‘to cry’, *àng ngōē* ‘He’s crying’) and the intransitive past tense marker (*-i*) in past forms (with third person argument; e.g. *ngà ròmñvng-pè gō shì bōi* [1sg friend-MALE also die PFV-INTR.PAST] ‘My friend also died’). They can be used transitively only when they take valency-increasing morphological marking (causative, benefactive). Adjectives can take the intransitive morphology or the nominaliser *wē* in citation (e.g. *tēē ~ tēwē* ‘big’), and can modify a noun in post-head position without being nominalised (e.g. *lègā tē bok* [book big CL] ‘the big book’), unlike verbs, but when used as predicates function the same as other intransitive verbs (e.g. *ngà nō tē-ng wē ínigō* [1sg TOP big-1sg NOM although] ‘Although I was older, ...’) and so are considered a subclass of intransitive verb. Some stative intransitive verbs can take an oblique argument marked by the locative/dative marker, such as the stimulus argument in (1):

- (1) *Ngà vgī s̀vng svrēngē.*
ngà [vgī s̀vng] svrē-ng=ē
 1sg dog LOC afraid-1sg=NPST
 ‘I’m afraid of dogs.’

- Transitives take the non-past third person undergoer marker (*ò*) plus the non-past affirmative/declarative marker (*ē*) in non-past forms (e.g. *shádōē* ‘to know (something)’, *rídōē* ‘to carry (something)’, *ỳvngóē* ‘to see (something)’; see (2), below, for a full example) and the transitive past tense marker (*à*) in past forms (with third person undergoer arguments; see (3) below). They can be used intransitively only when they take valency-reducing morphological marking (the intransitivising prefix or the reflexive/middle marking suffix). Rawang seems to have only two underived ditransitive roots: *zìdē* ‘give’ and *v̀lòē* ‘tell’,

and they take the same morphology as mono-transitives. All other ditransitive verbs, e.g. *dvtānòē* ‘show’ (< *vtānē* ‘be visible’) and *shvríòē* ‘send’ (< *riòē* ‘carry’), are derived using the causative construction.

- There is an agentive marker *í* which appears after the NP representing the actor argument (if one is present in the clause) of transitive clauses (those with a transitive verb as defined above). It does not appear in intransitive clauses, either single argument clauses or two argument clauses with intransitive verbs.

(2) *Ngái gō tiq gó shángòē.*
 ngà=i gō [tiq gó] shá-ng-ò=ē
 1sg=AGT also one person know-1sg-3U.NPST=NPST
 ‘I also know one man (there).’ (Interview with Bezideu, 38:3)

(3) *Rvshàrì ỳv̀ng bóà kvt, ...*
 rvshà-rì=i ỳv̀ng bó-à kvt
 monkey-pl=AGT see PFV-TR.PAST when
 ‘When the monkeys saw (him), ...’ (Mykangya and the monkeys, 4:2)

- Ambitransitives (labile verbs) can be used as transitives or intransitives without morphological derivation. There are two patterns, representing the two conceptions of transitivity discussed in the introduction to this issue: one type involves a Medium and an event, but to which an agent can be added (e.g. *gvyaqē* ‘be broken, destroyed’ ~ *gvyaqòē* ‘break, destroy’). In this type, adding an agent argument creates a causative without the need for a causative prefix. The other type involves an actor and an activity, to which a second argument can be added in the traditional sense of the action being carried over to another participant (e.g. *á:mòē / v̄mē* ‘to eat’). Within this second type there are also two patterns when a second participant is added: in one type the clause retains the intransitive morphology, while in the second type the verb takes full transitive morphology and the NP representing the actor takes the agentive marker. Contrast (4a–b):

(4) a. *Àng pē zvtñē.*
 àng pē zvt=ē
 3sg basket weave=NPST
 ‘He weaves baskets.’ (general or habitual sense)

b. *À:ngí pē tiqch̀v̀ng za:tnòē.*
 àng=i [pē tiq-ch̀v̀ng] zvt-ò=ē
 3sg=AGT basket one-CL weave-3U.NPST=NPST
 ‘He is weaving a basket.’

Use of the intransitive vs. the transitive form marks a difference between a general or habitual situation and a particular situation respectively. The second

argument of the intransitive form is non-referential and simply acts to specify the activity, though it is not grammatically or phonologically incorporated into the verb. The transitive form can also be used if the second argument is not specific, but *if the second argument is specific, then the transitive form must be used.*

- The copula, *îē*, takes the intransitive morphology and is like other intransitive verbs in terms of person marking, tense/aspect marking, interrogative marking, applicative marking, and nominalization, but it has two arguments. The copula cannot take causative marking, the way most other intransitives can, though it can take the precative marker (*laq-*), which is a sub-type of imperative (e.g. *cilcè laq-(mò)-í* '(Don't) let him be a soldier'). Two other verbs that take two arguments but are always morphologically intransitive are *mvyóē* 'to want, to like' and *vdáē* 'to have, own'.

Morse (1965: 346–8) analysed the appearance of the verbal suffix *-ò* in the non-past or *-à* in the past as a necessary criterion, aside from the appearance of the agentive marker, for a clause to be transitive (adapted from Morse 1965: 346):

	Clause-marking suffixes	
	Transitive	Intransitive
Past	-à	-í
Non-past	-ò	-Ø

He argued that only clauses with third person undergoer arguments are transitive ("Only action from first or second to third person, or between two third parties, is expressed as transitive action"; 1965: 348), even though in clauses that do not have third person undergoer arguments the NP representing the actor argument can take the agentive marker. For Morse then, (5a) is transitive, but (5b) is intransitive (from Morse 1965: 348; glosses added), whereas in my analysis both are transitive because I take the use of the agentive marker as criterial and consider the *-ò* suffix to be a non-past third person undergoer marker, and transitivity harmony (see below) works the same regardless of person.

- | | |
|---|--|
| <p>(5) a. <i>Ngái àng shvlòē.</i>
 <i>ngà=í àng shvl-ò=ē</i>
 1sg=AGT 3sg drag-3U.NPST=NPST
 'I am dragging him.'</p> | <p>b. <i>à:ngí ngà èshvlē.</i>
 <i>àng=í ngà è-shvl=ē</i>
 3sg=AGT 1sg N.I-drag=NPST
 'He is dragging me.'</p> |
|---|--|

Morse (1965: 349) and I both analyse reflexive/middle voice clauses, where the verb is marked by the suffix *-shì* and the actor cannot take the agentive marker, as intransitive, even when there are two noun phrases in the clause, as in (6).³

- (6) *Nvpè gō vPuqdap taq cilcè wáshì yà:ng má?*
 nv-pè gō vPuq-dap taq cilcè wà-shì yǜng má
 2-father also Jinghpaw-army.base LOC soldier do-R/M TMyrs Q
 ‘Was your father also a soldier in the Jinghpaw army base?’ (Lit.: ‘make himself a soldier’; Interview with Bezidø, 33.3)

One manifestation of the importance of transitivity in Rawang grammar is the phenomenon of transitivity harmony (LaPolla 2010b). A small subset of transitive verbs can be used following a main verb to mark the phase or other aspects of the action, such as *dýn* (*dá:nòē*) ‘be about to’, *pýng* (*pà:ngòē*) ‘begin to’, *m̄vn* (*mā:nòē*) ‘continue’, *m̄nòē* ‘be used to’, *dýng* (*dá:ngòē*) ‘finish’. There is also at least one ambitransitive verb that can be used as an auxiliary as well, *daqē* ~ *daqòē* ‘be able to’. When these verbs act as auxiliary to another verb, they have to match the transitivity of the main verb. For example, with a transitive main verb, the auxiliary simply follows that verb and the two verbs together take one set of transitive marking morphology, as in (7), where the auxiliary verb *m̄vn* (*mā:nòē*) ‘continue’ follows the transitive verb *dvkòmòē* ‘gather (something)’, and the transitive non-past marker *-ò* marks the combined predicate as transitive.

- (7) *Paqzí sháò shvlē gō wēdō dvkóm mā:nò!*
 [paqzí shá-ò shvlē] gō wē-dō [dvkòm⁴ m̄vn-ò]_{PRED}
 education know-3U.NPST layer also that-ADV gather continue-3U.NPST
 ‘Continue to gather the educated ones that way!’ (Karu Zong, 46.3)

If instead the main verb is intransitive, then the auxiliary verb must be intransitivised, as in (8), where the same auxiliary, *m̄vn* (*mā:nòē*) ‘continue’, is made intransitive by the reflexive/middle voice suffix *-shì* to harmonise with the intransitive verb *vløp* (*vløpmē*) ‘enter, go/sink into’:

- (8) *Kādō wàò nìgō, sòngmèdým nō vløp m̄vnshìē wā.*
 kā-dō wà-ò nìgō, [sòngmè-dým] nō [vløp
 WH-ADV do-3U.NPST though needle-CL TOP go.into
 m̄vn-shì=ē]_{PRED} wā
 continue-R/M=NPST HS
 ‘No matter how (he tried) the needle kept on going inside, it is said.’
 (Makangya, 6.5)

In (9), the ambitransitive verb *daqē* ~ *daqòē* ‘be able to’ is used first as an intransitive, as it follows an intransitive verb (which is intransitivised by the reflexive/middle marker *-shì* because it is reflexive), and then is used in its transitive form, as it follows a transitive verb:

- (9) *Ỳvng̀lòng n̄ wāshì daqē, wā; T̀òlòng n̄ gw̄ər daq̄è, wā.*
 ỳvng̀-̀lòng n̄ [wā-shì **daq-ē**]_{PRE} wā t̀ò-̀lòng n̄ [gw̄ər
 long-CL TOP do-R/M able-NPST HS short-CL TOP toss
daq-ò=ē]_{PRE} wā
 able-3U.NPST=NPST HS
 ‘Long ones can be taken for oneself; short ones can be discarded.’ (Rawang
 proverbs, #8)

Notice we are talking here purely about morphological transitivity; as with the ambitransitives and the reflexives, there may be two arguments in the clause, but the clause is morphologically intransitive. Note also that this morphological intransitivity does not correspond with what in Role and Reference Grammar (Van Valin & LaPolla 1997, §4.2) is called M-transitivity, transitivity defined in terms of the number of macro-roles (which correlates with Aktionsart) rather than syntactic arguments, as both the intransitive and transitive clauses have the same sort of arguments, even though, in the M-transitivity view, transitivity is dependent on there being an individuated undergoer, similar to the condition for the use of the transitive form of ambitransitives.

In (10) we can see that when the main verb is intransitivised by the other intransitivising marker (*v-*), which is used here to give the sense of a reciprocal, *daqē* also has to be intransitive:

- (10) *Àngní dvh̄ò n̄ dvkū màkūí vrú kē n̄ vshvt daqē, wā.*
 àng-ní dvh̄ò n̄ dvkū màkū=í v-rú kē n̄ [v-shvt
 3-dl in.laws TOP ladle SCOOP=INST INTR-hit RECIP PS INTR-fight
daq=ē]_{PRE} wā
 able-NPST HS
 ‘Close relatives sometimes can fight.’ (Rawang proverbs #7)

The auxiliaries follow the harmony pattern even when the different forms of the ambitransitive verbs are used as the main verb. That is, when the ambitransitive main verb is used as an intransitive, the auxiliary verb will also be intransitive, but if the ambitransitive main verb is used as a transitive verb, then the auxiliary will be transitive. Compare (11a–b), for example:

- (11) a. *àng v̄m̀d̀v̄ng̀shì b̄òì*
 àng [v̄m-**d̀v̄ng-shì** b̄ò-ì]_{PRE}
 3sg eat-finish-R/M PFV-INTR.PAST
 ‘He finished eating.’ (intransitive *v̄mē* ‘eat’)
- b. *àngí v̄mpà̀lòng v̄m̀d̀v̄ng b̄ò-à*
 àng=í v̄mpà-̀lòng [v̄m-**d̀v̄ng** b̄ò-à]_{PRE}
 3sg=AGT food-CL eat-finish PFV-TR.PAST
 ‘He has finished eating the food.’ (transitive *v̄mòè* ‘eat’)

The pattern is also followed when the main verb takes the purposive nominaliser, as in (10), where *ngaqòè* ‘push over’ is intransitivised by the intransitivising prefix (*v-*), and then nominalised by the purposive suffix (see LaPolla 2000 on the prefix, and LaPolla 2008a on the suffix and complement structures). Because the verb is intransitive, the auxiliary must be intransitivised.

- (12) *Vngaqólým dýnshìē.*
 v-ngaq-lým dýn-shì=ē
 INTR-push-PUR about.to-R/M=NPST
 ‘(It) seems like (it) is about to fall down.’

The pattern also holds regardless of person. For example, if a phase verb is added to (5b), which Morse analysed as intransitive, the phase verb follows the transitive pattern, not the intransitive pattern:

- (13) *à:ngí ngà s̀vng sh̀vl èp̀vngē.*
 àng=i ngà s̀vng sh̀vl è-p̀vng=ē
 3sg=AGT 1sg LOC drag N.1-begin=NPST
 ‘He began to drag me.’

We can see from these examples that some conception of transitivity is needed for understanding the patterns found in the Rawang examples. But how should transitivity be defined in Rawang? One of the analyses in the literature (mine) assumes a dependency between the individuation of the undergoer and transitivity in the case of ambitransitives, which correlates with the use of agentive marking and particular verbal affixes; the other one (Morse’s) assumes a dependency between person and transitivity, which also correlates with use of the same verbal affixes, but in a different way, and he assumes the presence or absence of the agentive marker does not affect transitivity. Neither view is based on core vs. non-core arguments, as it can be difficult to distinguish core and non-core arguments, given that none are obligatory in the clause, and in clauses which we might assume are transitive, non-agentive animate arguments (which we must assume are core arguments if we want to say the clause is transitive) can be marked the same way as peripheral arguments (using the same marker locative/dative marker as used in (1) above; see (13) and line 2 of (14)). We will return to this question after the discussion of Qiang.

- (14) *Vlāng Pū:ngí nō s̀vngzàwàngcèrì taqkèní*
 [vlāng pūng=i nō s̀vngzàwàngcè-rì taq-kèní
 Vlang Pung=AGT TOP human.beings-pl LOC-from
 ‘Alang Pung, from among the humans,

s̀vng vnvprì s̀vng t̀vm vb̀un baq kéò nò, ... (LaPolla & Poa 2001:50–51)
 [s̀vng vnv-p-rì s̀vng] t̀vm vb̀un baq ké-ò] nò
 person beautiful-pl LOC quickly lift carry eat-3U.NPST PS
 picked up the beautiful ones and quickly carried them away to eat, ...'

2.2 Qiang

Qiang is a Tibeto-Burman language of northern Sichuan. The examples and discussion below are of the Ronghong variety, from LaPolla with Huang 2003. We argued on the basis of the unmarked arguments that can appear in a clause that Qiang has intransitive, transitive, and ditransitive verbs, plus some ambitransitive verbs. Transitives can be formed from intransitives, or ditransitives from transitives, by the addition of the causative suffix. There is no intransitivizing marking other than the reduplication that marks the reciprocal. In a transitive clause, when the actor is the topic, the noun phrase representing the actor need not take any agentive marking, and the undergoer can also be unmarked. With few exceptions, this is true regardless of whether the noun phrase representing the actor is a noun or a pronoun, or whether the referent is first, second, or third person, or whether the argument is agentive or non-agentive, and is true for all aspects. The person marking on the verb generally reflects the person and number of the actor, regardless of whether the actor is agentive or non-agentive. The post-nominal agentive marker, *-wu*, is optional, as shown by the lack of it in the semantically very effective clause in (15), but it can be used when there is marked word order, or when there is a need to emphasise the agentivity of the actor. The (a) and (b) examples in (16) and (17) come from the same story, and were said just a few lines apart, but differ in terms of the use or non-use of the agentive marker (examples from LaPolla with Huang 2003):

- (15) *tçile pəmaha tse: qəta:-wa* (p. 272, story line 97)
 2pl tonight this:CL beat.to.death:PRS-EMPH
 'We will beat this (orangutan) to death tonight.'
- (16) a. *ʃkup-le:-wu qa dza:* (p. 268, story line 38)
 orangutan-DEF:CL-AGT 1sg eat:PRS
 'The orangutan will eat me.'
- b. *ʃkup-le:-ŋuəŋi qa dza:-wa* (p. 268, story line 50)
 orangutan-DEF:CL-TOP 1sg eat:PRS-EMPH
 'The orangutan will eat me.'
- (17) a. *χa-la-ha⁵ japə-le:-ta ə-tʃə-ŋiaufu...* (p. 274, story line 123)
 needle-DEF:one-pl hand-DEF:CL-LOC DIR-stab-as.soon.as
 'As soon as the needles stabbed the hand (of the orangutan) ...'

- b. *qusap-te:-wu japə-le:-xʂe tu-tua-kui,...* (p.275, story line 130)
 scissors-DEF:CL-AGT hand-DEF:CL-side DIR-cut-NAR
 ‘The scissors cut off the hand (of the orangutan), ...’

Normally the noun phrase representing the causer of a derived monotransitive clause does not take the agentive marker, but if it is an inanimate force, such as ‘wind’ in (18), the agentive marker would generally be used for clarity.

- (18) *тову-wu qa da-tuə-z̄*
 wind-AGT 1sg DIR-fall.over-CAUS
 ‘The wind knocked me down.’

Another context where the agentive marking is often needed for disambiguation is in relative clauses, as relative clauses are nominalisations, and there is no person marking within nominalisations. See how the marking affects the interpretation of the following two examples:

- (19) a. [*qa panə dele-m*] *mi*
 1sg thing give-NMLZ person
 ‘the person who gave me something’
 b. [*qa-wu panə dele-m*] *mi*
 1sg-AGT thing give-NMLZ person
 ‘the person to whom I gave something’

The one exception to the lack of marking of the undergoer of a transitive verb is when the undergoer is animate and the noun phrase representing the actor does not have agentive marking, so there might be confusion of which referent is the actor and which is the undergoer. In this case the dative/allative marker *-ta* can be used after the noun phrase representing the undergoer to disambiguate the actor from the undergoer or emphasise the undergoer, as in the following examples:

- (20) *the: qa-ta dze!*
 3sg 1sg-DAT hit
 ‘He is hitting me!’
 (21) *khuə-le: qa-ta ha-ʋdʒe-ʂa.*⁶
 dog-DEF:CL 1sg-DAT DIR-bite-1sgU
 ‘The dog bit me.’
 (22) *xʂe-le: ʔũ-ta ə-tə-san.*
 bull-DEF:CL 2sg-DAT DIR-gore-2sgU
 ‘The bull gored you.’

There is no change in the transitivity of the clause with the use of this marking (even though it is often used to mark peripheral arguments), as its use here is

purely to distinguish semantic roles. While generally it is used when the agentive marking is not used, the two markers can appear in the same clause. For example, (20) could also have the agentive marker *-wu* after the noun phrase representing the actor.⁷

3. Discussion

In Section 1 we saw that two different conceptions of transitivity are possible for Rawang.⁸ Morse's view is that only clauses with third person patients are transitive. Mine is that any clause where the actor takes the agentive marker or (in cases where no actor argument is mentioned) the verb takes one of the transitive suffixes is transitive. Neither view is based on the number of unmarked or core arguments, or the traditional sense of adding another participant that the action "passes over" to. So having the agentive marker and the "transitive" verbal affixes (which pattern together) mark a clause as transitive, not the number of unmarked arguments that appear in the clause. Looking at the different conceptions of transitivity in the introduction to this issue, we see that the RRG view of transitivity and also Hopper and Thompson's (1980) and Næss' (2007) views of transitivity might be of use in understanding this system.⁹ All three of these conceptions take the individuation and affectedness of the patient as a crucial factor in determining transitivity. In the view of Hopper & Thompson (1980) and Næss (2007, §3.3), prototypical transitive clauses are the ones that have more morphological marking distinguishing the two arguments. That is, a prototypical transitive clause is a morphologically marked construction. In this view the construction I am calling transitive in Rawang, with agentive marking and extra participant marking on the verb and, in the case of animate undergoers, dative marking on the undergoer, would be a prototypical transitive clause. In the case of Qiang, again the clauses with agentive marking and dative/animate patient marking would be prototypical transitive clauses. Thompson & Hopper (2001) argue that what they call high transitivity clauses are also marked in terms of frequency in conversation, that is, they are rare. In the case of Qiang the construction with the agentive marking is also more marked in terms of frequency.

In RRG only an individuated and referential patient will be an undergoer, and only when the clause has an undergoer will it be considered M-transitive. With verbs that have both activity and active-accomplishment uses, the difference in use correlates with there being a undergoer in the clause (active-accomplishment) or not (activity). This seems to be what is going on in the case of the ambitransitives in Rawang, where the intransitive use is an activity/non-telic use, and the transitive use is an active-accomplishment/telic use. This is completely independent of

person, and direction of action.¹⁰ Morse's view also cannot account for the facts of transitivity harmony, as it also functions independent of person.

Unlike in my analysis of Rawang, in analysing Qiang I did use the number of unmarked arguments as the criterion for transitivity, and said the appearance of the agentive marker or undergoer marker was purely for disambiguation. I think this is not problematic, as it just means the marking systems in the two languages are at different stages of development (the Rawang morphological system is more fully systematised — see LaPolla 1995 on the difference between systematic and non-systematic agentive marking), though we can see the beginnings of the Rawang type of system in the Qiang system, as the agentive marker is more likely to be used when there is a topical (referential and differentiated) patient and its use is more predictable in certain contexts, such as in relative clauses.

Abbreviations

1sgU	first person singular undergoer verb suffix	LOC	locative marker (also used for dative, purpose)
2sgU	second person singular undergoer verb suffix	N.1	non-first-person actor
3U.NPST	3rd person transitive non-past marker	NAR	narrative/hearsay marker
ADV	adverbial marker	NMLZ	nominaliser
AGT	agentive marker	NPST	non-past declarative marker
CAUS	causative marker	PFV	perfective marker
CL	classifier	pl	plural
CSM	change of state marker	PN	proper name
DAT	dative marker	PRED	predicate
DEF	definite marker	PRS	prospective aspect marker
DIR	direction/orientation marker	PS	predicate sequencer (non-final marker)
GEN	genitive marker	PUR	purposive nominaliser
EMPH	emphasis marker	RECIP	reciprocal marker
HS	hearsay marker	R/M	reflexive/middle marker
INST	instrumental	TMYRS	temporal marker of remote past (years ago)
INTR	intransitivising prefix	TOP	topic marker
INTR.PAST	3rd person intransitive past marker	TR.PAST	transitive past marker
		WH	interrogative morpheme

Notes

1. I'd like to thank Alec Coupe, Balthasar Bickel, and two reviewers for helpful comments on a draft of this paper.
2. The Rawang orthography (Morse 1962, 1963) is used in this paper. Most letters represent the pronunciations of English, except $i = [i]$, $v = [ə]$, $a = [a]$, $o = [u]$, $q = [ʔ]$, and $c = [s]$. Tones: high falling: \acute{a} , mid: \bar{a} , low falling: \grave{a} . Syllables ending in a stop consonant ($-p$, $-t$, $-q$, $-k$) are in the high tone. Open syllables with no tone mark are unstressed. A colon marks non-basic long vowels. Four lines are used because of frequent morphophonological changes which blur morpheme boundaries.
3. See LaPolla with Yang 2004 for details. See Kemmer 1993 on the transitivity-reducing effect of reflexives and middles.
4. There is a tone change from low to high tone on this verb when the auxiliary is added. It is a type of stem formation and nominalization.
5. The needles and scissors in this folktale are animate, so are the agents of the actions in these examples.
6. There are two sets of person marking forms: one for actors and one for salient non-actors. Which is used depends to some extent on the relevant saliency of the referents in the discourse, but the former is more common than the latter in natural texts. Third person singular is unmarked in the actor-marking paradigm, though 3dl and 3pl take $-t\check{c}i$.
7. The agentive marker is actually not very common in natural discourse in the Ronghong variety, except with verbs of speaking, and has been essentially lost in the neighboring Qugu variety (LaPolla & Poa 2003, Huang and Zhou 2006).
8. There is also a third possibility, that the morphological alternations I talked about as marking transitivity are actually just emphatic or for disambiguation, and do not affect the transitivity of the clause, but this would not allow us to explain what we are calling transitivity harmony and the other transitivity-related phenomena.
9. Notice that while Hopper & Thompson and Næss talk of transitivity as gradient, because they talk of semantic transitivity (actually effectiveness), in the case of Rawang I am talking about morphological transitivity, and it is a yes or no matter in this case.
10. See LaPolla 2010a for discussion of the marking of direction of action in transitive clauses.

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Transitivity in Saliba-Logea

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Valence and transitivity in Saliba-Logea can be described with reference to three structural levels, the root, the verb and the clause. Phenomena like clauses with both transitive and intransitive features, which are found across the Oceanic language group can be explained through different possible relationships between these levels.

Keywords: Austronesian, Oceanic, noun incorporation, object, applicative, valence, transitivity, causative, ditransitive, three-participant events

1. Introduction¹

Saliba-Logea is a Western Oceanic language of the Papuan Tip cluster (Ross, 1988: 190–212). It belongs to the Suaucic family and is spoken by about 2,500 people on the islands of Saliba, Logea and Sidea and the adjacent mainland in Milne Bay Province, at the eastern tip of Papua New Guinea. The language is nominative-accusative and mainly head-marking, with SOV and Genitive-Noun word order for lexical elements. This is in contrast to the typical Oceanic pattern of VO and Noun-Genitive. The word order of Saliba-Logea and many other Oceanic languages of New Guinea is attributed to prehistoric contact with non-Austronesian languages. The Saliba-Logea verb obligatorily carries a subject prefix and, if transitive, an object suffix. English is the modern lingua franca of the area rather than Tok Pisin as in most parts of PNG.

Previous work on Saliba-Logea (including Margetts 1999, 2002, 2005, 2007a, 2008a, b) discussed a number of phenomena relating to the expression of valence and transitivity. This article brings together the different threads of this research and maps the connections between a range of morpho-syntactic and semantic patterns. The article provides an analysis of how different phenomena relating to valence and transitivity interact and determine each other in the morpho-syntax of the language and it investigates the interplay of the semantics and morpho-syntax

of transitivity in Saliba-Logea. The paper also shows how these patterns relate to constructions found in other Oceanic languages and in Proto-Oceanic.

The data discussed here show that a morpho-syntactic definition of transitivity is useful to account for the facts in Saliba-Logea and Oceanic languages more generally. They also confirm that morphological defining features of transitivity and syntactic ones do not necessarily align, in that certain types of objects are not cross-referenced. The Saliba-Logea data suggest that a semantic notion of transitivity is also relevant, particularly in those contexts where morphological and syntactic transitivity features do not align. The article first addresses some tendencies found across the Oceanic language group in terms of transitivity marking before discussing the role of transitivity and its expression in Saliba-Logea grammar.

2. Transitivity in Oceanic Languages

Transitivity is generally a central and useful concept in the analysis of Oceanic languages. They tend to have a number of interesting characteristics relating to transitivity, including the presence of constructions with both intransitive and transitive features and the distinction between close and remote objects. Many can be classified as transitivity languages according to Nichols et al. (2004) and they tend to have very few ditransitive verbs if any.

2.1 Transitivity discord

One issue prevalent across the Oceanic language group relates to clauses where intransitive verbs co-occur with what looks like an object argument. The objects in these constructions are typically non-individuated, as discussed further below. The intransitive verbs in these constructions generally have transitive counterparts, and in terms of their semantics they are compatible with an object argument. Sugita (1973), working on a number of Micronesian languages, termed the verbs occurring in such clauses semitransitive. Margetts (2008a) analyses them as discord between verb and clause-level transitivity (see 3.4.2) and Massam (2001) refers to similar constructions as pseudo noun incorporation.

The example from Trukese (Micronesian) in (1) shows a transitive verb *wúnú-mi* 'drink it' with its object in (a) but the intransitive verb *wún* 'drink' followed by the same definite object noun phrase in (b).²

- (1) a. *Wúpwe wúnúmi ewe kkónik.*
 I.will drink.it the water
 'I will drink the water.'

- b. *Wúpwe wún ewe kkónik.*
 I.will drink the water
 'I will drink some of the water.' (Sugita 1973:397, the morpheme glosses are mine)

In the Niuean (Polynesian) example in (a) the verb 'hunt' is followed by the adverb 'always' and an emphatic marker. The subject is marked ergative and the object 'fish' is marked absolutive and occurs at the end of the clause. In (b) the object NP has no case marking and directly follows the verb; the adverb 'always' and the emphatic marker follow the object rather than the verb; and the subject is marked as absolutive rather than ergative.

- (2) a. *Takafaga tūmau nī e ia a tau ika*
 hunt always EMPH ERG he ABS PL fish
 He is always fishing.
 b. *Takafaga ika tūmau nī a ia.*
 hunt fish always EMPH ABS he
 He is always fishing. (Massam 2001:157)

Example (3) shows that the object following the verb is phrasal, as it is followed by a modifier *kiva* 'dirty'.

- (3) *Ne holoholo kapiniu kiva fakaeneene a Sione*
 PST wash dish dirty carefully ABS Sione
 'Sione washed dirty dishes carefully.' (Massam 2001:158)

The examples in (4) are from Manam (Western Oceanic). They again show a transitive verb in (a) and an intransitive verb in (b) and both are preceded by an object NP. The non-individuated object in (4b) is not cross-referenced on the verb.

- (4) a. *Bóro ŋe u-rere-t-á'-di.*
 pig this 1SG.RL-like-THC-TR-3PL.OBJ
 'I like these pigs.'
 b. *Deparóbu u-rerére.*
 rice 1SG.RL-like
 'I like rice (in general).' (Lichtenberk 1982:271–272)

The verbs in such constructions are morphologically intransitive, yet the apparent objects behave more like arguments than adjuncts (which are never cross-referenced and typically introduced by postpositions). To deal with this discrepancy the objects are sometimes considered to be incorporated (because the verb is intransitive). However, this is problematic if we apply a definition of incorporation by which the object is structurally part of the verb because in such constructions: (a) verb-final particles or clitics precede the object in some languages; and (b) the

objects are clearly phrasal and in some cases include determiners (cf. sections 3.4.2 and 4.1). So, in Oceanic languages, we are left with intransitive verbs co-occurring with object noun phrases as a common phenomenon. This is because only certain types of objects tend to be cross-referenced on the verb, namely those which can be considered to be more or less highly individuated along the lines described by Hopper and Thompson (1980). While, as described by Hopper and Thompson, transitivity can be said to be a scalar notion cross-linguistically, in individual languages there is often still a binary distinction between transitive and intransitive marking of the verb. The question is what features trigger transitive vs. intransitive marking. For the present discussion the object features are the most relevant. Hopper and Thompson's notion of object individuation includes features such as definiteness, specificity, and referentiality, but also the degree of affectedness. In some languages there seems to be a clearly defined trigger which predicts which types of objects are cross-referenced and which are not.³ In other languages there is no one feature that would allow us to predict transitivity marking and this seems to be the case for most of the Oceanic languages that have been discussed in the literature. For example Sugita (1973) discussed evidence for four Micronesian languages (Trukese, Ponapean, Kusaiean, and Marshallese) and shows that there is no one single object property which triggers cross-referencing on the verb. Not all discord (i.e. non-cross-referenced) objects in these languages are indefinite, nor are they all non-specific or only partially affected, but they will be low in some feature relating to individuation.

2.2 Close and remote objects: Proto-Oceanic *-i and *-akini

Many Oceanic languages show reflexes of the two transitivizing morphemes reconstructed for Proto-Oceanic, *-i and *-akini, which add different types of direct objects to an intransitive verb. The objects differ in their semantic roles and have been termed 'close' objects (added by *-i) and 'remote' objects (added by *-akini) respectively (Pawley 1973; Pawley and Reid 1980). In the more recent literature *-i and its modern reflexes are typically described as a transitive suffix, while *-akini and its reflexes are described as an applicative (Lynch et al. 2002).

Based on this, direct objects in Proto-Oceanic divide into two types according to the transitive suffix by which they are added. Close objects include patients and products of agentive verbs, stimuli and targets of psychological verbs, and locations and goals of verbs of motion and posture. Remote objects include instruments of agentive verbs, expressions of cause, objects of psychological verbs, and concomitants of verbs of motion (Pawley and Reid 1980: 106). Example (5) shows the reconstructed Proto-Oceanic verb **tanis* 'weep' and the two types of objects with which it can occur (Lynch et al. 2002: 44).

- (5) **taŋis* ‘weep’
 **taŋis-i-a* ‘weep for it’
 **taŋis-akini-a* ‘weep about it’

As will be discussed below, close and remote objects can also be distinguished in Saliba-Logea even though the language has only one transitivity suffix.

2.3 Valence-changing morphology and ditransitive verbs

Many Oceanic languages can be classified as transitivity languages (following Nichols et al. 2004), which are characterized as having a larger inventory of root-intransitive (monovalent) verbs than root-transitive (bivalent) verbs and a larger or more productive inventory of transitivity than detransitivizing morphemes. This means intransitives are the preferred input and transitives the preferred output of derivational processes.

Semantically basic and almost universally intertranslatable verbs such as ‘sit’, ‘fear’, ‘laugh’, ‘break’, and ‘fall’ are not always formally underived, and languages differ systematically in the formal treatment they give to these verbs vis-à-vis their transitive counterparts (respectively ‘seat’, ‘scare’, ‘amuse’, ‘break’, ‘drop’) ... Accordingly, in their overall lexical cast languages fall into four major types: transitivity, detransitivizing, neutral and indeterminate. The general typological parameter is (lexical or basic) VALENCE ORIENTATION. (Nichols et al. 2004: 149)

As mentioned, many Oceanic languages have one or two productive transitivity suffixes (reflexes of Proto-Oceanic *-*i* and *-*akini*) and, in addition, many have one or more productive causative morphemes. By contrast, there tend to be fewer productive detransitivizing morphemes and some of them apply to only a small subset of the verbal lexicon.

Another feature of Oceanic languages relating to transitivity is that most have only a relatively small inventory of ditransitive verbs, if any. Margetts (2007b) investigates ditransitive verbs in a sample of 28 languages across all first-level Oceanic subgroups. The study looks at root ditransitives, extended ditransitives (verbs that require two NP arguments and one PP argument), and the kind of morphological devices available to derive them. While some Oceanic languages have at least a small class of ditransitives or even a productive applicative morpheme to derive ditransitive verbs, most languages in the sample have no ditransitive or extended transitive verbs, either basic or derived, at all. In many cases the available valence-increasing morphemes cannot apply to transitive verbs in order to derive ditransitives. Oceanic languages tend to use other, more pragmatic, strategies for encoding three-participant events, as discussed in Section 3.4.3 below.

In the next section, I introduce an approach to the description of valence and transitivity which considers these notions separately on three structural levels. In Section 4 we then return to the transitivity features discussed above in order to assess the Saliba-Logea system in light of the patterns found in Oceanic.

3. Valence and transitivity on different levels

In order to discuss the role of transitivity in Saliba-Logea grammar we need to define concepts like transitive and intransitive verbs and clauses. Unless otherwise specified, I apply formal, morpho-syntactic definitions for these concepts, rather than semantic ones.

In Saliba-Logea, valence and transitivity have to be defined semi-independently on three structural levels, the root, the verb, and the clause, and on each level a different set of features is relevant to define transitive and intransitive elements. This approach emerges because in many Oceanic languages the relationship between elements on the root, verb and clause level is not always straightforward and predictable. As introduced in Section 2.1 above, the semantic and the morphological status of a verb may be in sync or out of sync and this relationship correlates with certain features of the object. The fact that an underived verb is transitive or intransitive does not entail that the root is bivalent or monovalent, respectively, because of the existence of labile roots, such as *hedede* ‘talk/tell’ in (6) which can occur as an intransitive or a transitive stem without derivational morphology. Further, the fact that a clause is transitive (i.e. containing two arguments) does not entail that the verb is itself morphologically transitive because of the existence of discord constructions, as in (7), where the verb is morphologically intransitive but is preceded by an object noun.⁴

- (6) a. *Se-hedede.*
 3PL-talk/tell
 ‘They talked.’
- b. *Se-hedede-go.*
 3PL-talk/tell-2SG
 ‘They talked about you.’
- (7) *Koya se-deula.*
 garden 3PL-terrace
 ‘They terraced a garden.’

For a consistent distinction, I use the term ‘valence’ exclusively for the domain of the verb root, the term ‘verb-level transitivity’ for inflected verbs and verb stems, and the term ‘clause-level transitivity’ for the domain of the clause. Each of these terms is defined independently with features from the respective structural levels. The terminology applied here distinguishes between a verb’s morphological

marking and its distributional characteristics. The benefit of this distinction is that it allows us to consider the transitivity features of a construction on the level on which they are manifested, rather than considering them only as features of the construction as a whole.

Valence denotes the inherent relational need or potential of a verb root to take a certain number of core arguments. The valence of a verb root can only be observed in its distributional behavior, that is in the root's ability to occur as a simplex stem in transitive and/or intransitive verbs without the addition of derivational morphology. Verb-level transitivity depends on the morphological features of the inflected verb. Clause-level transitivity is defined by the overall number of arguments expressed in the clause.

An intermediate level between the verb root and the inflected verb is represented by the verb stem. Roots are the monomorphemic, smallest elements of the lexicon, and stems are their instantiation in discourse, i.e. a verb stem is the instantiation of a root as it occurs in an inflected verb. Simplex stems consist of only a verb root, derived stems consist of a root plus further derivational morphology or are composed of more than one simplex stem. The transitivity status of a simplex stem is determined by the valence of the root, the status of a derived stem is determined by the valence of the root and the added morphology. This means that some roots are banned from certain constructions unless derivational morphology is added, as in the case of the monovalent root *posi* 'white' in (8), which can only occur as a transitive verb if it is causativized.

- | | | | |
|--------|-----------------|----|------------------------|
| (8) a. | <i>Ye-posi.</i> | b. | <i>Ya-he-posi-di.</i> |
| | 3SG-white | | 3SG-CAUS-white-3PL.OBJ |
| | 'It is white.' | | 'I bleached them.' |

The differentiation between root valence and verb-level transitivity allows for a consistent distinction between the general potential of a linguistic unit (root valence) and its actual instantiation in a specific context (verb-level transitivity). Verb stems are distinct from inflected verbs in that the inflected verb minimally carries a subject prefix and, if morphologically transitive, an object suffix and so a verb stem constitutes a verb without its inflections. Stems always have the same transitivity status as the inflected verb in which they occur. So both verb stems and inflected verbs are units of the domain of verb-level transitivity.

A further relevant distinction is that between inflected verbs and clauses. By means of the pronominal affixes, every Saliba-Logea inflected verb constitutes a potentially complete clause. Nevertheless, the distinction between verb level and clause level is valid and necessary in that a clause may consist of an inflected verb only, or of an inflected verb plus its extensions such as lexical arguments or adjuncts.

3.1 Root valence

Valence is a formal property of the verb root which can be identified by its potential to occur as a simplex stem (i.e. without derivational morphology) in morphologically transitive and/or intransitive verbs. Saliba-Logea verb roots allow for either one or two arguments; there are no root ditransitives. In terms of definitions, a root is considered monovalent if, without derivational morphemes, it can only occur as an intransitive verb. A root is bivalent if, without derivational morphemes, it can only occur as a transitive verb. There are also labile roots which, without application of derivational morphemes, can occur as intransitive or transitive verbs.

The valence of a root is its general potential to occur in transitive and/or intransitive verbs. In principle this means that one has to look at all the possible occurrences of a verb root to identify its valence. If a verb root is attested as a simplex transitive stem, the root could be either bivalent or labile, depending on whether it can also occur as a simplex stem in intransitive verbs. In order to state the valence of a root as bivalent, negative evidence is needed, namely that the root cannot occur as a simplex intransitive stem. The identification of monovalent roots is often more straightforward in that, if a verb root is attested with the applicative suffix it is monovalent, since neither bivalent nor labile roots can occur with this suffix.⁵

Taking into account root valence and the ability to combine with the applicative suffix, four verb classes can be distinguished in Saliba-Logea. (Class 2 can be further divided into two subclasses as discussed in Section 4.2 below.)

- (9) Class 1: monovalent, not allowing the applicative suffix (typically stative verbs)
- Class 2: monovalent, allowing the applicative suffix (typically active verbs)
- Class 3: bivalent (active verbs)
- Class 4: labile (typically active verbs)

One practical problem in identifying a root's class membership is the third person singular object suffix, which is $-\emptyset$ in word-final position, i.e. in most contexts. (There is a second allomorph $-ya$ which only occurs if followed by another suffix.) This is problematic because, as mentioned, the obligatory or potential presence of an object suffix is crucial in determining a root's valence. For example, to distinguish between bivalent and labile roots, it has to be established whether the roots can ever occur without an object suffix. To do so requires a distinction between a zero suffix and the absence of a suffix. This is in fact possible, by establishing whether the verb can take any non-zero object suffix (i.e. the non-final allomorph of the third singular or an object suffix other than third singular). This means,

however, that verb class membership can often not be determined from text data alone but requires elicitation with morphological tests.

3.2 Verb-level transitivity

Verb-level transitivity is a feature of the inflected verb, i.e. of a verb stem with its pronominal subject and/or object affix.⁶ Unlike the definition of root valence, verb-level transitivity is not defined by distributional criteria. The potential of a verb to occur in certain types of clauses, or with a certain number of arguments, is explicitly not part of the definition of verb-level transitivity. The transitivity status of a verb is defined exclusively by its morphological marking. Pawley and Reid (1980) apply a similar morphology-based definition of transitivity for the Oceanic language family:

‘Transitive verb’ is a well defined category. A transitive verb is any verb which (a) carries a transitive suffix **-i* or **-akki(ni)*, and/or (b) carries a pronominal suffix or clitic determining person and number of direct object ... Nearly all transitive verbs exhibit both features (a) and (b). (p. 105)

In Saliba-Logea, minimally one (the subject prefix) and maximally two pronominal affixes (subject prefix and object suffix) may appear on the verb. So on the verb level, only two types of verb are morphologically distinguished — transitive and intransitive verbs. Again, the object suffix is crucial for the definition and the practical problems of identifying it apply.

Examples of a simplex and a derived transitive verb are given in (a) and (b), and of a simplex and a derived intransitive verb in (a) and (b) respectively. (The applicative suffix is always followed by an object suffix which may however be zero.)⁷

- | | | | |
|---------|--|----|---|
| (10) a. | <i>Ya-kita-di.</i>
1SG-see-3PL.OBJ
‘I saw them.’ | b. | <i>Ye-bahe-i-di.</i>
3SG-carry-APP-3PL.OBJ
‘He carried them.’ |
| (11) a. | <i>Se-koi-kesi-Ø.</i>
3PL-hit-break-3SG.OBJ
‘They broke it.’ | b. | <i>Ye-ta-kesi</i>
3SG-RES-break
‘It is broken.’ |

In many text examples it is not transparent whether the verb is transitive or intransitive, in particular since the presence of an object NP cannot be taken as proof for the transitive status of the verb, as discussed below in Section 4.1.

There are a few verbs in the language which can take three arguments but they do not morphologically differ from monotransitive verbs because there can be no affixes on the verb which would indicate the presence of a third argument. Such

verbs can only be defined by features pertaining to the clause level, i.e. by taking distributional criteria into account, as discussed in Section 3.3.

As it is defined by the presence of affixes, Saliba-Logea verb-level transitivity can also be described as morphological transitivity, contrasting with clause-level syntactic transitivity. However, some Oceanic languages mark corresponding material on the verb level by pronominal clitics rather than by affixes. So, for such languages the terminological distinction between morphological and syntactic transitivity does not neatly align with the verb level and the clause level.

3.3 Clause-level transitivity

Clause-level transitivity is a feature of the entire clause and determined by the overall number of arguments (expressed by lexical or pronominal NPs or the cross-referencing morphemes on the verb). In terms of clause-level transitivity, there is a three-way distinction between intransitive, transitive, and ditransitive clauses.

Intransitive clauses are always headed by morphologically intransitive verbs. But transitive clauses can be headed by transitive or intransitive verbs and ditransitive clauses are always headed by morphologically transitive verbs. This is part of the motivation for keeping apart morphological and distributional features in the level-bound definition of transitivity and is discussed further in Section 3.4.2.

3.4 Relationships between the levels

Having defined valence and transitivity on the root, verb, and clause level we can now look at the different possible relationships between the levels. The relationship between the root and the verb level is determined by the presence or absence of valence-changing morphology. The relationship between the verb and the clause level is determined by what I will call accord vs. discord.

3.4.1 *Root to verb level: derivation*

The relationship between the root and the verb level is quite straightforward: without derivational morphology, monovalent roots surface as intransitive verbs, as in (12), bivalent roots surface as transitive verbs, as in (13), and labile roots can surface as either, as in (14).

- (12) *Ye-duba.*
 3SG-black
 'It is black.'

- (13) *Ya-deuli-di*.
 1SG-wash-3PL.OBJ
 'I washed them.'
- (14) a. *Ye-hede-hedede*.
 3SG-RED-talk
 'She is talking.'
- b. *Ye-hede-ya-ko*.
 3SG-talk-3SG.OBJ-already
 'She said it already.'

But when combining with valence-changing morphemes, monovalent roots can also surface in derived transitive verbs, and bivalent roots can surface in derived intransitive verbs. In (15) the monovalent root *duba* 'be black' occurs in a causativized transitive verb *he-duba* 'blacken'. In (16) the bivalent root *deuli* 'wash' occurs with the detransitivizing prefix *kai-* in an intransitive verb.

- (15) *Ku-he-duba-Ø*.
 2SG-CAUS-back-3SG.OBJ
 'Blacken it / Make it black.'
- (16) *Ya-kai-deuli*.
 1SG-KAI-wash
 'I did the laundry.'

3.4.2 *Verb to clause level: accord vs. discord*

In Saliba-Logea, clauses and their verbal heads can agree or differ in their transitivity status. The distinction between accord and discord relationships follows from the independent definitions of verb-level and clause-level transitivity. So, a morphologically intransitive verb can occur as the head of a transitive clause (as defined by the number of arguments) and a morphologically transitive verb can be the head of a ditransitive clause. However, the morphologically intransitive heads of transitive clauses can be identified as semantically transitive verbs and the morphologically transitive heads of ditransitive clauses as semantically ditransitive verbs based on their distribution and their occurrence with one and two object arguments respectively.

The notion of discord allows us to locate the transitive and intransitive features of a construction in the relevant domains and on the respective structural levels. The clauses in (17) and (18) show accord with morphologically transitive verbs heading transitive clauses. The objects are individuated and specific.

- (17) *Kaleko ka-deuli-di.*
 clothes 1EXCL-wash-3PL.OBJ
 ‘We washed the clothes.’
- (18) *Ya-lao tem noi unai manuwa ya-sipwa-i-di.*
 1SG-go DIST.DEM nest PP.SG bird 1SG-trap-APPL-3PL.OBJ
 ‘I go and catch the birds in that nest.’

The clauses in (19) and (20) show discord between the verb and the clause level with morphologically intransitive verbs as heads of transitive clauses. In these cases the objects are non-individuated (but at least in the case of (19) could be said to be specific). These constructions are further discussed in Section 4.1.

- (19) *Kaleko ka-kai-deuli.*
 clothes 1EXCL-KAI-wash
 ‘We washed the clothes / did the laundry.’
- (20) *Ya-lao manuwa ya-sipwa.*
 1SG-go bird 1SG-trap
 ‘I go and trap birds.’

The regularities and restrictions which govern the relationship between the verb and the clause level mean that the transitivity status of the clause can be the same or higher than that of the verb. There is a two-way distinction on the verb level between intransitive and transitive verbs, but a three-way distinction on the clause level between intransitive, transitive, and ditransitive clauses. There can therefore be a maximum of one direct argument in the clause which is not cross-referenced on the verb.

Consequences of these restrictions are that (a) in intransitive clauses, there can only be a relation of accord; (b) in ditransitive clauses, there can only be a relation of discord, since there are no morphologically ditransitive verbs; and (c) there can never be discord by more than one argument. (Intransitive verbs cannot feature in ditransitive clauses and there are no clauses with four arguments). Figure 1 illustrates these relationships.

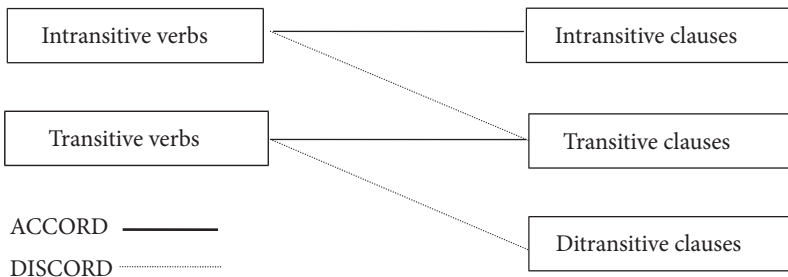


Figure 1. Relationships between verb and clause level transitivity

3.4.3 Clause-level to event representation: a looser connection

Besides the three structural levels, root, verb, and clause, it is interesting to consider the level of event representation. To some extent there is a regular connection between the number of arguments in a clause and the number of event participants. So events with one participant are typically expressed by intransitive clauses, events with two participants by transitive clauses, and three-participant events by ditransitive clauses.

However, there is a certain degree of independence between the structure of the clause and the level of event representation, and clause-level transitivity does not always determine or match the number of event participants. For example, Saliba-Logea reflexive verbs are formally transitive but express events with only one participant.

- (21) (*Ya-bom*) *ya-kita-uyo-i-gau.*
 1SG-self/alone 1SG-see-back/again-APPL-1SG.OBJ
 'I saw myself.'

There are also intransitive clauses which can be argued to express events with two participants, as in (22) and (23) where the second participant can be inferred from the directional suffixes.⁸

- (22) *Ye-hedede-lao-ma.* (23) *Ye-kita-dobi-wa.*
 3SG-tell-go-hither 3SG-see-go.down-thither
 'He told me.' 'He looked down to you.'

Finally, there are a number of strategies for encoding events with three participants and only some of them are based on ditransitive clauses. For example, parallel to the second participants in (22) and (23), recipients can be indicated by deictic directional suffixes, as in (24), or as the grammatical possessors of an object argument, as in (25) (see Margetts and Austin for discussion).

- (24) *Leta wa ye-hetamali-ya-ma.*
 letter ANA 3SG-send-3SG.OBJ-hither
 'He sent the letter to me/us.'
- (25) *Ka-m ti ya-ini-Ø?*
 CLF2-2SG.POSS tea 1SG-pour-3SG.OBJ
 'Shall I pour you some tea?' (lit. 'I pour your tea?')

After this overview of the expression of transitivity on different structural levels we now return to the features discussed earlier for the Oceanic language group.

4. Transitivity in Saliba-Logea

In many ways Saliba-Logea shows the characteristics that are typical for Oceanic languages. This section provides an overview of the Saliba-Logea version of constructions with both intransitive and transitive features, of close and remote objects, and the valence-changing morphology and inventory of ditransitive verbs.

4.1 Transitivity discord

Like many other Oceanic languages and as mentioned above, Saliba-Logea has discord clauses where intransitive verbs co-occur with object arguments. Because the language has OV word order, rather than VO like most Oceanic languages, the discord constructions are formally clearly distinct from object incorporation, as the noun precedes the subject prefix on the verb. Semantically they are however very similar to incorporation and speakers are typically not able to describe semantic differences for the instances where verbs allow either type of construction. The clause in (26) includes an incorporated object, while (27) shows a discord construction.

(26) *Ya-peleide-deuli.*
 1SG-plate-wash
 'I'm washing the dishes.'

(27) *Peleide ya-kai-deuli.*
 plate 1SG-KAI-wash
 'I'm washing the dishes.'

A study of the distribution of discord constructions in discourse and an analysis of their features is hampered by some of the morpho-syntactic characteristics of Saliba-Logea. As discussed above, first, discord clauses can often not be identified in text examples due to the zero allomorph of the third singular object suffix. Second, the specific or definite status of the object noun may or may not be overtly marked since definite and specific referents in Saliba-Logea can be expressed by unmarked NPs (see Cleary-Kemp 2006 for discussion). This means that the status of discord objects is not necessarily overt and even when a text example can be identified as showing discord, establishing the status of the object may not be straightforward.

Discord objects, i.e. objects which are not cross-referenced on the verb, express non-individuated participants and so are often mentioned in the context of habitual activities, like incorporated nouns. They also more often express superordinate terms (like 'food', 'fish' or 'clothes'), as in (28), than subordinate terms, such as specific types of food or fish species, but such examples also occur, as in (29).

- (28) *Unai hinage yama ka-kai-unui.*
 PP.SG also fish 1EXCL-KAI-catch/kill
 ‘We also catch fish with it.’ (Fishing_01BQ_392)
- (29) *Kumkum ta-kai-unui.*
 angelfish 1INCL-KAI-catch/kill
 ‘We catch angelfish.’

Saliba-Logea discord objects are low in terms of some features of object individuation as described by Hopper and Thompson (1980). However, as in the case of Sugita’s (1973) work on Micronesian, it is not possible to identify one particular object feature which determines all cases of discord in Saliba-Logea. While discord objects are typically indefinite and non-specific, this is not necessarily the case. However, modifiers which strongly promote the individuation of the object noun, such as numerals and singular-marked modifiers, are consistently rejected in elicitations. Other modifiers including plural-marked lexical modifiers show a high degree of speaker variation in elicitation.⁹ Discord clauses commonly describe habitual activities and the objects denote the kind of entities which are typically involved.

In some cases, discord is not only allowed but required. In the elicited examples in (30) and (31) speakers rejected the clauses with the transitive verb forms in (b) and only allowed the discord constructions in (a).¹⁰

- (30) a. *Se-sae koya, kai se-wase.*
 3PL-go.up garden food 3PL-search
 ‘They go up to the garden and look for food (i.e. tubers).’
 b. **Se-sae koya, kai se-wase-nei-Ø.*
 3PL-go.up garden food 3PL-search-APPL-3SG.OBJ
 ‘They go up to the garden and look for food (i.e. tubers).’
- (31) a. *Ya-lao maketi waiwai ya-wase.*
 1SG-go market mango 1SG-search
 ‘I went to the market and looked for mangoes.’
 b. **Ya-lao maketi waiwai ya-wase-nei-di.*
 1SG-go market mango 1SG-search-APPL-3PL.OBJ
 ‘I went to the market and looked for mangoes.’

Discord objects constitute full NPs and show some of the same syntactic characteristics as objects of regular transitive clauses. They occur in the canonical object position and are clearly phrasal, as they can take modifiers (but there is no data on whether they can be topicalized or focused). In some cases they can refer to human participants (see (47) further below).

The modifiers which occur with discord objects include the anaphoric marker *wa*, in (32), determiners like *ne* and *te*, as in (33), possessive classifiers, as in (34), and lexical modifiers, as in (35).

- (32) *Waiwai wa se-usa-usa bosa wa unai.*
 mango ANA 3PL-RED-put.in basket ANA PP.SG
 ‘They were putting the mangoes into the basket.’ (pear2:37)
- (33) *Kwa-lao-ma gogo ne kwa-tano!*
 2PL-go-hither things DET 2PL-collect
 ‘Come and collect the things!’ (edial143)
- (34) *Yo-di puwaka yo-di gogo wa se-bahe.*
 CLF1-3PL.POSS pig CLF1-3PL.POSS things ANA 3PL-carry
 ‘They carry their pigs and their things.’ (Giyahi_01AA_097)
- (35) *Yama gagili-di-yao ... ka-kai-unui.*
 fish small-3PL.POSS-PL 1EXCL-KAI-kill
 ‘We kill small fish.’ (Fishing_01BQ_029-31)

Discord object NPs can also consist of coordinated NPs, as in (36).

- (36) *Laisi baiki-di yo suga yo miti yo samani se-bahe.*
 rice bag-3PL.POSS and sugar and meat and tin.fish 3PL-carry
 ‘They carry bags of rice and sugar and meat and tin fish.’ (saekeno01_AH)

By contrast, incorporated objects are never modified. The incorporated object immediately precedes or follows the verb root (the position depends on the verb, see Margetts, to appear) and is morphologically clearly part of the verb, as in example (26) above. (There are a number of morphological tests which either show the incorporated status of the noun, including its position between the subject prefix and the verb stem, or the fact that verbal suffixes attach to the noun stem if it occurs in final position.)

The underived verbs which are attested in discord constructions are either monovalent (of class 2), as in (37), or labile, as in (38):

- | | | | | |
|------|-----------------|------------------|--------------|-----------|
| (37) | <i>bahe</i> | ‘carry’ | <i>lagau</i> | ‘weed’ |
| | <i>deula</i> | ‘(make) terrace’ | <i>lusa</i> | ‘shoot’ |
| | <i>gala</i> | ‘catch with net’ | <i>sipwa</i> | ‘trap’ |
| | <i>kaibwada</i> | ‘ask for’ | <i>tano</i> | ‘collect’ |
| | <i>kailoya</i> | ‘hunt’ | <i>usa</i> | ‘put in’ |
| | <i>kuma</i> | ‘plant’ | <i>wase</i> | ‘search’ |
| (38) | <i>daibi</i> | ‘clean (garden)’ | <i>keli</i> | ‘dig’ |
| | <i>huwa</i> | ‘plant’ | <i>numa</i> | ‘drink’ |
| | <i>kai</i> | ‘eat’ | | |

The verbs in discord clauses can also be morphologically complex, like those in (39), which are compound stems, or those in (40), which are derived by the prefix *kai-*, which derives intransitive stems from transitive and intransitive ones. The transitive counterparts of the compound stems in (39) consist of only the second stem.

(39)	<i>kabi-henaku</i>	‘chase’	(literally ‘touch-chase’)
	<i>kabi-tano</i>	‘pick clean’	(literally ‘touch-collect’)
	<i>lao-liga</i>	‘cook’	(literally ‘go-cook’)
(40)	<i>kai-biteli</i>	‘hit’	<i>kai-keli</i> ‘dig’
	<i>kai-deuli</i>	‘wash’	<i>kai-sapi</i> ‘slap’
	<i>kai-gabu</i>	‘bake/burn’	<i>kai-sikwa</i> ‘poke’
	<i>kai-gwali</i>	‘spear’	<i>kai-tuha</i> ‘poison’
	<i>kai-katu</i>	‘catch (fish)’	<i>kai-unui</i> ‘kill/catch’

When attaching to transitive verbs, the function of the *kai*-prefix is similar to that of an antipassive marker, by which a transitive object is deleted or demoted. (e.g. Heath 1976: 202). When a transitive stem takes the *kai*-prefix, it is detransitivized and can no longer take an object suffix. However, the object of the transitive input verb may occur as a discord object (i.e. not cross-referenced) with the intransitive *kai*-verb. Besides the detransitivizing function, the *kai*-prefix also derives verbs which indicate that the expressed activity is done for fun or play (implying that it is not performed in the proper way or for the proper reason). Such verbs are often translated as “to VERB around”, “to play at VERBING” or “to pretend to VERB”. With the “play” function the prefix can attach to both transitive and intransitive stems to derive intransitive verbs.¹¹

4.2 Close and remote objects: semantics vs. syntax

As mentioned above, the Proto-Oceanic distinction between close and remote objects relies on the presence of two different transitivizing suffixes, **-i* and **-akini*, each associated with one type of object. In Saliba-Logea there is only one single transitivizing suffix *-i* (with a number of allomorphs) and it cross-cuts the functions of the two morphemes reconstructed for Proto-Oceanic.¹² Objects added by this suffix can be semantically of the close or the remote type. The derived transitive verbs can take object arguments with a range of semantic roles, including patient, stimulus, addressee, location, and concomitant. Even though they are added by the same suffix, close and remote objects can be distinguished in Saliba-Logea by their morpho-syntactic behavior in other contexts.¹³ Close objects cannot alternatively occur as obliques in clauses with the corresponding intransitive verbs,

while most remote objects can. Also, only close objects can occur in discord constructions (because only close objects are semantic objects of the verb, see below).

While in Proto-Oceanic some verbs could take either of the two suffixes and therefore occur with close or remote objects, Saliba-Logea verbs of class 2 (monovalent roots that can take the applicative) can take only one type of object, either close or remote, as shown in Table 1 and the examples below.

Table 1. Applied objects and their classification

Type of verbs	Role of object	Type of object
agentive verbs and verbs of transfer	patient	close
psychological verbs and verbs of perception	stimulus	remote
verbs of communication	addressee	remote
'stay', 'shine', 'fall', and verbs of bodily functions	location	remote
motion verbs (path- or manner-encoding)	concomitant	remote

- (41) a. *Se-deula*
3PL-terrace
'They make terraces.'
- b. *Koya se-deula-i-Ø.*
garden 3PL-terrace-APPL-3SG.OBJ
'They terraced the garden.'
- (42) a. *Ye-koipili.*
3SG-angry
'She's shy.'
- b. *Ye-koipili-ei-go.*
3SG-angry-APPL-2SG.OBJ
'She's shy of you.'
- (43) a. *Ya-henamai.*
1SG-ask
'I asked.'
- b. *Ya-henamai-ei-go.*
1SG-ask-APPL-2SG.OBJ
'I asked you.'
- (44) a. *Ye-maliwai.*
3SG-vomit
'I asked.'
- b. *Tebolo ye-maliwai-ei-Ø.*
table 3SG-vomit-APPL-3SG.OBJ
'She vomited on the table.'
- (45) a. *Mahana ye-sina.*
sun 3SG-shine
'The sun shines.'
- b. *Mahana ye-sina-i-gau.*
sun 3SG-shine-APPL-1SG.OBJ
'The sun shines on me.'
- (46) a. *Ye-loi.*
3SG-run
'It flew.'
- b. *Ye-loi-ei-Ø.*
3SG-fly-APPL-3SG.OBJ
'It flew with it.' (e.g. s.th. tied to his foot)

Interestingly, intransitive verbs that take close objects when they are transitivized behave differently to verbs that take remote objects, even though they are of the same morphologically defined verb class. Differentiating between close and remote objects allows us therefore to distinguish two types of monovalent roots which can take the transitive/applicative suffix, i.e. there are two subclasses of verb class 2 (cf. Section 3.1 above) which I will call class 2(a) and 2(b).

Saliba-Logea morphologically intransitive verbs of class 2(a) behave like transitive verbs in certain contexts. In their underived intransitive form, they can occur in discord clauses with an object noun, as in (47), and some allow object incorporation, as in (48).

- (47) *Natu-di-yao se-bahe se-lu se-lao nukula ne.*
 child-3PL.POSS-PL 3PL-carry 3PL-go.in 3PL-go bush DET
 ‘They would carry their children and go into the bush.’

- (48) *Se-kaiwa-bahe.*
 3PL-wood-carry
 ‘They carried wood. (they had a marriage wealth exchange)’

The verb in (48) incorporates an object even though its underived base form is intransitive. Incorporated is the noun that would be added as direct object if the verb was transitivized.

These verbs also pattern like transitive verbs in types of serialization where a final verb stem, like *uyo* ‘back/again’, must agree with the transitivity status of the preceding stem. If the initial stem is transitive then *uyo* must occur in its transitivized form *uyo-i*, carrying the transitive suffix (cf. LaPolla, this volume, on a similar phenomenon in Rawang). In (49) the transitive stem *tole* ‘put’ is followed by *uyo* ‘back/again’ which must be transitivised. In (50), *uyo* ‘back/again’ follows the intransitive stem *keno* ‘sleep’ and must occur in its intransitive form.

- (49) *Ye-tole-uyo-i-Ø.*
 3SG-put-back-APPL-3SG.OBJ
 ‘He put it back.’

- (50) *Ye-keno-uyo.*
 3SG-put-back
 ‘He slept again.’

However, intransitive verbs of class 2(a) behave like transitive verbs in this context: example (51) shows the morphologically intransitive class 2(a) stem *bahe* ‘carry’ followed by the transitivized version *uyo* ‘back/again’.

- (51) *Ye-bahe-uyo-i-Ø.*
 3SG-carry-back-APPL-3SG.OBJ
 ‘He carried it back.’

Finally, a text count of a sample of class-2(a) verbs showed that they occurred more frequently in their derived transitive form than in their underived intransitive form.

It can be argued that verbs of class 2(a) have a semantic object argument and those of class 2(b) do not. The transitive features described above can be seen as morpho-syntactic reflexes of the semantic object argument and that certain rules in the grammar of the language are not only sensitive to morpho-syntax but also to the semantic arguments of a verb. The characteristics of class 2(a) and (b) are summarized in Table 2.

Table 2. Subclasses of verb class 2

Class 2 (a)	Class 2 (b)
close objects	remote objects
like TR verbs in serialization	like INTR verbs in serialization
more frequently in derived transitive form	more frequently in underived intransitive form
agentive verbs	motion verbs
verbs of transfer	psychological verb
	verbs of perception
	verb of communication
	verbs of bodily functions
	'stay', 'shine', 'fall'

4.3 Valence-changing morphology and ditransitive verbs

Saliba-Logea has a range of valence-changing morphemes. The majority of the productive morphemes are valence-increasing; the available valence-decreasing morphemes are more limited, as summarized in Table 3.

Table 3. Derivational processes and their input

Derivation	Input roots	Input stems	Output stems	Productivity
Applicative	monovalent, noun	INTR	TR	+
Causative	monovalent, labile, bivalent, noun	INTR, TR	TR	+ with INTR stems – with TR stems
Complex verbs	monovalent, labile, bivalent	INTR, TR	INTR, TR	+
Incorporation	monovalent, labile, bivalent	INTR, TR	INTR	+
Prefix <i>kai-</i>	monovalent, labile, bivalent, noun	INTR, TR	INTR	–
Resultative	bivalent	TR	INTR	–

The most productive derivational operations are applicativization and causativization. The majority of stems in the language are monovalent or labile; bivalent roots are relatively rare. Many of the transitive stems which figure as input to valence-changing processes are not based on bivalent but on labile roots or even on monovalent roots which have been transitivized by the applicative suffix.

The transitive/applicative suffix has already been discussed above with examples. The causative prefix *he-* derives morphologically transitive verbs mainly from intransitive verbs, as in (52).

- | | | | |
|---------|-----------------|----|------------------------|
| (52) a. | <i>Ye-bida.</i> | b. | <i>Ya-he-bida-Ø.</i> |
| | 3SG-dirty | | 1SG-CAUS-dirty-3SG.OBJ |
| | 'It is dirty.' | | 'I made it dirty.' |

It can also attach to some transitive verbs and the resulting verbs can head ditransitive clauses, as in (55) below. However, the causativization of transitive verbs is not productive and novel derivations are typically not accepted by speakers.

The compounding of verb stems in complex verbs can also have a valence-changing effect as there are certain final stems which determine the transitivity status of the compound as either transitive or intransitive.

Noun incorporation results in intransitive complex verb stems. Incorporation into transitive verbs therefore has a valence-changing effect (but as mentioned some morphologically intransitive verbs also allow incorporation).

In addition there are two valence-decreasing prefixes. The prefix *kai-* derives intransitive verbs from transitive and intransitive ones by demoting the object. A list of derived verbs was given in (40) above. The resultative prefix *ta-* also derives intransitive verbs from transitive ones. In this case the object of the transitive base verb becomes the subject of the derived intransitive verb.

- | | | | |
|---------|--------------------------|----|---------------------------|
| (53) a. | <i>Galasi ya-kesi-Ø.</i> | b. | <i>Galasi ye-ta-kesi.</i> |
| | glass 1SG-break-3SG.OBJ | | glass 3SG-RES-break |
| | 'I broke the glass.' | | 'The glass is broken.' |

This suffix is restricted to occurring with a small class of six verbs expressing breaking, snapping, tearing, and bending events.

In terms of ditransitive predicates, as there are no morphologically ditransitive verbs, ditransitive clauses always show discord between the verb and the clause level. In parallel to the verbs of class 2(a), which are morphologically intransitive but can be said to be semantically transitive, the morphologically transitive verbs which can head ditransitive clauses can be said to be semantically ditransitive. (Note that in both cases the identification of semantically transitive verbs depends on some formal, morpho-syntactic behavior of the verb, rather than, say, on world

knowledge.) I will refer to transitive verbs which can head ditransitive clauses simply as ditransitive verbs in the remainder of this section.

There are no root ditransitives in Saliba-Logea and derived ditransitives are also limited, as is common across the language group. While valence-increasing morphemes do not productively take transitive verbs as input there are some derived forms. Eleven ditransitive verbs derived by the causative prefix *he-* are attested but the novel derivation of ditransitive causatives is restricted by the semantic requirement that the causing agent needs to physically manipulate the causee (rather than, say, simply telling them to perform the action). The attested verbs include ‘teach’, ‘show’, ‘make understand’, ‘make carry’, ‘make carry on head’, ‘make wear’, ‘put necklace on neck’, ‘feed’, ‘make drink’, and ‘make taste’. Example (54) shows a transitive clause and (55) a ditransitive clause with a causativized verb.

(54) *Puwaka ne saha se-kai-kai-Ø?*
 pig DET what 3PL-RED-eat-3SG.OBJ
 ‘What did the pigs eat?’

(55) *Puwaka ne saha se-he-kai-di?*
 pig DET what 3PL-CAUS-eat-3PL.OBJ
 ‘What did they feed the pigs?’

In addition there are two ditransitive verbs derived by the transitive suffix *-i*. One is *mose-i* ‘give’, which obligatorily takes the applicative suffix.¹⁴ The second verb is *kainauya-i* ‘give as a gift’, which is derived from the noun *kainauya* ‘gift’. The verb *mose-i* ‘give’ is suppletive and can only express giving events with third person recipients. Its suppletion partner, which expresses giving events with first and second person recipients, is monotransitive and the recipient is indicated by means of a directional suffix rather than a pronoun.

(56) *Bosa kesega ye-le-ya-ma.*
 basket one 3SG-give-3SG.OBJ-hither
 ‘He gave me/us one basket.’

(57) *Bosa kesega ye-le-ya-wa.*
 basket one 3SG-give-3SG.OBJ-to.ADDR
 ‘He gave you (SG/PL) one basket.’

(58) *Bosa kesega ye-mose-i-Ø.*
 basket one 3SG-give-APPL-3SG.OBJ
 ‘He gave him/her one basket.’

(59) *Bosa kesega ye-mose-i-di.*
 basket one 3SG-give-APPL-3PL.OBJ
 ‘He gave them one basket.’

As discussed in Section 3.4.3, Saliba-Logea, like most Oceanic languages, has a preference for expressing three-participant events not by ditransitive clauses but by means of constructions which indicate a third event participant by pragmatic means such as the directional markers in (56) and (57). In the paradigm of the verb 'give' these two strategies are combined.

5. Summary

This article provides an account of transitivity in Saliba-Logea which regards transitivity features as being relevant to the individual structural levels on which they are manifested. This approach allows for morpho-syntactic definitions of valence and transitivity for verb roots, inflected verbs and clauses. This is helpful because the transitive features on these three levels do not automatically align and constructions with both transitive and intransitive features exist across the Oceanic language group. In the framework presented here transitivity discord between different structural levels occurs when a verb has a semantic argument which is not indicated in its morphological marking. So, morphologically intransitive verbs which are semantically transitive can occur with an object argument in transitive clauses with discord. Morphologically transitive verbs which are semantically ditransitive can occur as the heads of ditransitive clauses. Note that the identification of semantic transitivity here is anchored in some way in the morpho-syntactic behavior of the verbs, not in our world knowledge about the number of participants in a given event. It is not based on an observer's assumption of the nature of the event expressed (which tends to be shaped by expectations based on the observer's own language).

Due to Saliba-Logea's OV word order, some constructions look different from their counterparts found in most other Oceanic languages, which are VO. As a result, Saliba-Logea discord constructions in transitive clauses are more clearly distinct from object incorporation than they would be in some other languages.

The Saliba-Logea system of transitivity marking in terms of its repertoire of verb roots and inflected verbs, the valence-changing devices, the distinction between close and remote objects, and the mix of transitivity features is not atypical for the patterns found across the Oceanic language group.

Notes

1. I'd like to thank the communities on Saliba and Logea Island for welcoming me and for their support over the years. This article is in part based of findings from my PhD research. I am

grateful to my supervisors, Steve Levinson, Ulrike Mosel, Eric Pederson and Felix Ameka for their feedback and criticism. Part of the research reported here has also been shaped by input from Peter Austin, Jürgen Bohnemeyer, Melissa Bowermann, James Essegbey, Nick Evans, Birgit Hellwig, Eva Schultze-Berndt, David Wilkins and Roberto Zavalla. I thank the anonymous reviewers and the editors for helpful feedback. All shortcomings are, alas, as usual my own.

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2. Beside those stated in the Leipzig Glossing Rules the following abbreviations are used: ANA, anaphoric, EMPH, emphatic, KAI, prefix *kai-* which functions like an antipassive marker, PP, post-position, RED, reduplication, SKPR, speaker, THC, thematic consonant.
3. So for these languages it is not the accumulation of many transitive features which is responsible for whether the verb is marked transitive, but rather one single feature predicts the status of the verb, say the full affectedness of the object (transitive) vs. partitive constructions (intransitive).
4. The stem *deula* ‘make terraces’ cannot carry an object suffix without first being transitivised by the applicative. So it is clear that it is not carrying the third singular zero object suffix here.
5. This is helpful to identify active intransitive verbs. Stative intransitive verbs tend not to allow the applicative suffix to derive transitive versions.
6. Since the verb stem itself always shares the transitivity status of the inflected verb, verb-level transitivity equally applies to uninflected verb stems.
7. The Saliba-Logea pronominal affixes are as follows:

	subject	object	possessive
1SG	<i>ya-</i>	<i>-gau</i>	<i>-gu</i>
2SG	<i>ku-, ko-</i>	<i>-go</i>	<i>-m</i>
3SG	<i>ye-, i-</i>	<i>-ø, -ya</i>	<i>-na</i>
1INC	<i>ta-</i>	<i>-da</i>	<i>-da</i>
1EX	<i>ka-</i>	<i>-gai</i>	<i>-ma, -mai</i>
2PL	<i>kwa-</i>	<i>-gomiu</i>	<i>-mi</i>
3PL	<i>se-, si-</i>	<i>-di</i>	<i>-di</i>

8. The directional suffixes commonly occur on motion verbs to indicate the direction of the motion, as in *lao-ma* ‘come’ which is derived from *lao* ‘go’. They are clearly not pronominal as discussed in more detail in Margetts 2008b.

9. Nominal modifiers in Saliba-Logea, as in some other Melanesian languages, carry suffixes which indicate the number of the head noun. These associative suffixes are homophonous with possessive suffixes on nouns. The Saliba-Logea morphemes are *-na* ‘singular’ and *-di* ‘plural’. See Ross (1998) and Margetts (2009) for discussion.

10. It might be possible to construct an unusual context where a person goes to the garden to look for some specific tubers that someone has hidden there. In such a scenario it is conceivable that the transitive verb may be accepted. I didn’t get very far when trying this with speakers because they thought the idea was rather silly. Still I am reluctant to say that the constructions in (b) are ungrammatical rather than pragmatically infelicitous.

11. So possibly this prefix derives activity verbs from accomplishments, but to date there are no tests to establish lexical aspect in Saliba-Logea.
12. Depending on the verb on which it occurs this suffix therefore has the function of a transitive or an applicative morpheme. For simplicity I use the gloss APPL, for 'applicative', in all of the examples.
13. The distinction between close and remote objects is only relevant for those added by the suffix *-i*. Objects of other transitive verbs (e.g. based on labile or bivalent roots) are all close objects.
14. The form *mose* cannot occur as a simplex stem but it is attested without the applicative suffix in complex verbs where it is followed by a transitive stem.

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Transitivity in Cholim Tangsa

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Transitivity in the Cholim variety of Tangsa is seen to be a grammatical feature with low functional load. It is viewed in terms of three factors: the form of the verb (simplex, middle and causative), the relationship to markers of agentivity and anti-agentive, and the verbal agreement system of Cholim. Using traditional texts, the paper explores in detail the issues raised by an examination of transitivity, and relates the findings to the treatment of transitivity in other Tibeto-Burman languages and beyond.

Keywords: Tibeto-Burman, Tangsa, transitivity, causative, reciprocal, reflexive, middle voice, agentivity, anti-agentive

1. Introduction¹

Tangsa (Tibeto-Burman/Bodo-Konyak-Jinghpaw) consists of around 70 identified subgroups,² each of which speaks a distinct linguistic variety. Some of these varieties are similar and mutually intelligible, while some are not. They differ in terms of phonetics and phonology, lexicon, and grammatical features including some of those discussed here. What we say here can only be said with confidence about the Cholim variety, spoken in one village in Assam State, India, in two villages in Arunachal Pradesh state, and at least one village in Myanmar.³ It is also known as Tonglum and Dawlum (see Morey 2011a). Our study is based on a 1500-item word list and texts spoken by Loekyam Cholim (Lukam Tonglum) in Kharang Kong, Lekhapani, Assam.⁴

Cholim morphosyntax is *prosodically* more isolating than some other Tangsa varieties (see Morey 2011a). Therefore most of the grammatical markers, such as verbal agreement, are shown as separate phonological words. There is some tendency to prefixing and/or precliticization. Basic constituent order is AOV/SV, but in natural speech few clauses have two expressed NPs, and variation in ordering is pragmatically motivated.

Three features of Cholim intersect in our consideration of transitivity: (1) the form of the verb: (a) simplex, or (b) with a *rǎ-* prefix ‘middle’ (Section 2, Table 1) or (c) with a *tǎ-* prefix ‘causative’ (Section 2, Table 3); (2) whether noun phrase arguments are marked by the agentive and/or anti-agentive markers (see Section 3), and (3) the verbal agreement system. None of these features, alone or in combination, define transitivity clearly.

Some Tibeto-Burman languages have formal marking of transitivity, such as Kham (Watters 2002: 78), where there is a different paradigm for transitive verbs (verbs with objects) from that for intransitive verbs. In many other TB languages, however, transitivity is not marked, such as in Meithei (Chelliah 1997). Meithei does have a rich system of derivational morphology in three levels, one of which includes suffixes that are, or may be, valence affecting — ‘comitative’, ‘reciprocal’, ‘for sake of self’, ‘causative’ (1997: 211). These suffixes are derived from roots, mostly verbs (1997: 205).

So-Hartmann (2009: 189) pointed out that “the concept of valence is closely related to — but not identical with — verb-transitivity which counts only object arguments,” in other words valence is a wider-ranging term than transitivity. In Daai Chin, there are two types of valence-affecting morphemes, prefixes and applicatives (So-Hartmann 2009: 198). The applicatives have transparent sources as verbs, such as a main verb ‘give’ having an applicative meaning ‘on behalf’.

The valence-affecting prefixes in Daai Chin are *m-* and *k-*, both ‘causative’ and *ng-* ‘detransitivising’, the latter with a variety of functions similar to those found for Cholim *rǎ-* discussed in 2 below (see So-Hartmann 2009: 209). LaPolla (1996) has surveyed a number of Tibeto-Burman languages in light of the literature on middle voice, concluding that ‘middle’ is found in a number of Tibeto-Burman languages.

The situation in Tangsa as a whole is complicated by internal variation. In both the Moklum and Hakhun⁵ varieties of Tangsa there are verbal agreement markers that show agreement with 1st and 2nd person undergoers as well as the actor (hierarchical agreement). In such circumstances transitive and intransitive verbs are formally distinct, just like in Kham (see Das Gupta 1980 for examples from Moklum and Boro 2011 for Hakhun). In Cholim Tangsa, on the other hand, there is no hierarchical marking, and with simplex verbs there is no paradigmatic distinction, the same as we see in Meithei and Daai Chin. The situation of Cholim is, however, much more like that in Daai Chin, since there are applicative-like morphemes that are synchronically also both full verbs have some valence-affecting functions (see (18) below where the verb ‘give’ gives the implication ‘for the benefit of’) as well as both middle and causative prefixes, the former of which never co-occurs with actors marked by the agentive marker *rah* and is arguably

detransitivising, and where the latter always allows *rah* marked arguments and is arguably transitive.

Tibeto-Burman languages are equally varied in terms of the marking of agents and non-agents. Many languages have in their inventory a marker of the actor (or subject) in a transitive clause. This marker is variously referred to as agent or agentive (Chelliah 1997, Coupe 2007, LaPolla with Huang 2003) or ergative (Hyslop 2010, LaPolla 1995), these two terms referring to very similar functions. Many languages of the family do not have such marking at all (van Breugel 2008, Post 2007⁶), and some have a marker termed nominative (Burling 2004, Joseph 2007), marking subjects of both transitive and intransitive clauses.

In many Tibeto-Burman languages that have agentive marking, it is not obligatory and is used for functions such as emphasis of agentivity and marked constituent order (Qiang; LaPolla with Huang 2003), marked or atypical situations contrary to real world expectations (Mongsen Ao; Coupe 2007), or disambiguating two potential agents and marking contrastive focus (Kurtöp; Hyslop 2010). Some languages even use the agentive to mark single arguments of intransitive clauses, such as Mongsen Ao, where “semantically motivated marking” occurs in specific circumstances (Coupe 2007: 161, 173).

In Cholim, as we will see from Table 5 in 5, the use of the agentive marker is not obligatory, and we have evidence of its use in situations where a verb that would be typically transitive occurs without any stated or understood undergoer, as in example (2) below. This is very rare, and in general the agentive marker *rah* is only found with clauses that have a stated or understood undergoer.

As we will see, transitivity in Cholim, as in Murrinh-Patha (Nordlinger this volume), is not a discrete category well identified in the language. From the formal structure of a verb we can say that *tã-* forms are always transitive and *rã-* forms are not, but we can say nothing about the transitivity of simplex verbs (which is most of them). We recognise that clauses with *rah* marked agents are almost always transitive, but most agent arguments are either omitted or unmarked. Clauses with arguments marked with the anti-agentive *mah* are also likely to be transitive, but not always, because *mah* has a wide range of meanings

Consider (1):⁷

- (1) *ăpih rah nye mah doet tuh wa.*
 əpi¹ ra¹ ɲe¹ ma¹ dɔt² tu¹ βa²
 [3SG AG] [1SG A.AG] hit PST.3 RL
 ‘He hit me.’

This was an elicited sentence, chosen because in natural texts examples with two simple arguments are uncommon. At a superficial level, we could define transitivity on the basis of (1): saying that *doet* is a transitive root, as shown by

its co-occurrence with an agent argument *ǎpĩh*, marked by the agentive *rah*, and by the presence of a second argument, *nye*. However, we have a number of examples of *doet* with only one argument, as in (2):

- (2) ǎre phǎren rah pǎra rangkho chue
 ǎre² p^hǎren² ra¹ pǎra² ran² k^ho² cu³
 thus [Naga AG that] [sky side high]

doet sing agyo.

dyt² sin² agjo²

hit must NEG.have

‘Thus, there was no way for the reptiles to fight high up in the sky.’

Cholim Naga Story, told by Loekyam Cholim (358)

This example comes from a passage describing a battle between reptiles and birds. The protagonist is a *phǎren*, a word that can mean ‘sea monster’ or ‘crocodile’, but is here representative of all reptiles, which, being unable to fly, cannot fight in the air and were consequently defeated. The agent argument is marked both by the agentive particle and by a demonstrative. The more usual order of these would be NP *pǎra rah*, but the order found in (2) is by no means uncommon.⁸ In this example, there is no ‘understood’ non-agent argument, and from this we need not conclude that *doet* is intrinsically transitive, but rather that a clause containing *doet* is transitive if an undergoer argument is present or recoverable.

We will now explore the situation of transitivity in Cholim in detail.

2. *rǎ-* and *tǎ-* verbal forms

Cholim, as well as many other varieties of Tangsa, manifests three forms of the verb: (a) a simplex, usually monosyllabic, form; (b) a form with a ‘middle’ prefix and (c) a form with a causative prefix. Few verbs have been recorded with all three forms, though both prefixes are productive. Simplex verbs when marked by these prefixes may have transparent derived meanings, such as *kak* ‘bite’ and *rǎkak* ‘bite each other’, or the meanings may be more opaque, as in *rǎna* ‘lean on’, where no simplex form *na* has been recorded. Furthermore, whilst verbs with *tǎ-* are always transitive, simplex verbs can be transitive, such as *phak* ‘eat solid food’ in *wuechhi phak mang* (egg eat NEG.1sg), ‘I don’t eat eggs’, or intransitive, such as *di* ‘die’.

There is a third verbal prefix. In citation, many verbs (but not all) were given by Loekyam Cholim with a nominalising/citation prefix *ǎ-*, which we have omitted in the following discussion. This prefix can co-occur with a verb marked by either *rǎ-* or *tǎ-*.

The *rǎ-* and *tǎ-* forms are exemplified in (3), where both examples have the same putative root *phyoe*.

- (3) MID: *rǎphyoe* ‘turn itself over, as of a baby rolling’
 CAUS: *tǎphyoe* ‘turn (something) over’

The root *phyoe* has not been recorded as a simplex form in our Cholim data, although we speculate that it would mean something like ‘turned over’. It is possible that such a word may be found either in other Cholim villages, or in a cognate form in other Tangsa varieties.

2.1 *rǎ-* ‘middle’

The *rǎ-* prefix marks a reflexive in (3), but can also mark a reciprocal, as in the pair *bom* ‘to speak, language, word’ and *rǎbom* ‘speak together’. Verbs that have been recorded with the *rǎ-* prefix are listed in Table 1, together with their simplex equivalents, if those have been recorded (we would expect to find more *rǎ-* forms and more simplex equivalents as a result of future deeper studies of Cholim).

As we can see, the meaning of the *rǎ-* form is not always predictable from the simplex form. If *rǎ-* were a true reciprocal, *rǎbom* would mean ‘speak to each other’. This is a possible meaning, but in the texts we have recorded, it means ‘speak together’, where more than one actor is involved and both are not necessarily stated. This wider range of possible meanings is subsumed under the category ‘middle’.

Almost all the simplex verbs listed in Table 1 occurred in clauses with an undergoer argument, in other words they are what we would term transitive. The agent argument of such verbs is often marked by the agentive particle *rah*, as in (4).

- (4) *chhyoeh rah qhai rah moen kak muh.*
 c^hjyʔ¹ raʔ¹ xai¹ raʔ¹ mɤn² kak¹ muʔ¹
 tiger AG fox AG also bite NEG.3
 ‘The tigers and foxes won’t bite (you⁹).’

Story of the Dog, SDM12-2008Tascam-136, told by Loekyam Cholim (46)

Later in the same text the form *rǎkak* is found, meaning literally ‘bite each other’, relating to a fight between the dog and the goat. According to the Cholim story, dogs once had horns. The dog was tricked out of the horns by a goat, and a fight ensued. In describing the fight, two words, *rǎkak* and *rǎthu* [rə^hu¹] ‘to gouge’, were used. Neither the action of biting nor gouging was of itself reciprocal. There was only one horn, which the goat was using to gouge the dog, and only the dog was using his teeth. However, the whole episode involved a reciprocal fight, and involved more than one actor, hence the use of *rǎ-*.

Table 1. rä- initial (middle) verbs in Cholim Tangsa

rä- form		gloss	root form ¹⁵	gloss
<i>rābom</i>	rābom ²	speak together	<i>bom</i>	speak
<i>rābuh</i>	rābuʔ ¹	fight with stick		
<i>rāchho</i>	rāc ^h o ²	settle down ¹⁶	<i>chho</i>	place, put
<i>rāchhoem</i>	rāc ^h ʷm ¹	divide ¹⁷	<i>chhoem</i>	cut
<i>rāchyoe</i>	rāc ^h ʷy ²	approach		
<i>rādo</i>	rādo ²	quarrel	<i>do</i>	lift up
<i>rāhoem</i>	rāhʷm ³	meet	<i>hoem</i> (hʷm ²)	get
<i>rājai</i>	rāzai ²	gather, keep		
<i>rākak</i>	rākak ²	bite each other	<i>kak</i>	bite
<i>rākam</i>	rākam ¹	look after		
<i>rākho</i>	rāk ^h o ³	be split ¹⁸	<i>kho</i>	split
<i>rākhoet</i>	rāk ^h ʷt ¹	fight	<i>khoet</i>	fight
<i>rākhluk</i>	rāk ^h uk ¹	slide; slip		
<i>rālai</i>	rālai ¹	change ¹⁹		
<i>rālong</i>	rālon ²	fight with weapons		
<i>rāluh</i>	rāluʔ ¹	have sexual intercourse		
<i>rālung</i>	rāluŋ ³	attack		
<i>rāmjam</i>	rāmjam ²	lose oneself, get abandoned ²⁰	<i>myam</i>	abandon
<i>rāna</i>	rāna ²	lean on		
<i>rāngyoe</i>	rāŋy ¹	turn around		
<i>rāphai</i>	rāp ^h ai ³	divide (ourselves)	<i>phai</i>	divide (something)
<i>rāphyoe</i>	rāp ^h ʷy ³	roll over, of babies		
<i>rāphyoe rārik</i>	rāp ^h ʷy ³ rārik ¹	roll over, of babies		
<i>rāpoem</i>	rāpʷm ³	embrace	<i>poem</i>	embrace
<i>rāqhah</i>	rāxaʔ ¹	slap		
<i>rāqhete</i>	rāxe ¹ te ¹	know a person	<i>qhete</i>	know a fact
<i>rāqhing</i>	rāxiŋ ³	leave		
<i>rāqhot</i>	rāxot ¹	mix food		
<i>rāro</i>	rāro ²	unite	<i>ro</i> (ro ³)	love
<i>rārom</i>	rārom ²	help; as all helping together	<i>rom</i>	help, add
<i>rāso</i>	rāso ¹	join		
<i>rāthang</i>	rāt ^h aŋ ¹	kick		
<i>rāthu</i>	rāt ^h u ¹	gouge		
<i>rāthung</i>	rāt ^h uŋ ²	change ²¹	<i>thung</i>	change

When surveying all our texts, we found only one example, (5), of any of the simplex verbs from Table 1 where no undergoer was stated or recoverable from the context. In this case, a generic undergoer is assumed.

- (5) hai kak joelyoe wa kak le.
 hai³ kak² ʒv³ljv²le² βa² kak² le²
 EXCL bite if RL bite SAL
 ‘Good, if he bites, he bites.’

Cholim History (SDM12-20091226-02_SM_T_History), told by Loekyam Cholim, No (65)

There is a further complication in dealing with the middle in Cholim: there is another grammatical form, with a different origin, that can appear as *rǎ-*. As mentioned earlier, at least in the speech of our principal consultant, Loekyam Cholim, grammatical morphemes that follow their head (such as agreement particles and NP markers) are generally realised as phonological words. Where there are phonologically reduced elements, there is a strong preference for prefixes and proclitics.¹⁰ Grammatical morphemes are often realised with reduced vowels as a proclitic to the next element. Thus it sometimes happens that the agentive marker, in the reduced form *rǎ=*, appears cliticised to the verb, even though it marks the previous element. In (6) it marks *pǎra* ‘that’ and this is not an instance of a middle. The context of the example is that a newly married woman has just lost her husband, and she is pregnant although she does not yet know it. Thus *qhete* here is the simplex verb meaning ‘to know a fact’ not the middle form meaning ‘to know a person’, and *rǎ=*, clearly prosodically connected to the verb, is certainly the agent particle in this case.

- (6) pǎra rǎqhete muh se ǎwang woen.
 pǎra² rǎ=x¹te¹ mu¹ se¹ ə-waŋ² βv²
 that AG=know NEG.3 [child NMLZ-come COS]
 ‘And she did not know that the child was coming.’

Mulon Story, SDM-12-2009-11-04-08-MB-Lukyam-Moolongan-story, told by Loekyam Cholim (97)

If the *rǎ-* in (6) was in fact the middle prefix, it might mean ‘she did not know the child who is coming’, but the context tells us that the child is unborn and this meaning cannot be derived.

When a verb with the *rǎ-* form is employed in texts, the agentive marker *rah* is not used, as can be seen in (7). In this example there is a single NP, shown bracketed. This NP is a single syntactic argument referring to two entities.

- (7) phären along ni lalong rākhoet tuh.
 p^hären² a²lon³ ni² la²lon³ rə-k^hyt¹ tu¹
 [Naga PN two¹¹ great eagle]_{NP} MID-fight PST.3
 ‘The *phären* Naga and the eagle fought each other.’
Cholim Naga Story, told by Loekyam Cholim (1)

This is not an example of the procliticised agentive marker, because we have similar forms later in the same text¹² with a nominalisation *ārākhoet* following a conjoined NP very similar to that seen in (7). If the *ră-* in (7) were the agentive marker, it could not follow the nominaliser *ă-*.

When *khoet* is found as a simplex form, the agent is usually marked with *rah*. This is seen in (8):

- (8) sumpujan mukātu rah qham nang ngo ākhoet
 sum²pu²zan² mu²kātu¹ ra¹ xam² nan² ŋo² ə-k^hyt¹
 [caste type PN AG] [Tai at] say NMLZ-fight

 ngo tuh ngo wa.
 ŋo² tu¹ ŋo² βa²
 say PST.3 say RL
 ‘Sumpujan Mukātu fought in speaking with the Shans, it is said.’
Cholim History (SDM12-20091226-02_SM_T_History), told by Loekyam Cholim, No (140)

In addition to examples like (7), verbs in the *ră-* form can also be found with two NP arguments, as in (9). Both NPs are shown bracketed. The first NP is itself a complex structure, referring to a single entity (the younger son of the Naga in (7)). The Naga child referred to by the first NP is the topical argument and hence that NP appears first. It is not the case, however, that one NP is the actor and the other the undergoer. Syntactically both are equal.

- (9) phären se naga se jyoechhik nyu pära rābom.
 p^hären² se¹ na²ga² se¹ ʒjv²c^hik¹ ju¹ pära² rə-bom²
 [Naga child PN child]_{NP1} [female mother that]_{NP2} MID-speak
 ‘(then) the *phären* child, the Naga child and the female spoke together.’
Cholim Naga Story, told by Loekyam Cholim (174)

The reciprocal uses of the *ră-* form have all involved two arguments/entities, expressed either as a single NP, as in (7), where the two entities are conjoined by *ni*, or two separate NPs, as in (9). Some *ră-* forms are reflexive, such as *răphyoe* ‘turn itself over’, used to describe the movement of a baby in (3) above. Here only a single entity is required.

There are some uses of *rǎ-* which do not involve either reciprocal or reflexive action. Consider (10), which refers to a very deep nest, the bottom of which cannot be seen. The nest was created by the great eagle that we have already seen in (7). Here the function of *rǎ-* is to make the agent indefinite, or reduce agentivity; this is translated by an English passive. In Daai Chin, So-Hartmann (2009: 207) records a similar function for the reciprocal/reflexive *ng-*, which she terms ‘passive’.

- (10) chhue re, pǎra due khe lyoemoen rǎkho muh.
 c^hu² re² pǎra² du²k^he¹lj^y² mɣn² rǎ-k^ho³ mu²¹
 deep SUB [that at] what if also MID-see NEG.3
 ‘It was so deep that nothing could be seen.’
Cholim Naga Story, told by Loekyam Cholim (171)

Whilst the *rǎ-* form cannot occur with a *rah* marked actor or agent, it can occur with a *mah* marked undergoer. Consider (11), an elicited example where *mah* marks an instrument (see Table 4 below). I have not recorded how to say ‘kick one’s own legs’, but my Cholim teachers were clear that we cannot say **jyoe thang* ‘leg kick’. (There is another verb *hip* ‘kick’ which can be used in this way: *jyoe hip* is grammatical.)

- (11) jyoe mah rǎthang
 ʒjv¹ ma² rǎ-t^haŋ¹
 leg A.AG MID-kick
 ‘kick with the feet’

The four different kinds of meanings of the reflexive/middle marker are summarised in Table 2

Table 2. The middle marker in Cholim Tangsa: form and interpretation

Example No.	Context for interpretation	Interpretation
(7)	Two arguments	Reciprocal
(9)	Two arguments	Agent pluralisation
(3)	One argument	Reflexive
(10)	One stated argument	Agentivity reduction

This parallels the situation in Rawang, where a verb marked by the intransitivising prefix *v-* is interpreted as reciprocal if the single direct argument of that verb is a plural, animate, argument (LaPolla 2000: 288).

2.2 *tă-* verbal forms

The *tă-* form is always transitive, as in the pair *tăxen* ‘make something dry’ and *xen* ‘(be) dry’. It probably derives from the proto Tibeto-Burman *s- causative prefix (see LaPolla 2003: 33).

Table 3. *tă-* initial (causative) verbs in Cholim Tangsa

<i>tă-</i> form		gloss	root form	gloss
<i>tăbeh</i>	təbe ²	destroy		
<i>tăcha</i>	təca ²	touch		
<i>tădang</i>	tədaŋ ³	put on top	<i>dang</i>	ride a horse
<i>tăjah ju</i>	təʒa ² ʒu ²	give back	<i>jah</i>	return
<i>tăjo</i>	təʒo ¹	hang up		
<i>tăjo qhoem</i>	təʒo ¹ xvm ²	carry in hand		
<i>tăka</i>	təka ¹	stick out, as of the tongue		
<i>tăkhi</i>	tək ^h i ³	shiver		
<i>tăkhing</i>	tək ^h iŋ ¹	prevent, stop something	<i>khing</i>	stay for a short time
<i>tăkho</i>	tək ^h o ³	show	<i>kho</i>	see
<i>tălim</i>	təlim ¹	pile up		
<i>tăling</i>	təliŋ ³	learn		
<i>tămang</i>	təmaŋ ¹	remember, think		
<i>tămoet</i>	təmvt ¹	extinguish		
<i>tăngoh</i>	təŋo ²	bend, break	<i>ngoh</i>	be bent
<i>tăpa</i>	təpa ³	separate		
<i>tăphai</i>	təp ^h ai ³	shake, as the branch of a tree	<i>phai</i>	divide
<i>tăphyon</i>	təp ^h yon ³	rescue		
<i>tăphyoe</i>	təp ^h yy ³	turn over	<i>răphyoe</i>	roll over, as of babies
<i>tăpo</i>	təpo ¹	pile up		
<i>tăqhen</i>	təxen ¹	dry	<i>qhen</i>	dry
<i>tărang</i>	təraŋ ¹	alive, used of animals		
<i>tăreh</i>	təre ¹	make noise		
<i>tărom</i>	tərom ³	collect, gather		
<i>tăryah</i>	tərya ¹	shriek		
<i>tăthin</i>	tət ^h in ²	destroy ²²		
<i>tăting</i>	tətiŋ ³	aim		
<i>tăwyoe</i>	təʒy ²	fold	<i>wyoe</i>	to be folded

A list of *tǎ-* forms collected in the word list is given in Table 3. Since *tǎ-* is a productive morpheme, this list is incomplete. However, as can be seen, many of the *tǎ-* forms in Table 3 lack a simplex counterpart, because this list includes those forms that can be regarded as lexicalised.

Note that the simplex forms in Table 3 include both forms that are transitive and co-occur with undergoers, like *kho* ‘see’, and those that do not, like *jah* ‘return’.

A typical example of the productive use of the *tǎ-* prefix is in (12), where we see *tǎ tāwang* ‘cause to come’. The simplex verb *wang* ‘come’ is very common in Cholim discourse. In (12), the great eagle had caused a wind to come and carry his seed into the wombs of the women, hence the use of the causative. There are two causative forms in this example, the noun *kha* ‘cause’, translated into English as ‘because’ and the morphological causative *tǎ-*, which with the verb *wang* is translated as ‘make come.’

- (12) *jyoechhik ri ǎse tai tuh pǎra*
ʒjʷ²cʰik¹ ri² ə-se¹ tai² tuʷ¹ pʷra²
 [woman COM 3SG-child become PST.3 that]¹³

ranggi tāwang kha.

raŋ²gi³ tǎ-βaŋ² kʰa²

wind CAUS-come cause

‘Those women being made to be with child, it was because of (his) making that wind come.’

Cholim Naga Story, told by Loekyam Cholim, No. 126

If the agent (causer) of a *tǎ-* form verb is expressed, we might expect it to be marked with the agentive particle *rah*. In the first 150 lines of the Naga Story there are 16 examples of *tǎ-* verbs, in which eight involve two human participants. Only three have expressed agents where the agent is marked with *rah*, of which (13) is an example. Five are in imperative constructions, where the agent is routinely unexpressed, and eight more are declarative but with the agent unexpressed and otherwise recoverable from the context.

- (13) *ngo re jyoechhik se pǎra rah*
ŋo² re² ʒjʷ²cʰik¹ se¹ pǎra² raʷ¹
 say SUB [woman child that]_{NP} AG

mihmah poem pǎra mihwe se tǎphyon.

miʷ¹maʷ² pʷm³ pǎra² miʷ¹βe¹ se¹ tǎ-pʰjon³

[self self that] [male child] CAUS-save

‘And having said this, the woman herself saved the boy.’

Cholim Naga Story, told by Loekyam Cholim, No. 149

The agent NP is shown bracketed, marked by the agentive *rah*. The whole NP is also elaborated by the phrase *mihmah poem* (*păra*) which is translated as ‘self’.

In (14), we see a verb derived from a noun by means of the *tă-* prefix, as in *tăpo* ‘make into ball’.

- (14) naga we păra labe qhipqha păra geh tăpo re
 na²ga² βe³ pəra² la²be² xip¹xa¹ pəra² ge² tə-po² re²
 [PN DEF that] [living ant that] earth CAUS-ball SUB
 kāmūt re qhipqha mah sətai tuh.
 kəmut² re² xip¹xa¹ ma² sə-tai² tu²
 blow SUB ant A.AG CAUS-become PST.3
 ‘The Naga, having caused earth to be made into ball, and having blown (it),
 made it into an ant.’

Cholim Naga Story, told by Loekyam Cholim, No. 287

In (15) it is not possible to translate the causative in the English free translation. The context of this example is that the mother of the twin sons of the great Naga (snake) has told her boys to go and look at their father. The imperative form *ke kyoeh* is addressed to them, but the verb *la* ‘look’ is in the causative form, and the literal meaning is something like “Go and (be caused to) look again!” The twin sons have discovered that their father is a great snake, and they want to kill him. The causative in (15) thus appears to convey that their mother is controlling them just to look and not to kill.

- (15) a amchhu moen / ke tāla ke kyoeh.
 a² am¹c^hu¹ mɯn² ke¹ tə-la² ke¹ kɣɔ²
 EXCL now also go CAUS-look go IMP.away
 ‘And so, now go and look again!’

Cholim Naga Story, told by Loekyam Cholim, No. 57

This was translated into Singpho¹⁴ as *ya mu sa ri, yu sa u!* ‘and again going, go and look again!’, without any suggestion of a causative. Two sentences later, the verb occurs in the simplex form, shown in (16), which says what happened, and contains no implication of an instruction from the mother.

- (16) ... jah gue re la ke tuh
 ... ʒa² gu² re² la² ke¹ tu²
 ... return COS SUB look go PST.3
 ngo wa păra.
 ŋo² βa² pəra²
 say RL that
 ‘... having gone again, they went to look, it is said.’

Cholim Naga Story, told by Loekyam Cholim, No. 57

Finally in this section we present an example with *rǎ-* and *tǎ-* together. In the second line of (17), the brothers are encouraging each other to join their boats, so the causative ‘make them join’ is appropriate. On the other hand, in the third line the meaning is that the boats did not join together (*rǎrom lot muh*), hence the use of the *rǎ-* form.

- (17) ǎre khahli jamten wyah re
 ǎre² k^haɾ²li² ʒam²ten² βjaɾ¹ re²
 thus boat how much punt SUB
- tǎrom i ngogue re moen
 tǎ-rom³ i³ ŋo² gu² re² mɤn²
 CAUS-join HORT say COS SUB also
- rǎrom lot muh.
 rǎ-rom³ lot² muɾ¹
 MID-join able NEG.3

‘But however much they punted the boats, saying “Let’s make it join”, they were not able to join them together again.’

Cholim Naga Story, told by Loekyam Cholim, No. 103

3. *rah* and *mah*

We will now turn to the marking of arguments in Cholim Tangsa. In particular we will look at the functions of the two markers mentioned above, *rah*, which marks the agent, and which I have termed agentive, and *mah*, which marks non-agent arguments, usually animate, and which I term ‘anti-agentive’. LaPolla (1992) is a rich typological discussion of a similar phenomenon across many languages, where this function was termed ‘anti-ergative’, also discussed as anti-agentive in LaPolla 1995, 2004. The term ‘anti-agentive’ is preferred because, as we shall see, these are not paradigmatic and their use depends on the interplay between syntax, pragmatics and the animacy of the arguments.

As in Singpho (Morey 2011b), agents of the speech act verbs are very frequently marked with the agentive. In (18) we see a framing expression with an understood speech act verb (the word *chung* ‘tell’ was used earlier), and reference to the speaker (mother) marked by the agentive (*ǎnyu rah*). The rest of the example is the speech report, consisting of a vocative followed by three arguments shown in brackets: the animate recipient marked by *mah*, the actor marked by *rah*, and the theme, unmarked.

- (18) ... ănyu rah “ase ni loei
 ... ə-ŋu¹ raʔ¹ a²-se¹ ni² lvi³
 ... 3SG-mother AG 1SG-child two VOC
- nyim ni mah nye nyimnyu rah
 ŋim¹ ni² maʔ¹ ɲe¹ ŋim¹-ŋu¹ raʔ¹
 [2PL two A.AG]_{RECIPIENT} [1SG 2SG-mother AG]_{ACTOR}
- menten pingja wesi si phai kueh i.”
 men²ten² piŋ²ʒa² βe¹si¹ si¹ p^hai³ kuʔ¹ i³
 [wisdom wisdom one one]_{THEME} distribute GIVE HORT
 ‘... their mother (said), “Oh my sons, let me your mother distribute a little wisdom to each of you two.”’
Cholim Naga Story, told by Loekyam Cholim, No. 91

Table 4. Marking of Noun phrases in Cholim Tangsa

	∅	rah ‘AG’	mah ‘A.AG’	ri ‘COMIT’	due, nang ‘LOC’
Actor (intrans)	X				
Actor (trans)	X	X (13), (18), (19)			
Actor (reciprocal) <i>ră-</i> form	X (7), (9)			X	
Experiencer	(X)		X		
Patient	X (13), (19), (26)		X (24)		
Beneficiary/ Recipient			X (18)		
Theme	X (18)				
Manner	X		X		
Cause, Reason			X (25)		X
Instrument			X (26)		
Possessor	X	X (19)			
Goal (location)	X				X
Source (location)			X		LOC + A.AG
Comitative				X	
Reported speech	X				
Purposive clause			X (28)		
Complement clauses	X		X		

In Table 4, I have listed a number of functions of the arguments of verbs, together with how these are marked in Cholim Tangsa ('X' indicates that the function is marked in that way, a blank cell indicates that it has not been found in that function). The term 'actor' is used to cover the three roles of (i) the single argument in an intransitive clause, (ii) the agent in a transitive clause, and (iii) the arguments of the *rá*-form that we discussed earlier. These three are grouped together because it is with the actor that the person marking in Cholim Tangsa agrees. I do not wish to term these three as 'subject', not least because one of the roles traditionally associated with 'subject', namely experiencer, does not trigger agreement on the verb and can be marked anti-agentive.

3.1 agentive *rah*

The agentive *rah* has two main functions: marking the agent, as we have already seen, and marking the possessive. Example (19) is an interesting but complex case. It consists of three subordinate clauses shown on the first two lines below, and a main clause on the last line.

- (19) ... piqhip wueqha rah / äku agyo joelyoele ...
 ... pi¹xip¹ βu¹xa ra¹ ə-ku² agjo² ʒy³ly²le² ...
 ... trees birds AG 3SG-female NEG.have if ...
- äse nge pära qhipqha dyo gue re
 ə-se¹ ŋe² pära² xip¹xa¹ djo³ gu² re²
 [3SG-child all that] ant ascend COS SUB
- wueqha äse phak ke lu pära qhipqha rah.
 βu¹xa ə-se¹ p^hak² ke¹ lu³ pära² xip¹xa¹ ra¹
 [birds 3SG-child]_{PAT} eat go CONT.3 that [ant AG]_{AG}
 '... if the birds of the trees have no mother ... for those chicks, the ants
 having climbed up, will go and eat away the chicks.'
Cholim Naga Story, told by Loekyam Cholim, No (289)

The post-predicate final agentive marked NP, shown bracketed, is included for disambiguation. This position is termed additional topic in our analysis of the Turung variety of Singpho (Morey 2010: 508).

In the first subordinate clause in (19), *rah* marks a possessor, literally 'the [birds of the trees]'s mother'. This form of the possessive construction is *X POSS Y EXIST/NEG.EXIST*, to mean 'X does / does not have Y'.

The last clause has a serial verb construction, *phak ke* 'eat go'. We can say that this is a serial verb construction, a single event, because the actor in this case, *xipxa* 'ant' is marked by the agentive, and this implies a transitive verb. Since *ke* is a

motion verb, the marking with *rah* is licensed by the presence of a transitive verb *phak* ‘eat’.

In (20) we see that the agentive can mark inanimate entities, although in this case the water is in a sense anthropomorphised, with a literal meaning something like ‘the child of the world and land which is water (would flood)’. This is also an example of an agent representing a ‘natural force’ with an element of nature (flood) as the actor, a role that is marked as an agent in many languages.

- (20) pāra mungkan̄ se geh pāmoen̄ jo rah ālim.
 pəra² muŋ²kaŋ² se¹ geʔ² pə-mv̄n²ʒo² raʔ¹ ə-lim¹
 that world child land that-also water AG NMLZ-flood
 ‘And water would flood the whole world.’
Cholim Naga Story, told by Loekyam Cholim, No. 227

In (21) we see a similar example, with the even more clearly anthropomorphic form *chi nyu jo we* ‘water mother water father’. This example literally means ‘the mother and father of waters (would) submerge all’.

- (21) chhi nyu jo we rah nohle chhip woen.
 c^hi² ŋu¹ ʒo² βe¹ raʔ¹ noʔ²le² c^hip¹ βv̄n²
 water mother water father AG all submerge COS
 ‘And the great waters would submerge everything.’
Cholim Naga Story, told by Loekyam Cholim, No. 229

These last two examples have predicates without agreement markers; they are part of a large conditional structure, ‘if the Naga and the great eagle fight, then ...’ in which none of the result clauses are marked with any of the TAM person agreement particles.

3.2 anti-agentive *mah*

As for *mah*, the anti-agentive, we have seen already its use on a patient in (14), and on a recipient in (18), in both cases with animates. It also marks experiencers, so that, for example, ‘I need time’ is expressed as in (22):

- (22) nye mah akhing ra lu wa.
 ŋe¹ maʔ¹ a¹k^hiŋ² ra² lu³ βa²
 1SG A.AG time need CONT.3 RL
 ‘I need time.’
 Cholim sentence, spoken by Chonja Tonglum

Such experiencer ‘subjects’ do not lead to person marking, so that (23) is not grammatical.

- (23) nye mah akhing ra lang wa.
 ne¹ maɹ¹ a¹k^hiŋ² ra² laŋ³ βa²
 1SG A.AG time need CONT.3 RL

It can be argued that the agreement in (22) is with *akhing* ‘time’, although examples of the experienced construction with just a single argument marked by *mah* are also found. This requirement for agreement only to occur with what I have termed actors in Table 4 may not be true for those Tangsa varieties that have hierarchical agreement.

In (24) we find a transitive clause in which the agent and topic (*naga along*) is marked with the agentive, and the patient is an abstract entity. The patient NP is repeated. The first instantiation is followed by a pause, because the speaker had not found the correct marker. The second instantiation is marked by *mah*.

- (24) naga along rah äpih pingja /
 na²ga² a²loŋ³ raɹ¹ äpiɹ¹ piŋ²ʒa²
 [PN PN AG] 3SG wisdom
 äpih pingja mah gälo.
 äpiɹ¹ piŋ²ʒa² maɹ¹ gälo²
 3SG wisdom A.AG make
 ‘And so the Naga made his wisdom.’
Cholim Naga Story, told by Loekyam Cholim, No. 270

The particle *mah* is also used to mark a fixed causal expression, *pära kha mah*, as in (25). This phrase and the related causal expression, *pära ningkhoen due*, which includes the locative particle *due* ‘at’, are very similar to causal phrases in Singpho, and may be calques, given the close contact between Tangsa and Singpho speakers over a long period. However, the phrase *pära kha mah* differs from its Singpho equivalent, *ndai nähkan i*, in that the Singpho phrase is marked by the historical agentive *i*, whereas the Cholim form uses the anti-agentive.

- (25) äre pära kha mah a pu phan phan
 äre² pära² k^ha² maɹ¹ a² pu³ p^han² p^han²
 thus that cause A.AG EXCL snake types
 pära phären phan ...
 pära² p^hären² p^han² ...
 that Naga type ...
 ‘And for this reason, the different kinds of snakes, the kinds of Naga ...’
Cholim Naga Story, told by Loekyam Cholim, No. 298

In (26), a single clause, there is no *mah* marking the word *lalong* ‘great eagle’. This suggests that animacy is neither a necessary condition nor an overriding

condition, for marking by *mah* — *lalong* is more animate than *menten*, unless we regard *menten* as being somehow anthropomorphised because it is wisdom given by a mountain spirit, the mother of the Naga.

Another reason for the lack of marking on *lalong* seems to be that only one argument can be marked by *mah* in a single clause. The marking of two arguments by an anti-agentive has been reported for Tai languages of Northeast India (Morey 2006) and for Singpho (Morey 2010: 353), with forms like ‘the king gave his daughter(-A.AG) to the prince(-A.AG)’. Such double marking has not been found in Cholim.

- (26) *äre pära menten pära mäta*
äre² pära² men²ten² pära² mä-ta²
 thus that wisdom that A.AG-LINK
- lalong gep nyen tuh wa pära.*
la²lon³ gep² nen² tu¹ pä² pära²
 great eagle shoot able PST.3 RL that
 ‘And through that wisdom, the great eagle was able to be shot.’
Cholim Naga Story, told by Loekyam Cholim, No. 324

We have seen in the previous examples that *mah* can mark pronouns. In (27), however, it does not. Rather, there is a proximate locative demonstrative *ara*. Actors, patients and beneficiaries can appear marked by a demonstrative if identifiable and definite. This marking is redundant in (27), since a 1st person is always identifiable and definite.

- (27) *rangwyo nang/ qhyomke kyo joelyoele,*
ran²βyo³ nan² xyom³ ke¹ kyo³ ʒv³lyv²le²
 daytime at walk go PST.1SG if
- khälung along rah nye ara me phak.*
k^hälun² a²lon³ ra¹ nye¹ a²ra² me¹ p^hak²
 [eagle PN AG] [1SG here] FUT eat
 ‘(He said) “If I go walking at daytime, the great eagle will eat me.”’
Cholim Naga Story, told by Loekyam Cholim, No. 210

Could *mah* have been used here instead of, or in addition to, *ara*? Loekyam Cholim suggested that the use of *ara* here is correct; **khälung along rah nye mah me phak* would be ungrammatical here, not because NP NP *mah* V clauses are impossible, though they are rare, but because (to paraphrase him) *mah* would be used only with beneficial situations, whereas this situation is malefactive. There are, however, examples in the texts of *mah* being used to mark an argument that is

adversely affected by the action. A much larger corpus study is needed to establish the conditions of the use of *mah* vis-à-vis the demonstratives.

Another use of *mah* is the marking of a purposive clause, shown in (28):

- (28) koemchhin koempet khyoe mah wik wue
 kʷm²cʰin³ kʷm²pet² kʰyʷ² maʔ¹ βik¹ βu²
 gourd.type pumpkin plant A.AG swidden field clear
 ke kyoeħ ...
 ke¹ kyʷ² ...
 go IMP.away ...
 ‘Go and clear a swidden field in order to plant gourds ...’
Cholim Naga Story, told by Loekyam Cholim, No. 32

4. A note on ‘ambitransitivity’

There are many cases where not all arguments are expressed in an utterance but are understood. Consider (29):

- (29) e p̄ra pat nang lalong rah tang re,
 e² p̄ra² pat² naŋ² la²loŋ² raʔ¹ taŋ² re²
 EXCL that lifetime at great eagle AG defeat SUB
 ph̄ren along soem tuh ngo wa p̄ra.
 pʰəren² a²loŋ³ sʷm² tuʔ¹ ŋo² βa² p̄ra²
 Naga PN lose PST.3 say RL that
 ‘At at that time the eagle won and the Naga lost, as it is said.’
Cholim Naga Story, told by Loekyam Cholim, No. 2

The context of this utterance is that it follows an introductory sentence in which the two protagonists fought. This example has two clauses, shown on each of the two lines. It is the only example of *soem* in a text, but *tang* is also recorded in a fully transitive construction, as in (30), where the agent, *chingni sephue noetga* is marked by *rah*.

- (30) nre / rangkho geh kho noet thang ri
 n²re² raŋ² kʰo² geʔ² kʰo² nyt¹ tʰaŋ² ri²
 thus sky side ground side spirit bad spirit with
 rākhoet/ r̄along joe moen p̄ra chingni
 rəkʰyt¹ r̄aloŋ² ʒy³=mʷn² p̄ra² ciŋ²ni²
 fight fight with weapons if=also that 3DL

sephue noetga p̄ara rah tang roh.
 se¹-p^hu¹ nɣt¹ga² p̄ara² raʔ¹ taŋ² roʔ¹
 child-EL.BR Naga that AG defeat able
 ‘And so there was fighting and battling with bad spirits both in the heavens
 and in the earth, but those Naga children were able to prevail.’
Cholim Naga Story, told by Loekyam Cholim, No. 16

One analysis of examples like (29) is that *tang*, at least, can function as what is sometimes termed an S=A ambitransitive, and it is translated with the verb ‘won’. However, given the propensity in Cholim to omit arguments, we do not have, and perhaps cannot have, any evidence that cases such as (29) are not simply examples of argument dropping. We therefore do not regard the term ambitransitive as useful for the analysis of Cholim Tangsa.

5. Transitivity in Cholim Tangsa — a wider perspective

Of the three features of Cholim Tangsa that we started this paper with, we can say that a verb marked by *tā-* is necessarily transitive, but other forms of the verb may or may not be. We have already mentioned that the *rā-* prefix can be seen as lessening transitivity, as it does not co-occur with the arguments marked by the agentive marker *rah*. Although in most cases the structure is transitive if there is an argument marked by *rah* (save in the possessive use of *rah*), there are exceptions, such as (2) above, and it is certainly not the case that every transitive structure has an agent marked with *rah*. We can say that the actor in a transitive clause triggers the agreement on the verb, but this is the case for intransitive clauses as well.

The complexity of the analytical challenge is demonstrated in Table 5, in which we have tried to outline the structure of the first 20 lines of the Naga Story, and to assign types to the constructions. As can be seen, most arguments are unmarked. In Table 5 *sub* stands for ‘subordinate clause’.

Since none of the formal characteristics represented by the three features of form, noun phrase marker and agreement are able to produce a clear definition of the function of transitivity in Cholim Tangsa, we are led to the view that transitivity as a category appears to have a low functional load, a conclusion similar to that drawn by Nordlinger (this volume), who concludes that “there is no single morphosyntactic property that will identify all and only the transitive clauses in Murrinh-Patha” and that although “direct object marking on the verb comes closest”, transitivity as a category has little functional load.

Cholim also illustrates the difficulty we have in defining transitivity. Consider Dixon (2010: 116), who defines two basic clause structures: “intransitive, with one

Table 5. Transitivity in the *Cholim Naga Story*

Verb	Gloss	Agent-like argument	Patient-like argument	Other arguments	Ex. No.	Clause Type
<i>rǎkhoet</i>	fight	two NPs unmarked, linked by <i>ni</i> 'two'			1	<i>rǎ</i> - form, middle
<i>tang</i>	win	unmarked			2	transitive
<i>soem</i>	lose	unmarked			2	?
<i>tǎchhing</i>	think	unmarked		unmarked complement	3	transitive
<i>hoem</i>	get			complement marked by <i>mah</i>	4	transitive
<i>athe</i>	have	unmarked			4 <i>sub</i>	possessive
<i>gep</i>	shoot	marked by <i>rah</i>	marked by <i>pǎra</i>		5	transitive
<i>ngo</i>	say			speech complement	6	transitive
-		single NP unmarked			7	locational, verb unexpressed
<i>rǎro</i>	unite	two NPs unmarked			8	<i>rǎ</i> - form, middle
<i>dung</i>	born	unmarked			9	intransitive
-		CS — the one named, marked by <i>pǎra</i> 'that'	CC — the name given is unmarked		10–14	naming copula, verbless with <i>ming</i> 'name'
<i>tai</i>	become	marked by <i>rah</i> ; the agent is repeated and marked by <i>pǎra</i> 'that'	unmarked		15	copula
<i>rǎkhoet</i> ; <i>rǎlong</i>	fight; fight	one argument marked with <i>ri</i> 'COMIT'			16 <i>sub</i>	<i>rǎ</i> - form, middle

Table 5. (continued)

Verb	Gloss	Agent-like argument	Patient-like argument	Other arguments	Ex. No.	Clause Type
<i>tang</i>	defeat	marked by <i>rah</i>	(understood from the subordinate clause)		16	transitive
<i>tang</i>	defeat				17	transitive
-		marked by <i>rah</i>		speech report	18	transitive (speech), verb unexpressed
<i>chhung</i>	tell	-	unmarked	unmarked	19, 20	imperative

core argument, and transitive, with two”. But what is a ‘core argument’? Does this refer to an argument that must be present, or merely one that could be present? In Cholim we might find a clause that is simply ‘tiger kill-AGR’, where the agreement marks 3rd person. There is just one argument: context will disambiguate whether the tiger was killed by some other entity, or the tiger killed someone, or whether there was just an act of killing with no undergoer, as in example (2) above. Is this a transitive clause or not?

Consider the marker *mah*. It has the range of functions listed in Table 4, some of which (patient, experiencer, beneficiary) might be regarded as more ‘core’ than others (instrument, cause). It is clear that Cholim Tangsa speakers regard this as a single morpheme, and it seems unlikely that we will gain greater insight into this language by dividing some of its functions (i.e. patient) into core and some (i.e. instrument) into non-core. In some ways the behaviour of *mah* parallels what Dryer (1986) called the primary object, where the “recipient, the indirect object, in a ditransitive and the patient, the direct object, in a monotransitive clause, receive the same case, while a secondary object, the direct object in a ditransitive clause, is marked differently”. But in Cholim, the use of *mah* is not paradigmatic, nor syntactic, but is semantically based. If transitivity is in fact a purely syntactic phenomenon (as claimed by Dixon 2010: 116), we cannot use the presence of either *mah* or *rah* to say that a clause is transitive.

In his analysis of Boumaa Fijian, Dixon (2010: 117) talks about ‘extended intransitives’, where there is a dative marked argument (E) plus the absolutive marked S. In some ways dative marked E in Boumaa Fijian looks like the *mah* marked argument in Cholim Tangsa, but that would entail analysing forms like *person buffalo-mah kill* as extended intransitive, and the equally common *person house go* as transitive. It would suggest that ‘go’ is more transitive than ‘kill’, which

is certainly counter-intuitive. And this also begs the question of whether an unmarked argument is somehow more 'core' than one marked by a postposition/postclitic.

Another question relates to the place in the grammar where transitivity occurs. Is it a feature of the verb itself, or of the construction in which it appears? Margetts (this volume) talks of three levels of transitivity (root, verb and clause) in Saliba-Logea. We have already seen in (1) and (2) above that in Cholim Tangsa, the simplex form (root) *doet* 'kill' cannot be treated as intrinsically transitive, but rather that whether transitivity is present or not seems to be a feature of the construction in which the verb occurs.

There is much more work to do on Cholim Tangsa, and on the many other varieties of Tangsa. In this paper we have presented data about this language and discussed the issues raised by transitivity. Future work, both detailed work on the Tangsa languages and typological overviews, will further elucidate the issues raised here.

Abbreviations (other than those in the Leipzig Glossing Rules)

A.AG	anti-agentive
AG	agent
CONT	continuous
COS	change of state
EL.BR	elder brother
EXCL	exclamation
HAB	habitual
HESIT	hesitation
HORT	hortative
LINK	linker; segments the utterance
MID	middle (voice) / reciprocal
PN	proper noun
RL	realis
SUB	subordinating morpheme <i>re</i> , a grammaticalisation of a generic auxiliary verb
TB	Tibeto-Burman
/	pause
...	section of the example has been edited out

Notes

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2. A full list of the subgroups is available at http://en.wikipedia.org/wiki/Tangsa_people, accessed 24/5/2011.
3. Word lists collected by Statezni and Nawyawahyt Ahkhi (2011) confirm that Cholim (Tawlum) in Myanmar is almost identical to Cholim in India.
4. The Cholim data are being progressively archived, with open access, in the DoBeS archive, www.mpi.nl/DoBeS. Most of the examples in this paper are taken from the *Cholim Naga Story*, a full and searchable transcription of which is available at the Tai and Tibeto-Burman Languages of Assam website, <http://sealang.net/assam>, under the name SDM12–2008Tascam-055.doc.
5. Hakhun does have a causative, written *tae-* in Hakhun orthography. We have not recorded a ‘middle’ form for Hakhun and this may be a further difference between Hakhun and Cholim.
6. Post 2007:720 does report that “highly individuated referents” can be marked with the topic marker to indicate a higher level of agentivity or volitionality.
7. The examples are presented with an orthographic version on the first line and a phonemic realisation on the second line. There are three tones in Cholim, Tone 1: a glottal tone (realised with high level pitch), Tone 2: a plain tone (realised with low falling pitch), and Tone 3: a high falling tone. The orthography is based on that used in the Joglei (Tangsa) Bible, where where *ue* stands for [u], *oe* for [y], *ã* for reduced vowels, *ch* for [tʃ], *chh* for [tʃʰ], *qh* for [x], *w* for [β], *j* for [ʒ] and *h* for final glottal stop.
8. A survey of around 2 hours of Cholim text revealed 15 examples of NP *rah pãra* and 28 examples of NP *pãra rah*.
9. The pronoun *mo* ‘2sg’ was spelled out in a subordinate clause.
10. This is not surprising because Cholim Tangsa does have some preference for iambic structures, but not as much languages like Singpho (Morey 2010). Most of the sesquisyllabic structures in Cholim are words with a transparent prefix like *rã-*, *tã* or the nominaliser *ã-*.
11. We have glossed this as ‘two’ because this is certainly the same form as the numeral for ‘two’. Some of our reviewers suggested that we should rather gloss this as a conjunction, ‘and’, homophonous with the form for ‘two’. When we have discussed this form with Cholim speakers, they translate it as ‘two’ and we would prefer to maintain the unity of this form in our glossing.
12. Line (225).
13. The demonstrative *pãra* marks the whole of the clause on the first line.

14. In our fieldwork, Singpho is the usual matrix language for translation of Cholim. It is the lingua franca around Kharang Kong, but by no means in all of all the Tangsa areas.
15. Blank spaces means no simplex verb has been recorded matching the middle form.
16. The form *rächho* is recorded with a clearly reflexive meaning in a Cholim Historical text with the meaning 'settle down, literally 'put himself down' (Text SDM12-20091226-02_SM_T_History, No 109).
17. The form *rächhoem* occurs in the *Cholim Naga Story* to refer to the division of the world between the two ancestral brothers; *chhoem* means simply 'cut', as in cutting the head off a chicken.
18. We do not have an example of this form in a text. It appears to be a kind of resultative.
19. Probably a borrowing from Singpho *lai ~ gälai* 'change'
20. This word is found in the Cholim Historical text with the meaning 'lost themselves', or 'got abandoned' (Text SDM12-20091226-02_SM_T_History, No 111).
21. The form *räthung* was only recorded when making the word list, whereas *thung* is found in several texts
22. Possible a loan word from Singpho *hten*.

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Transitivity in Murrinh-Patha

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In this paper I discuss transitivity in Murrinh-Patha, a non-Pama-Nyungan polysynthetic language from northern Australia. I survey the range of bivalent clauses in Murrinh-Patha and their morphosyntactic properties, and consider their analysis in terms of definitions of transitivity in the cross-linguistic literature. I argue that syntactic definitions of transitivity, while compatible with the Murrinh-Patha data, are empirically unrevealing since they provide little account for the varying morphosyntactic properties of different bivalent constructions. Instead, I show that the morphosyntax of bivalent constructions in Murrinh-Patha is sensitive to the semantic features of the participants, supporting a prototype approach to transitivity (such as those proposed by Hopper and Thompson 1980 and Næss 2007).

1. Introduction¹

In this paper I discuss transitivity in Murrinh-Patha, a polysynthetic language of the Northern Territory of Australia. I survey the range of bivalent clauses in Murrinh-Patha and their formal (morphosyntactic) properties, and consider their analysis in terms of definitions of transitivity in the cross-linguistic literature. Building particularly on the discussion in LaPolla (this volume), I consider two distinct, yet related questions:

- i. Are there particular constructions in Murrinh-Patha that can best be identified in terms of transitivity (however defined)?
- ii. How must the concept of transitivity be defined to best elucidate these constructions and their distinction from other (possibly bivalent) constructions in Murrinh-Patha?

Both questions are important for an empirical study of transitivity, and require both a general idea of transitivity (however it is to be defined) and an understanding of what distinctions in Murrinh-Patha are best accounted for in these terms. As a result, I will consider the two questions concurrently while outlining a range

of bivalent construction types in Murrinh-Patha. As we will see, it is not hard to identify the basic transitive construction in Murrinh-Patha as one which contains a patient/theme encoded by a direct object marker in the verb. However, these properties fail to identify *all* and *only* the transitive clauses in the language: clauses with non-human objects have patients, but no direct object marking in the verb (§5.1); clauses with impersonal subjects have direct object marking, but no agents or patients (§5.2); and semi-transitive clauses are bivalent, but have neither direct object marking nor patients (§5.4). Binary (or ‘syntactic’) definitions of transitivity are therefore less useful in describing Murrinh-Patha since there is no single construction type that corresponds to all the bivalent clauses that such an approach might consider transitive. Rather, I argue that the Murrinh-Patha data, like that of many other languages discussed in this volume and elsewhere in the literature, is more naturally explained in terms of a scalar prototype (‘semantic’) approach to transitivity, in which bivalent clauses can be described in terms of their similarity to or deviation from a transitive prototype.

In the following section I begin with a discussion of definitions of transitivity, and then provide an overview of the grammatical structure of Murrinh-Patha in §3. I then define and discuss the transitive prototype in Murrinh-Patha and its morphosyntactic properties in §4, and the various deviations from it we find in other bivalent clauses in §5, before summarising the discussion and its findings in §6.

2. Defining transitivity

There are many different definitions of transitivity in the literature, falling largely into two broad types: syntactic (or ‘formal’), and semantic.² Syntactic definitions are essentially based on the number of core arguments required by the clause — transitive clauses require two core arguments, intransitive clauses only one. More specifically, a transitive clause from this perspective is one which contains a direct object (e.g. Dixon & Aikhenvald 2000, Dixon 2010, Dryer 2007, etc.). Such an approach can be described as non-scalar (Nichols et al. 2004) since the definition is essentially binary in nature — either the clause has a direct object, and is therefore transitive, or it does not, and is intransitive. This is not to say that there can’t be more than two valence types — there may be extended transitive and intransitive clauses, for example (Dixon & Aikhenvald 2000, Dixon 2010) — but these will essentially be broadly classed as either transitive (having a direct object) or intransitive.

An alternative set of approaches takes a semantic perspective, and categorises clause types according to their closeness to or deviation from a prototypical event

type. The most influential of these approaches has been Hopper and Thompson's (1980) list of transitivity features, but other approaches in this vein include that of Givón (1995) and more recently Næss (2007). These approaches are inherently scalar since clauses can be described as more or less transitive, depending on their deviations from the transitive prototype. Næss (2007: 30) defines the prototypical transitive clause according to the Maximally Distinct Arguments Hypothesis:

- (1) THE MAXIMALLY DISTINCT ARGUMENTS HYPOTHESIS (Næss 2007: 30)
 A prototypical transitive clause is one where the two participants are **maximally semantically distinct** in terms of their roles in the event described by the clause.

The principle behind this definition is that a transitive clause is one which “describes an event which involves **two distinct, independent participants**, both in the sense that they are physically distinct and independent entities, and in the sense that their roles in the event are clearly distinct: there is only one instigating agent and only one affected “endpoint.”” (Næss 2007: 46). By ‘distinct, independent participants’ Næss is referring to participants that are both distinct from each other, and distinct from the ‘general background’ (following Kemmer 1993) (2007: 23). O arguments that are low in individuation (defined in terms of definiteness and animacy), for example, will not be as distinct from the general background as those that are animate and/or definite. Thus, following Hopper and Thompson (1980), the prototype for a transitive clause assumes a highly individuated O argument (Næss 2007: 18). Hopper and Thompson (1980) explain this in terms of the fact that the perceived effect of an action is stronger or more salient on a highly individuated entity than on an entity low in individuation. Thus, the higher the individuation of the O argument — i.e. being definite and/or animate — the closer the construction to the transitive prototype.

As Næss discusses in some detail (2007: 17ff), this makes the prototypical transitive clause distinct from the most natural or unmarked transitive clause, in which “the A is high in animacy and definiteness, and the P is lower in animacy and definiteness” (Comrie 1989: 128). Thus, markedness and prototypicality are two fundamentally different concepts. The **most natural**, or **least marked** transitive clause has the A higher in definiteness and animacy than the O; reflecting what is considered to be the typical experience for humans, where animate agents are more likely to act on inanimate entities. The **prototypical** transitive clause, on the other hand, is the one that is maximally distinct — both formally and semantically — from an intransitive clause. This is achieved by having two highly individuated participants in maximally differentiated roles.

Once the formal properties of the prototypical transitive clause have been identified for any given language, the prototype approach predicts that any clause

that is formally distinct from this prototype should also be semantically distinct. That is, if a clause deviates from the prototype formally, then it must also be one in which the two participants are not maximally semantically distinct. This may be in terms of their roles in the event, as with affected agents for example, or in their status as independent participants, as with an entity low in individuation, for example, and so forth (see Næss 2007: Ch. 3 for discussion). Conversely, the prototype model also predicts that all clauses which satisfy (1) — i.e. those which fulfil the semantic criteria for transitivity — should also be formally transitive (Næss 2007: 17).

Another point of variation in approaches to transitivity concerns the level of structure at which transitivity is considered to be relevant. Most agree that it is important to distinguish between semantic valence (sometimes also called semantic transitivity) — how many participants are “on stage” in the scene expressed by the verb (Payne 1997: 169) — from syntactic valence or (syntactic) transitivity, namely how many core arguments are required in the clause expressing the scene. It is possible for a verb to be bivalent semantically, yet appear in an intransitive clause, as a passive construction such as *The book was written (by my father)* clearly demonstrates. Van Valin and La Polla (1997) posit a three-way distinction between semantic valence, syntactic valence (or S-transitivity) and macrorole-transitivity (or M-transitivity), where the latter is defined in terms of the number of macroroles present in the clause, rather than core arguments (which is S-transitivity). Thus, a clause may have two core arguments, but only one macrorole, making it S-transitive, but M-intransitive. This is the analysis given for two-place activity predicates such as *eat spaghetti* in *Anna ate spaghetti for five minutes* (Van Valin and La Polla 1997: 148).

Margetts (1999, this volume) provides a different type of layered account, with transitivity encoded independently at three different levels of structure — root, verb and clause. The independence of encoding is evidenced by the fact that there can be mismatches between levels — i.e. an intransitive-encoded verb may appear in a transitive clause, for example.

In this paper I will discuss the range of bivalent clause types in Murrinh-Patha and how they relate to these various approaches to transitivity. For the purposes of this discussion, I will be focussed on transitivity as a clausal phenomenon in Murrinh-Patha.³ As we will see the Murrinh-Patha data supports a semantic, prototype approach to transitivity, which provides an explanatory account of the range of bivalent clauses that do not share the morphosyntactic properties of clauses expressing prototypical transitive events. Such clauses are discussed in more detail in sections §4 and §5, but first I present an overview of the complex grammatical structure of Murrinh-Patha.

3. Grammatical overview

Murrinh-Patha is a non-Pama-Nyungan, polysynthetic language spoken in and around the town of Wadeye (Port Keats), which is located approximately 400 kilometres south-west of Darwin in the Daly River region of Australia's Northern Territory. The Wadeye community numbers around 2500 people, virtually all of whom have Murrinh-Patha as their first language. It is the main language of communication in the community and is still being acquired by children as their mother tongue. In the Australian context of drastically high language endangerment, therefore, Murrinh-Patha is unusual; it is one of only a small number of Australian languages that is not yet classified as endangered according to standard measures (e.g. McConvell & Thieberger 2001, see Kelly et al. 2010 for discussion).

Early research on the languages of the Daly River region treated Murrinh-Patha as a language isolate (Tryon 1974). However, more recent comparative analysis by Green (2003) has shown it to be related to neighbouring Ngan'gityemerri (Reid 1990), forming the Southern Daly family.

Murrinh-Patha has been the subject of some previous grammatical description by Walsh (e.g. 1976a&b, 1996), Street (e.g. 1987, 1989), Blythe (e.g. 2009, 2010) and Nordlinger (2009, 2010a, b) but there are still many aspects of its complex grammatical system that remain under-described and there is as yet no comprehensive grammatical description.

Unsurprisingly for a polysynthetic language, one of the most complex aspects of the Murrinh-Patha grammar is the structure of the verbs. Murrinh-Patha, like many northern Australian languages (e.g. Wilson 1999, Schultze-Berndt 2000, McGregor 2002, Amberber et al. 2007), has a bipartite verbal system which combines one of a small closed class of classifier stems (also called 'finite verbs', 'inflecting verbs', 'auxiliaries') with one of a large class of lexical stems (often also called 'coverb') to form complex predicates.⁴ In other northern Australian languages with similar systems, these two constitute clearly distinct parts of speech: the 'finite' verb carries the inflectional morphology, and the coverb is generally uninflected (see, for example Wilson 1999, Schultze-Berndt 2000). In Murrinh-Patha, on the other hand, although clearly originating in such a system (see Blythe 2009: 138–140), the two elements are now bound within a single morphologically complex word, the verb (see also Reid 1990, 2003 for discussion of the related Ngan'gityemerri).⁵ The combination of the classifier stem (which is a portmanteau form also encoding subject person/number and tense/aspect/mood) and the lexical stem constitutes the clausal predicate (the verb), as shown in the following examples, in which the two elements of the complex predicate are given in bold:⁶

- (2) *ngay-yu ngardi-parl-dha*
 1SG-DM 1SGS.BE(4).P:IPFV-break-P:IPFV
 'I was getting firewood.' (RN 20070608-002:037)
- (3) *mi ngani-murrk-nu*
 CLF:VEG 1SGS.BE(4).FUT-eat-FUT
 'I'll eat my dinner.' (RN 20090930-002:79-84)

The combination of the two parts of the complex predicate determines the verbal argument structure and its semantics. Classifier stems and lexical stems co-vary to encode different verbal meanings, as shown by the fact that the examples above contain two different lexical stems co-occurring with the same classifier stem. The following examples demonstrate the reverse situation: the same lexical stem co-occurring with different classifier stems, in each case resulting in a different verb.⁷

- | | |
|--|---|
| <p>(4) a. <i>bangarntal</i>
 bangam-rtal
 3SGS.BASH(14).NFUT-chop
 'He chopped it (with an axe).'
 (RN 20070530-002:003)</p> | <p>b. <i>pantal</i>
 pan-rtal
 3SGS.SLASH(23).NFUT-chop
 'He sliced it (with a knife).'
 (RN 20070531-002:012)</p> |
| <p>c. <i>mungarntal</i>
 mungam-rtal
 3SGS.BREAK(11).NFUT-chop
 'He broke it with his hands.'
 (RN 20070530-002:009)</p> | <p>d. <i>darntal</i>
 dam-rtal
 3SGS.POKE(19).NFUT-chop
 'He broke it off with his mouth.'
 (RN 20070530-002:009)</p> |

Seiss and Nordlinger (2010) provide an initial analysis of the composition of verbal argument structure from the individual classifier and lexical stem components, showing the relevance of valence at the (sub-)verbal level. The complexities of the system are yet to be adequately understood (although see Reid 2000 for a detailed discussion of the related Ngan'gityemerri system), and it would take us too far beyond the discussion of clausal transitivity to discuss this issue in detail here. The essence of their analysis, however, is that the classifier stem provides the skeletal argument structure — the classifier stems in (4), for example, always construct canonical transitive clauses — while the lexical stem provides the thematic roles. A small number of classifier stems, such as BE(4), appear to be able to form both monovalent verbs (as in (6)) and bivalent verbs (as in (2), (3)), although in the latter case the objects are more likely to be less individuated or non-specific, and the verbs are therefore 'lower' in transitivity in the Hopper and Thompson (1980) sense.

Lexical stems must always occur in a complex predicate; they can never appear alone as the sole clausal predicate. This is also true for the large majority of

classifier stem paradigms: of the 38 classifier paradigms, only 11 can function as simple verbs outside of the complex predicate construction, as in the following examples.

- (5) *ngunungam-warda*
 1SGS.FEET(7).NFUT-NOW
 'I'm going now.' (RN 20070531-002:013)
- (6) *i da le patha-nu parni-nu*
 and CLF:TIME happy-FUT 3PLS.BE(4).FUT-FUT
 'and then they'll be happy' (RN 9-08TNSchool 003.012)

The semantics of the classifier paradigms is yet to be systematically described and analysed for Murrinh-Patha. Given that the overwhelming majority of classifier stems and lexical stems can only be found in combination, the task of determining their individual semantics is not straightforward. This is compounded by the fact that many combinations exhibit different degrees of lexicalisation, and some classifier paradigms are limited in their productivity. Traditionally the classifier paradigms have been glossed with numbers (e.g. Street 1987). In this paper, I attempt to attribute some general semantics to them where possible (largely based on the detailed analysis done by Reid (1990, 2000) for the related language Ngan'gityemerri), but continue to include the traditional number in the gloss for ease of comparison with other sources. It is important for the reader to remember that the semantics of these forms is indicative only, and that the semantics of the complex predicate in many cases is not transparent in the glosses of the component parts. Classifier paradigm 8, for example, appears to classify the event as one involving 'action done primarily with the hands', and is glossed in this work as HANDS(8). It is found in many combinations, however, where this meaning is not transparent in the meaning of the complex predicate, as in (7):⁸

- (7) *mam-pun-mardaraki*
 3SGS.HANDS(8).NFUT-3PLO-disappoint
 'He disappointed them(pl).' (Street & Street 1989, #mardaraki)

These classifier paradigms distinguish five major tense, aspect, mood categories (some also distinguish a sixth 'existential mood' category, see Street 1987), three basic numbers (roughly, singular, dual and plural) and four (including first inclusive) person categories for subject. For the most part, the different classifier forms are (synchronically) unanalysable portmanteau morphs, and there is a large degree of syncretism, suppletion and homophony throughout and across the 38 paradigms, meaning that most of the forms have to be learnt individually (although see Green 2003 for some diachronic analysis of their component parts).

In addition to the classifier and lexical stem, Murrinh-Patha verbs can also contain object markers, incorporated body parts, additional tense/aspect/mood specifications, additional number marking for subject and object arguments, and a range of adverbial elements. A template for the verb is given in Table 1 (see Nordlinger 2010b for arguments that this is indeed a templatic morphological system).⁹ The classifier stem and the lexical stem appear in slots 1 and 5 respectively. Object markers (provided in Table 2), appear in slot 2, with some additional object number marking possibilities in slot 8. As discussed in detail in Nordlinger (2010a, b), the dual subject number markers *-ngintha/-nintha* share slot 2 with the object markers: when there is no object marker in the verb, they appear in slot 2; when there is an object marker in the verb, they appear in slot 8. The paucal markers *-ngime/-neme* always appear in slot 8 irrespective of the presence or absence of an object marker. The other components of the verbal word are not directly relevant to the present paper, and so, in the interests of space, will not be further discussed or exemplified here.

Table 1. Murrinh-Patha verbal template

1	2	3	4	5	6	7	8	9
CS.SUBJ. TAM	SUBJ.NUM/ OBJ	RR	IBP	LEXS	TAM	ADV	SUBJ.NUM/ OBJ.NUM	ADV

Key:

CS.SUBJ.TAM: Portmanteau encoding classifier stem, subject agreement and tense/aspect/mood.

SUBJ.NUM: Subject number marker

OBJ: Object agreement marker (both direct and benefactive)

RR: Reflexive/Reciprocal marker

IBP: Incorporated body part

LEXS: Lexical stem

TAM: Tense/aspect/mood marker

ADV: Adverbial

OBJ.NUM: Object number marker

Table 2 provides a list of direct object and ‘benefactive’ markers.¹⁰

The morphosyntactic properties of roles encoded with the direct object and ‘benefactive’ markers are discussed in more detail in §5.4.

Although the classifier paradigms make a three-way number distinction (called singular, dual and plural in the above tables), the Murrinh-Patha grammatical system actually uses a four-way number system, distinguishing singular, dual, paucal (approximately 3–10) and plural. Furthermore, within the dual and paucal categories it distinguishes groups of siblings from groups containing non-siblings. These different categories are realised through the combination of the three-way number distinction in the classifier paradigms (in slot 1) and additional dual and paucal number marking, as shown in Table 3 and the following (constructed) examples. Recall that the additional dual number marking appears in slot 2 (as in 12b), unless there is an object marker present in which case it appears in slot 8. The additional paucal number marking always appears in slot 8 (as in 12d). Unlisted combinations are ungrammatical.¹⁴ This complex number marking system is discussed in more detail in Nordlinger (2010a).

Table 3. Subject number categories in the Murrinh-Patha verb

CS.SUBJ	SUBJ.NUM	SUBJECT VALUE
SINGULAR	unmarked	Singular (12a)
SINGULAR	dual (<i>ngintha</i> (f) / <i>nintha</i> (m))	Dual non-sibling (12b)
DUAL	unmarked	Dual sibling (12c)
DUAL	paucal (<i>ngime</i> (f) / <i>neme</i> (m))	Paucal non-sibling (12d)
PLURAL	unmarked	Paucal sibling / Plural (12e)

- (12) a. *bamkardu*
 bam-ngkardu
 3SS.SEE(13).NFUT-see
 ‘He/she saw him/her.’
- b. *bam-ngintha-ngkardu*
 3SS.SEE(13).NFUT-DU.F-see
 ‘They two (female non-siblings) saw him/her.’
- c. *pubamka-ngkardu*
 3DS.SEE(13).NFUT-see
 ‘They two (siblings) saw him/her.’
- d. *pubamka-ngkardu-ngime*
 3DS.SEE(13).NFUT-see-PAUC.F
 ‘They paucal (female non-siblings) saw him/her.’
- e. *pubamkardu*
 pubam-ngkardu
 3PS.SEE(13).NFUT-see
 ‘They (paucal siblings / plural) saw him/her.’

As reflected in the examples above, the basic clause in Murrinh-Patha frequently consists of a single verb, inflected with subject (and possibly object) information, as well as TAM. The following illustrate prototypical intransitive (13) and transitive (14) clauses.

- (13) *ngem-kampa*
 1SGS.SIT(1).NFUT-laugh
 ‘I’m laughing’ (RN 20091001-002:091)
- (14) *pan-ngi-bat*
 3SGS.SLASH(23).NFUT-1SGO-hit
 ‘He hit me.’ (RN 20091001-002:091)

In terms of verbal morphology, the prototypical intransitive clause contains only subject marking (13); the prototypical transitive clause contains subject and direct object marking (14).

Trivalent clauses, typified by ‘give’, contain subject and ‘benefactive’ object marking as shown in (15). The theme argument in these constructions is not encoded on the verb, but is expressed with a bare NP (or ellipsis).

- (15) *ku palyirr gathu tha-nga-mut*
 CLF:ANIM money towards 2SGS.POKE(19).FUT-1SG.BEN-give
 ‘Give me some money.’ (JB 2004-06-24JB01.txt:685)

Further discussion of these clause types will follow in the ensuing sections.

4. Transitive clauses

Transitivity is not encoded directly on verb stems in Murrinh-Patha; there is no transitivity marker, for example, to mark transitive verbs,¹⁵ nor is subject marking in the classifier paradigms sensitive to whether or not the clause is transitive or intransitive (cf. other northern Australian languages such as Bininj Gun-Wok (Evans 2003), for example). Nor have I yet been able to discern any clear syntactic indicators of transitivity. As is typical for a polysynthetic language, clauses in Murrinh-Patha regularly consist of just a single complex verb, with all argument NPs optional, and frequently omitted. There appear to be no grammatical constraints on the ordering of argument NPs (Street 1987), nor different ordering possibilities for arguments versus adjuncts (although see Walsh (1976a:280) for mention of some preferred orderings in some contexts). Furthermore, there are no formally-marked subordinating or coordinating constructions, ruling out syntactic tests for transitivity based on control, switch-reference, relativisation strategies and so forth.¹⁶

Nonetheless, it is possible to find in the corpus examples of transitive constructions with all the typical morphosyntactic correlates, including ergative case on the subject NP¹⁷ and direct object marking in the verb:

- (16) *ngay-re nhinhi ba-nhi-ngkardu-nu*
 1SG-ERG 2SG 1SG.SEE(13).FUT-2SGO-see-FUT
 ‘I will see you.’ (Walsh 1987:426)

In this section I discuss these prospective morphosyntactic correlates of transitivity and consider the extent to which they consistently identify prototypical transitive clauses; i.e. those in which the two participants are maximally individuated and distinct in their roles in the event, as defined by Næss (2007) and discussed above. The transitive prototype in Murrinh-Patha has a direct object marker in the verb, as in (17):

- (17) *pan-ngi-bat*
 3SGS.SLASH(23).NFUT-1SGO-hit
 ‘He hit me.’ (RN 20091001-002:091)

In fact, as we shall see, *only* direct object marking on the verb consistently identifies *prototypical* transitive clauses; case marking on arguments is an unreliable indicator, at best. In section §5 we consider some of the deviations from prototypical transitivity, and find that the correlation between transitivity and direct object marking in the verb begins to break down as constructions deviate from the semantic prototype.

4.1 Argument encoding on verbs

Being a polysynthetic language, core arguments in Murrinh-Patha are encoded on the verb,¹⁸ and thus the prototypical transitive clause can be identified as containing a direct object marker, as shown in (16) and (17) above, and the following:

- (18) *Thipun-ka mangan-ngi-bert*
 Thipun-FOC 3SGS.SNATCH(9).NFUT-1SGO-grab

dam-ngi-rdarrup
 3SGS.POKE(19).NFUT-1SGO-wrap
 ‘Thipun grabbed me and wrapped me up (with blankets).’ (RN 9-08
 CP-Drowning 01.060)
- (19) *thu ngu-nhi-bat-nu ngarra ngarlanan*
 CLF:WEAPON 1SGS.SLASH(23).FUT-2SGO-hit-FUT LOC ribs
 ‘I’m going to hit you in the ribs (with a weapon).’ (JBFieldnotebooks.txt)

This direct object marking in the verb is the only consistent morphosyntactic correlate of prototypical transitive events in Murrinh-Patha. Similarly, Reid (1990: 226), in his description of the related Ngan'gityemerri, states that “verbal transitivity in Ngan'gityemerri can only be formally defined in terms of the requirement that direct objects be cross-referenced within the verb under the appropriate person/number conditions.”

As indicated in the template in Table 1, direct object marking appears in the second slot of the verb. Third singular direct objects are unmarked, as shown in the contrast between (20) and (21), and in (23). Dual and paucal objects require additional number marking at the end of the verb (in slot 8), as shown in (22).

- (20) *nakurl ba-nhi-ngkardu-nu*
 later 1SGS.SEE(13).FUT-2SGO-see-FUT
 ‘I’ll see you later.’ (RN 20070607-002:022)
- (21) *nakurl ba-ngkardu-nu*
 later 1SGS.SEE(13).FUT-see-FUT
 ‘I’ll see him/her later.’ (RN 20070607-002:022)
- (22) *nakurl ba-nanku-ngkardu-nu-ngintha/ngime*
 later 1SGS.SEE(13).FUT-2DU/PCO-see-FUT-DU.F/PC.F
 ‘I’ll see you two/paucal later.’ (RN 20070607-002:022)
- (23) *panmat*
 pan-bat
 3sgS.SLASH(23).NFUT-hit
 ‘He/she hit him/her.’ (RN 20091001-002:091)

Recall from §3 that both object marking and dual subject number marking appear in the same slot in the verbal template (slot 2). When both are required in a single verb, the dual subject number marker is displaced and must appear in slot 8 instead, as shown (24a) (compare with 24b).

- (24) a. *pan-ngan-bat-ngintha*
 3SGS.SLASH(23).NFUT-1PL.EXCLO-hit-DU.F
 ‘They (two) hit us (plural).’ (RN 20091001-002:091)
- b. *pan-ngintha-bat*
 3SGS.SLASH(23).NFUT-DU.F-hit
 ‘They (two) hit him/her.’ (RN 20091001-002:091)

While direct object marking is found in prototypical transitive clauses encoding the patient, it is not restricted to this usage. In impersonal constructions (discussed in §5.2) direct object markers are used to encode experiencers. Direct object markers are also used to encode source participants in a special derived

applicative construction. This construction uses the applicative marker *-ma-* (derived from the incorporated body part meaning ‘hand’ (Nordlinger 2009)) to promote a source (25) or maleficiary (26) role to direct object. As shown by the (b) examples below, leaving the *-ma-* marker out of the verb results in a different argument structure, and no source/maleficiary argument.

- (25) a. *nganampunmakut*
 nganam-**wun**-ma-kut
 1SGS.BE(4).NFUT-3PLO-APPL-gather
 ‘I collected (the money) from them.’ (RN 20070607-002:037)
- b. *nganampunkut*
 nganam-**wun**-kut
 1SGS.BE(4).NFUT-3PLO-gather
 ?‘I collected them (i.e. people).’ (RN 20070607-002:037)
- (26) a. *nanthi truck pan-ngi-ma-bat* *thu lithpur*
 CLF:THING truck 3SGS.SLASH(23).NFUT-1SGO-APPL-hit CLF:WEAPON axe
 ‘He hit my truck with an axe.’ (RN 20080930-002:079–84)
- b. *pan-ngi-bat* *thu lithpur*
 3SGS.SLASH(23).NFUT-1SGO-hit CLF:WEAPON axe
 ‘He hit me with an axe.’ (RN 20080930-002:079–84)

The presence of the direct object marker in these source/maleficiary applied constructions argues in favour of its analysis as a marker of direct objects, rather than simply a marker of patient objects, since we find it marking objects with other types of semantic roles as well (see also §5.1).

4.2 Case on argument NPs

We have seen that the prototypical transitive clause has direct object marking on the verb. In this section we will consider whether there are case-marking properties that can likewise be correlated with prototypical transitive events.

4.2.1 Case on objects

Direct objects appear in unmarked case, as shown in many examples above and in the following:

- (27) *kardu wakal ngurdu-n-thukthuk-nu*
 CLF:HUMAN child 1SGS.SHOVE(29).NFUT-3PLO-send.RDP-FUT
ngarra da-warda
 home-NOW
 ‘I’ll send all these kids home now.’ (RN 20070608-002:037)

- (28) *mamay ngay perrkenku ba-nku-ngkardu-nu.*
 child 1SG two 1SGS.SEE(13).FUT-3DU/PCO-see-FUT
 ‘I’ll see my two kids’ (RN 20091006-002:119)

This is in contrast to other types of non-subject participants that are usually marked with dative case (as in 29), or the locative preposition *ngarra* (as in 30):

- (29) *kardu-ka pardi-na-rel-dha nukunu-nu*
 CLF:HUMAN-FOC 3PLS.BE(4).P:IPFV-3SG.M.BEN-sing-P:IPFV 3SG.M-DAT
kunginire-yu
 yesterday-DM
 ‘They were singing for him yesterday’ (Street 1987: 67)

- (30) *thu ngu-nhi-bat-nu ngarra ngarlanan*
 CLF:WEAPON 1SGS.SLASH(23).FUT-2SGO-hit-FUT LOC ribs
 ‘I’m going to hit you in the ribs (with a weapon).’ (JBFieldnotebooks.txt)

Thus, the presence of a bare NP is a possible formal correlate of prototypical transitive events: it can indicate the presence of a direct object in the clause even when there is no direct object marker in the verb (as with third singular objects), as demonstrated in the following.¹⁹

- (31) *ku were ngurdan-thukthuk=ngem ngarra da*
 CLF:ANIM dog 1SGS.SHOVE(29).NFUT-send=1SGS.SIT(1).NFUT home
 ‘I’m sending the dogs home.’ (Blythe 2009: 142, 6.67)
- (32) *mi lawam ban-pak ngarra thay*
 CLF:VEG flour 1SGS.17.NFUT-put.down LOC CLF:TREE
 ‘I put the flour by the tree.’ (Street 1987: 65)

However, while direct object NPs are necessarily unmarked, not all unmarked non-subject NPs can be treated as direct objects. In fact, Murrinh-Patha allows the use of unmarked NPs in a variety of functions including those that are neither subjects nor objects. In (33) the instrumental NP *thu lithpurr* appears unmarked, as does the ‘with’ NP in (34), although there is no reason to treat either of these as direct objects.

- (33) *nanthi truck pan-ngi-ma-bat thu lithpurr*
 CLF:THING truck 3SGS.SLASH(23).NFUT-1SGO-APPL-hit CLF:WEAPON axe
 ‘He hit my truck with an axe.’ (RN 20080930-002:079–84)
- (34) *pumam-ngan-manpi kardu kunuwunu pangu*
 3PLS.HANDS(8).NFUT-1PLEXCLO-help CLF:HUMAN old.women DIST

Thus, in the vast majority of prototypical transitive clauses in the corpus with overt subject NPs, the subject NP is not marked with ergative case. In each of the examples below, there is a direct object encoded on the verb, marking the clause as transitive, and yet no ergative case on the subject NPs (given in bold).

- (38) *Thipun-ka mangan-ngi-bert dam-ngi-rdarrup*
 Thipun-FOC 3SGS.SNATCH(9).NFUT-1SGO-grab 3SGS.POKE(19).NFUT-1SGO-wrap
 ‘Thipun grabbed me and wrapped me up (with blankets).’ (RN 9-08
 CP-Drowning 01.060)
- (39) *nhinhi damatha thurdan-ngi-yethith=thanam*
 2SG JUST 2SGS.SHOVE(29).NFUT-1SGO-teach=2SGS.BE(4).NFUT
murrinh kanhi-yu
 CLF:LANG this-DM
 ‘You’re the one teaching this language to me.’ (RN 20091006-002:119)
- (40) *dempunmanham ku pussycat wakal*
 dem-wun-ma-nham ku pussycat wakal
 3SGS.POKE:RR(21).NFUT-3PLO-APPL-fear CLF:ANIM small
 ‘The little pussycat is frightened of them.’ (RN 20091002-002:112)²²

Furthermore, unsurprisingly for a language with ‘agentive’ marking, this marker is also used to mark inanimate agentive NPs in cases where the clause isn’t clearly transitive. In (41), for example, the verb is apparently not transitive since the beneficiary/goal is encoded with the ‘benefactive’ marker and not the direct object series (see §5.4 below for further discussion), yet the inanimate subject NP is marked with the agentive marker:²³

- (41) *ngarra nanthi truck-te pana punu-nga-nu*
 LOC CLF:THING truck-AGT there 3SGS.FEET(7).FUT-1SG.BEN-FUT
 ‘when that truck will come for me...’ (RN 9-08TN-School 003.022)

And in other examples, the marker is used to mark instruments in clearly intransitive clauses:

- (42) *Ngay-ka ngurrini-dha kanhi nanthi truck-te*
 1SG-FOC 1SGS.GO(6).P:IPFV-P:IPFV here CLF:THING truck-AGT
 ‘I came here by truck.’ (Street 1987:66)

The presence or absence of the agentive marker (aka ‘ergative’ case) cannot, therefore, be used as a reliable marker of transitivity (prototypical or otherwise), since its appearance is conditioned by other factors, such as the pragmatics of the clause, the presence of inanimate agents, its use to encode instruments, and so forth.

In sum, the prototypical transitive clause in Murrinh-Patha has direct object marking in the verb (unmarked for third singular objects), which can be doubled by an overt NP in unmarked case. In the following sections we will examine other bivalent clause types in Murrinh-Patha that deviate from this prototype in various ways.

5. Deviations from the transitive prototype

There are a number of clause types that have properties in common with the transitive prototype discussed above, but which deviate from it in different ways. As discussed in §1, this is exactly what is expected on a prototype model, providing that the deviations in formal properties also correspond to deviations in semantics (see Næss 2007: Chap. 3). In this section I will discuss a number of different clause types that deviate semantically from this prototype, each with corresponding formal differences from the transitive clauses discussed above: clauses with non-human objects (§5.1); clauses with impersonal subjects (§5.2); reflexive/reciprocal clauses (§5.3) and clauses with non-patient objects (§5.4). In §5.4 I also discuss ditransitive clauses, which may not directly relate to the transitive prototype (see Næss (2007:215ff) for a discussion of ditransitive prototypes), but which are nonetheless relevant in this context, and which relate to the discussion of clauses with non-patient objects.

5.1 Clauses with non-human objects

In §4 we saw that third person *singular* direct objects are unmarked in the verb in a prototypical transitive clause. In fact, non-human objects are generally not marked at all on the verb, even when they are non-singular.²⁴ Consider the contrast between (43) and (44). In (43) the verb has a plural third person (human) object, which is cross-referenced on the verb. In (44), with a third person non-human object, there is no object marking despite the fact that the object is plural in number. Note that an overt NP expressing the patient appears in unmarked case, however, suggesting that it is still a direct object despite the fact that it is not encoded as such morphologically.

- (43) *kardu wakal ngurdu-n-thukthuk-nu*
 CLF:HUMAN child 1SGS.SHOVE(29).NFUT-3PLO-send.RDP-FUT
ngarra da-warda
 home-NOW
 ‘I’ll send all these kids home now.’ (RN 20070608-002:037)

- (44) *ku were ngurdan-thukthuk=ngem ngarra da*
 CLF:ANIM dog 1SGS.SHOVE(29).NFUT-send=1SGS.SIT(1).NFUT home
 ‘I’m sending the dogs home.’ (Blythe 2009: 142, 6.67)

These clauses deviate formally from the prototypical transitive clauses discussed in §4 in that they contain direct objects which are not encoded with a direct object marker (and are not third person singular). This is accounted for on the prototype model in terms of individuation, which is defined in terms of properties such as animacy and definiteness (Næss 2007: 17). Since non-human participants are lower in animacy, and therefore less individuated than human patients (e.g. Hopper and Thompson 1980, Næss 2007), these clauses do not conform fully with the transitive prototype, which involves two highly individuated participants. It is therefore unsurprising (and indeed, rather typical for languages in both northern Australia and elsewhere) to find that these clause types also deviate formally from the prototypical transitive clause in eschewing direct object marking on the verb.

5.2 Clauses with impersonal subjects

As discussed in detail by Walsh (1987), Murrinh-Patha has a range of ‘impersonal verb’ constructions which deviate semantically from the transitive prototype in having experiencer objects and dummy or inanimate subjects.²⁵ Consider the following examples.

- (45) *mam-ngi-me=dim*²⁶
 3SGS.DO(34).NFUT-1SGO-foot=3SGS.SIT(1).NFUT
 ‘My foot has gone to sleep.’ (RN 20090930-002:079–84)
- (46) *mam-ngi-ngkawurl*
 3SGS.DO(34).NFUT-1SGO-have.headache
 ‘I have a headache.’ (Walsh 1987: 436)
- (47) *pa-ngi-we-rttert-nu*
 3SGS.POKE(19).FUT-1SGO-hair-touch.lightly-FUT
 ‘My hair will be ruffled.’ (lit. ‘It (the wind?) will ruffle my hair.’) (Walsh 1987: 428)

In these examples, the animate participant — the experiencer — is encoded with a direct object marker and the subject is third person singular. In the case of (47) we can assume an implicit inanimate agent, such as the wind (Walsh 1987: 428), which could even be expressed with an overt NP. In constructions such as (45) and (46), however, there is no implicit agent — these are simply dummy subjects and there is no possibility of a coreferential overt NP. Walsh refers to these two construction types as ‘Impersonals’ (45, 46) and ‘Implicit Inanimate Agent’ (47).

These clause types are structurally identical to the prototypical transitive clauses discussed in §4,²⁷ despite the fact that they are differentiated from the transitive prototype semantically: the ‘agents’ are not highly individuated, nor volitional ‘instigators’, and in the case of the Impersonals (e.g. 45, 46) there are not even two semantic participants. These clauses, therefore, weaken the correlation between direct object markers and prototypical transitive events, since here we find direct object markers used in constructions that do not conform to the semantic prototype.

While they share the property of containing direct object markers, there is a degree of formal variation with some of the ‘Impersonal’ constructions, which may be accounted for in terms of their semantic deviation from the transitive prototype, as we shall now see.

Murrinh-Patha has an auxiliary construction used to encode imperfective aspect. In this construction one of a small set of classifier stems is encliticised to the end of the main verb, agreeing with the subject in person, number and tense/aspect/mood:

- (48) *mi pantartal=dim*
mi pan-rartal=dim
 CLF:VEG 3SGS.SLASH(23).NFUT-cut.RDP=3SGS.SIT(1).NFUT
 ‘She’s slicing the carrots (with a knife).’ (RN 20070530-002:004)

Interestingly, we find variation in the data as to the form that this auxiliary takes with ‘Impersonal’ constructions. While it agrees with the dummy subject as expected in some examples (such as 49), in others the encliticised auxiliary agrees with the object-marked argument — the experiencer — instead, as shown in (50).²⁸

- (49) *mam-ngi-ngkawurl=dim*
 3SGS.HANDS(8).NFUT-1SGO-have.headache=3SGS.SIT(1).NFUT
 ‘I’ve got a headache.’ (JB 2004-07-04JB01.txt)
- (50) *dem-ngi-ralal=ngurran*
 3SGS.POKE:RR(21).NFUT-1SGO-thirsty=1SS.GO(6).NFUT
 ‘I’m thirsty.’ (RN 20070607-002:021)

Nordlinger (2010a) discusses these constructions in more detail, but for our present purposes it is clear that such formal variation may relate to the fact that these clauses are not prototypically transitive despite the direct object marking in the verb.

5.3 Reflexive/reciprocal clauses

Reflexive/reciprocal clauses differ semantically from the transitive prototype since the participants involved are not distinct, independent participants (in the case of reflexives) and their roles in the event are not clearly distinct (in the case of reciprocals). Correspondingly, these clause types do not contain direct object markers in Murrinh-Patha, and are usually signaled with a change in classifier stem as shown in the examples below. There is a systematic relationship between pairs of classifier stems: a verb formed with the classifier ‘do with HANDS(8)’, for example, forms its reflexive/reciprocal equivalent with classifier 10, as shown in (51). Verbs containing classifier ‘BASH(14)’ on the other hand, form reflexive/reciprocal equivalents with classifier 15, as shown in (52).

- (51) a. *mi mam-nhet*
 CLF:VEG 3SGS.HANDS(8).NFUT-slice.into
 ‘He cut the food.’ (RN 20070530-002:004)
- b. *mangi memanhet*
mangi mem-ma-nhet
 hand 3sgS.HANDS:RR(10).NFUT-hand-slice.into
 ‘He cut his hand.’ (RN 20070530-002:004)
- (52) a. *bangam-ngintha-mardabi*
 3SGS.BASH(14).NFUT-DU.F-meet
 ‘They two met him.’ (RN 20050711-001:017)
- b. *bem-ngintha-mardabi*
 3SGS.BASH:RR(15).NFUT-DU.F-meet
 ‘They two met each other.’ (RN 20050711-001:017)

There is also a separate reflexive/reciprocal marker that can optionally appear in addition to the change in classifier, as shown in (53), with no apparent change in meaning. Some classifier stems have no reflexive/reciprocal equivalent, in which case the RR marker alone encodes the reflexive/reciprocal construction, as in (54):²⁹

- (53) a. *pan-thuk*
 3SGS.SLASH(23).NFUT-hit
 ‘He hit (the bull).’ (Street & Street 1989 #thuk)
- b. *pam-nintha-thuk*
 3SGS.SLASH:RR(24).NFUT-DU.M-hit
 ‘They two fought each other.’ (RN 20050711-001:007)
- c. *pam-ngintha-nu-thuk*
 3SGS.SLASH:RR(24).NFUT-DU.F-RR-hit
 ‘They two fought each other.’ (RN 20050719-001:079)

- (54) a. *nungarntirda*
 nungam-rirda
 3SGS.FEET(7).NFUT-push
 ‘He kicked him.’ (RN 20070531-002:012)
- b. *nungam-ngintha-nu-rirda=pirrim*
 3SGS.FEET(7).NFUT-DU.F-RR-push=3SGS.STAND(3).NFUT
 ‘They kicked each other.’ (RN 20070531-002:012)

Thus, reflexive/reciprocal constructions differ structurally from prototypical transitive clauses in that they never contain a direct object marker, and may optionally contain the RR marker *-nu-* following the subject number marker (in slot 3). This structural difference reflects the fact that they are not prototypical transitive events semantically since their participants are not sufficiently distinct and/or do not play clearly distinct roles in the event.

5.4 Ditransitive clauses and non-patient ‘objects’

As discussed in §4 above, the prototypical transitive clause has direct object marking in the verb which, usually, marks a patient. As shown in §3, there is a second set of object markers, referred to here as ‘benefactive’ markers, which encode animate non-patients, such as recipients, beneficiaries and goals. These ‘benefactive’ markers compete with direct object markers for the second slot in the verbal template, thus it is not possible for both object markers to co-occur in the verbal word. ‘Benefactive’ markers are found in ditransitive clauses; these differ from transitive clauses in having a benefactive object (marked in the verb) and a theme argument usually expressed with a bare NP (or ellipsed) as shown in the following examples.

- (55) *ku palyirr gathu tha-nga-mut*
 CLF:ANIM stone towards 2SGS.POKE(19).FUT-1SG.BEN-give
 ‘Give me some money.’ (JB 2004-06-24JB01.txt:685)
- (56) *parram-na-mut kardu numi*
 3PLS.POKE(19).NFUT-3SG.M.BEN-give CLF:HUMAN one
 ‘They gave them to one person.’ (RN 20050715-001:065)

‘Benefactive’ markers are also found with semi-transitive verbs, such as those in (57–59),³⁰ such verbs are bivalent, but deviate from the transitive prototype in that the second argument is not an affected end-point.

- (57) *bath ma-mpa-ngka-nu*
 wait 1SGS.HANDS(8).FUT-2SG.BEN-wait-FUT
 ‘I’ll wait for you.’ (JBFieldnotebooks.txt)

- (64) a. *pan-ngi-bat*
 3SGS.SLASH(23).NFUT-1SGO-hit
 He hit me.' (RN 20091001-002:091)
- b. *thu puy-nintha-bat-nu*
 CLF:WEAPON 3SGS.SLASH:RR(24).FUT-DU.M-hit-FUT
 'They (two) are going to hit each other (with a weapon).' (RN 20091001-002:091)
- (65) *nanthi perrem-mutmut=parnam*³¹
 CLF:THING 3PLS.POKE:RR(21).NFUT-give=3PLS.BE(4).NFUT
 'They're giving things to each other.' (RN 20050711-001:010)
- (66) *thubem-nu-ngkarnin=thim*
 1INCLS.BASH:RR(15).NFUT-RR-think=1INCLS.SIT(1).NFUT
 'We're thinking about each other.' (RN 20050721-001:101)

Thus, it appears that arguments encoded with either the direct object markers or the 'benefactive' markers may share the same morphosyntactic properties, at least with respect to case marking and reflexive/reciprocal constructions. Interestingly, however, these same properties *do* show a distinction between 'benefactive' arguments and 'benefactive' adjuncts: while the vast majority of examples in the corpus containing NPs cross-referenced with a 'benefactive' marker appear in unmarked case, a few are found occurring in *ngarra*-PP phrases (67) or marked with the dative case (68). In all of these cases, however, the 'benefactive'-marked participant appears to be an adjunct, rather than a core argument (i.e. it is not inherent to the meaning of the verb).³²

- (67) *ngurdu-na-ngkarl-nu ngarra pule ngala*
 1SGS.SHOVE(29).FUT-3SG.M.BEN-take.something-FUT LOC boss big

ngarra murrinh court-nukun
 LOC CLF:LANG COURT-DAT
 '(I will take the words that you tell me and then) I will tell them to the big boss for the court.' (Ford & McCormack 2007, #appear for)
- (68) *kardu-ka pardi-na-rel-dha nukunu-nu*
 CLF:HUMAN-FOC 3PLS.BE(4).P:IPFV-3SG.M.BEN-sing-P:IPFV 3SG.M-DAT

kunginire-yu
 yesterday-DM
 'They were singing for him yesterday.' (Street 1987: 67)

It appears also that adjuncts encoded with the 'benefactive' marker are unable to feed the reflexive/reciprocal construction, as shown in (69c):³³

- (69) a. *ngina-thi-nu*
 1SGS.HEAT(27).FUT-cook-FUT
 'I'll cook it.' (RN 20070608-002:042)
- b. *ngina-mpa-thi-nu*
 1SGS.HEAT(27).FUT-2SG.BEN-cook-FUT
 'I'll cook it for you.' (RN 20070608-002:042)
- c. ??*pina-nu-thi-nu*
 1INCLS.HEAT(27).FUT-RR-cook-FUT
 Attempted: 'We cooked it for each other.' (RN 20070608-002:042)
 This can only mean: 'We cooked each other/ourselves.'

Thus, while case marking and the morphosyntactic process of reflexive/reciprocal formation appear to distinguish between arguments and adjuncts marked with the 'benefactive' marker, these same morphosyntactic properties fail to distinguish between *arguments* marked with the 'benefactive' markers and those marked as direct objects.

It appears, then, that the non-subject marking in the verb is not encoding grammatical function, but is sensitive primarily to the semantic role of the participant. Patients/themes are encoded with the 'direct object' marker, while benefactives, recipients and goals are encoded with the 'benefactive' marker. This difference in encoding does not necessarily reflect a difference in grammatical function, and in fact it is difficult to find any other morphosyntactic properties which would consistently show the patients/themes on the one hand to be direct objects, and the benefactives/recipients/goals on the other hand to be something else. It may be, in fact, that both clause types are transitive to some extent; the difference in object marking arises from the fact that the benefactive/recipient/goal objects are not affected end-points, and so these clauses encode less prototypically transitive events than do those with patient/theme objects.

6. Conclusion

Prototypical transitive events in Murrinh-Patha can be identified as those encoded with direct object marking in the verb. However, as we have seen, this direct object marking is neither a necessary nor a sufficient condition for identifying the full range of transitive clause types: transitive clauses with non-human objects, for example, do not contain direct object markers, while they are present in impersonal constructions with dummy subjects, which are not clearly transitive. Moreover, clauses with non-patient objects contain a different set of object markers — the 'benefactive' markers — yet there are no clear morphosyntactic tests to distinguish

the grammatical function of these arguments from those encoded with the direct object markers. Rather, the morphosyntax of Murrinh-Patha appears to be sensitive primarily to the semantic role of the (non-subject) clausal participants, rather than to grammatical function: patient/theme, experiencer and source objects are encoded with the direct object marker, and benefactive/recipient/goal objects are encoded with the 'benefactive' markers.

In this paper I have argued that a semantic approach to transitivity — one which appeals to a notion of prototype — can provide an explanatory account of the Murrinh-Patha facts. Prototypical transitive events are identified as those which contain direct object marking for patient/themes, and deviations from this construction type can be explained in terms of deviation from the semantics of the prototypical transitive event. Non-human objects are less individuated, accounting for the fact that they are not marked as in prototypical transitive clause types. Non-patient objects are not affected end-points like patient/theme objects are, which accounts for the use of a different set of object markers.

This approach, unlike a syntactic approach to transitivity, does not require us to draw a binary distinction between transitive clauses on the one hand, and intransitive clauses on the other. Such a distinction falls down in Murrinh-Patha since it is not clear which morphosyntactic criteria could be called upon to categorise clause types according to such a binary distinction. Would clauses having non-patient objects be transitive or intransitive? As implicit in the arguments provided in §5.4, the decision would be largely arbitrary since it is hard to find any conclusive morphosyntactic arguments that would clearly show one to be transitive and the other to be intransitive. In both clause types the non-subject argument exhibits the same morphosyntactic behaviour, apart from the difference in verbal morphology driven by the different thematic role. On a semantic prototype account, such questions do not arise. Transitivity is instead a scalar property according to which clauses with patient/theme objects are simply 'more' transitive than those with non-patient objects, while the latter are 'more' transitive than those without objects at all.

In this paper, I have shown that a full and explanatory account of the morphosyntax of bivalent clauses in Murrinh-Patha can only be achieved through consideration of the semantic properties and thematic roles of the participants, and their relationship to those of prototypical transitive events. This analysis of Murrinh-Patha reflects that of other languages of its immediate region (e.g. Marrithiyel (Green 1989), Ngan'gityemerri (Reid 1990)), and many others discussed in this volume, and provides another exemplar for the long-held view that transitivity is a substantially more complex notion than the purely syntactic definitions suggest.

Notes

1. I wish to extend my heartfelt gratitude to the Murrinh-Patha speakers who have so patiently taught me their language, especially Carmelita Perdijert, Norma Kulumboort, Bonaventure Ngarri and Theodora Narndu. Thanks also to Joe Blythe, Mark Crocombe, Ian Green and Nick Reid, for valuable input and assistance in my long, slow journey into the intricacies of Murrinh-Patha structure, and particularly to Joe Blythe for providing access to his unpublished data and comments on a previous version of this paper. I am also grateful to František Kratochvíl, Alec Coupe, Randy LaPolla and two anonymous reviewers who suggested many helpful improvements to an earlier version of this paper. Funding for my research on Murrinh-Patha has been provided by the Arts Faculty at the University of Melbourne, and the Australian Research Council (DP0343354 *Reciprocals across languages* (N Evans, R Nordlinger, S Levinson and U Zeshan) and DP0984419 *Doing great things with small languages* (N Thieberger and R Nordlinger)). The data in this paper comes from a variety of sources. Data from published sources is referenced as such. Data from Lyn and Chester Street's (1989) electronic dictionary is referenced as Street & Street (1989), with the head word for the entry from which the example was taken preceded by #. Data marked JB comes from Joe Blythe's unpublished corpus, which he has graciously made available to me, and examples marked RN come from my own corpus collected in Wadeye between 2005–2010.
2. Kittilä (2011) also discusses a third pragmatic type of transitivity — transitivity in discourse — but this will not concern us here.
3. This is not to suggest that there aren't interesting issues of valence operating at other levels of Murrinh-Patha grammar as well, as suggested by Seiss & Nordlinger (2010) for the formation of complex predicates. Work on the details of such complex predicate formation is still in progress for Murrinh-Patha, but is briefly discussed in §3.
4. Current analyses identify 38 classifier paradigms, but many of the paradigms are similar in form, and some are very rare, making it hard to establish a definite number. Walsh (1976a) lists 33 paradigms, while Street (1987) lists 36 (although some of those listed in Walsh are not included in Street's list, and vice versa). Blythe et al. (2007) reconcile these two sources to arrive at 38. Traditionally these classifier paradigms have been glossed with numbers (in lieu of a detailed analysis of their semantics). This number is included in glosses in this paper, in addition to a semantic gloss wherever possible.
5. Unlike many other northern Australian languages with similar verbal systems (see, for example McGregor 2002), in Murrinh-Patha and other languages of the Daly River region, the two parts of the complex predicate form a single word from all perspectives: phonological, morphological, distributional, etc.
6. The following abbreviations are used in examples (these follow the standard conventions of the Leipzig glossing rules wherever possible): APPL 'applicative', BEN 'benefactive', CLF:ANIM 'noun classifier, animates', CLF:HUMAN 'noun classifier, humans', CLF:LANG 'noun classifier, language', CLF:SPEAR 'noun classifier, spears', CLF:THING 'noun classifier, neuter/residue class', CLF:TIME 'noun classifier, times and places', CLF:TREE 'noun classifier, trees', CLF:VEG 'noun classifier, non-meat food', CLF:WEAPON 'noun classifier, weapons', DAT 'dative case', DIST 'distal marker', DM 'discourse marker', DU 'dual', EMPH 'emphatic marker', ERG 'ergative case', EXCL 'exclusive',

F 'female', FOC 'focus marker', FUT 'future tense', INCL 'inclusive', LOC 'locative', M 'male', NFUT 'non-future tense', NOM 'nominative case', O 'object', P:IPFV 'past imperfective', PC 'paucal', PL 'plural', RDP 'reduplicated', RR 'reflexive/reciprocal', S 'subject', SG 'singular'. Additional abbreviations are used in the description of the verbal template in Table 1 and are explained in the key provided there.

7. In these, and many other examples in this paper, morphophonemic processes have affected the surface form of the verbs (see Street 1987 for details). Thus, I include two lines of Murrinh-Patha text: the first line represents the surface form, and the second line represents the underlying morphological constituency.

8. The semantic glosses used in this paper for classifier paradigms, along with explanations for those cases where the gloss may not be transparent, are as follows: BASH(14) (prototypically classifies events enacted with vertical trajectory and blunt contact), BE(4), BREAK(11) (prototypically classifies events that involve breaking with the hands), DO(34), FEET(7) (prototypically classifies events enacted with the feet), GO(6), HANDS(8) (prototypically classifies events enacted with the hands), HEAT(27) (prototypically classifies events that involve the application of heat), POKE(19) (prototypically classifies events enacted with the point end of a long thin instrument), SEE(13), SHOVE(29) (prototypically classifies events in which an agent causes something else to move), SIT(1), SLASH(23) (prototypically classifies events enacted with the long thin edge of an instrument in a slicing motion), SNATCH(9) (prototypically classifies events that involve acquiring things), STAND(3), TAKE(22).

9. In a few examples it appears that there may be an additional reflexive/reciprocal slot between the classifier stem and the subject number marker (i.e. between slots 1 and 2 in this template) (Blythe 2009) since some verbs appear to have a repetition of the RR marker, both before and after the subject number marker:

- (i) *thamul nungam-nu-nintha-nu-birr*
 CLF:SPEAR 3SGS.FEET(7).NFUT-RR-DU.M-RR-shoot
 'The two men shot at each other.' (Joe Blythe, pers. comm)

Since they are not directly related to the topic of this paper, I will leave discussion of such examples aside.

10. In previous work I have referred to these 'benefactive' markers as 'indirect object' markers. However, as discussed in §5.4 below, they are used both for indirect objects and for benefactive/recipient/goal adjuncts and so their presence seems conditioned more by thematic role than grammatical function, hence the change in terminology (cf. Green 1989 who uses 'goal' for the equivalent in the neighbouring Marrithiyel language). Since they encode a range of thematic roles, including beneficiaries, recipients and animate goals, I use 'scare quotes' around the label here to remind the reader that benefactive marking is not their only function. A reviewer points out that it is odd to term the other set 'direct' object markers, when there are no 'indirect' object markers to contrast them with. I have retained this nomenclature, however, since this set of object markers does not correspond so neatly to a defined set of semantic roles, covering patient, theme, experiencer, source, etc. as discussed in §4.

11. Although the 'benefactive' markers do not solely mark (types of) objects (see the discussion in §5.4 below), they occur in the same slot in the template as direct object markers, and share

the same number marking properties, and so I use ‘object markers’ as a cover term for both types where required.

12. In this and other examples taken from Joe Blythe’s work, I have changed the orthography to be consistent with the community-preferred orthography used in the rest of this paper.

13. It is very difficult in Murrinh-Patha to distinguish adjuncts from other types of (non-core) arguments, especially, as with the benefactive/goals discussed here, when they can be encoded on the verb identically to arguments. For the purposes of this paper, I largely use semantic criteria such that, if the verb regularly occurs without the benefactive/goal, and if the beneficiary/goal is not inherent to the meaning of the verb, then I treat it as an adjunct. It may be that Murrinh-Patha is not a language in which the distinction between adjuncts and arguments is particularly important for the grammatical system.

14. See Blythe (2010) for detailed discussion of how this number/sibling system may have arisen historically.

15. Although, even in languages that do have transitivity markers, defining transitivity may still be problematic — see Bower (2008) for discussion.

16. Walsh (1976a) discusses relative clauses, which are essentially regular finite clauses embedded into NPs. Unfortunately, my data provides no examples of these constructions, and Walsh does not discuss any restrictions on their occurrence that would relate to diagnostics for transitivity.

17. Although, in fact, I will argue in §4.2 below that this is no longer a true ergative case.

18. In the literature on Australian languages, and polysynthetic languages more broadly, much discussion has centred around the analysis of argument markers in the verb, and whether they should be treated as pronominal arguments or as agreement markers (see, for example, Jelinek 1984, Austin & Bresnan 1996, Baker 1996, Nordlinger 1998, Evans 2002, Baker 2002, Pensalfini 2004). In the former case, overt coreferential NPs are treated as associated adjuncts, while in the latter case, such NPs would be treated as the ‘real’ arguments with which the verbal markers agree. The perspective I take, following the approach within Lexical-Functional Grammar (e.g. Austin & Bresnan 1996, Nordlinger 1998), is that such verbal markers can have dual functions. When there is no coreferential NP present, the verbal marker functions as a pronominal argument; when there is a coreferential NP present, then it functions as an agreement marker (see Austin & Bresnan 1996 for detailed discussion of this type of analysis for the Australian language Warlpiri). I therefore use both ‘verbal agreement’ and ‘cross-referencing’ interchangeably to refer to this system, since either may apply depending on the clausal context.

19. Example (31) exemplifies an imperfective aspect construction, in which one of a set of classifier stems (here =*ngem*) is serialised to the end of the main verb to encode imperfective aspect. In this case, the second classifier stem must agree with the main verb in subject person and number features, and in TAM.

20. This phenomenon has been termed ‘optional ergativity’ in recent work, see McGregor (2010) and other papers in the recent special issue of *Lingua* (Optional Ergative Marking), Volume 120(7), 2010.

21. As is typical for ergative markers in Australian languages, and elsewhere, this marker is also used to mark instruments, see (42) below.
22. Note that the direct object in this example is licensed by the applicative marker, see §4.1 for discussion.
23. It is logically possible that this could be interpreted as the instrumental use here — i.e. ‘he/she will come for me with the truck’ — however, the English translation is the one provided by the speaker herself, so the agentive use appears more likely.
24. Such ‘differential object marking’ patterns are very common cross-linguistically, see for example Aissen (2003) and Næss (2007) for discussion.
25. In discussions of similar constructions in other languages, these sorts of constructions have been referred to as ‘experiencer object’ constructions, e.g. Evans (2004).
26. This verb contains an incorporated body part *-me-* ‘foot’, and a serialised auxiliary (=dim) marking imperfective aspect. As is common in incorporation constructions cross-linguistically, incorporated body parts are never transitive subjects, and thus the literal interpretation of this clause is something like ‘It is doing me foot-wise’ rather than ‘The foot is doing me’.
27. Although the subject marking is restricted since only third singular subjects are possible.
28. This agreement pattern is not accepted by all speakers, and may reflect a change in progress in the language. There are sufficient examples in both my corpus and in the literature (e.g. Walsh 1996), however, to show that it is not simply speaker error.
29. There are also many lexicalised examples of verbs containing reflexive/reciprocal classifier stems without there being a transitive equivalent, as in (ii), and (59) below:
- (ii) *benthattak*
 bem-dhattak
 3SGS.BASH:RR(15).NFUT-chatter
 ‘He’s chattering.’ (Street & Street 1989, #dhattak)
30. Note that (59) contains a verb that is a lexicalised reflexive/reciprocal construction; there is no transitive equivalent. This is further evidenced by the fact that the separate RR marker is required to mark a reciprocal ‘thinking about’ event, as shown in (66).
31. The reduplication of the lexical stem here (i.e. *mutmut* as opposed to *mut* in (60)) marks the existence of multiple objects being given (e.g. Street 1980).
32. Distinguishing adjuncts from arguments in a language that regularly allows omission of NPs is notoriously slippery. The verbs in these examples regularly appear without ‘benefactive’ marking, and it is possible to describe the meaning of the verbs without reference to a benefactive argument. Thus, it appears reasonable to consider the benefactive participants to be adjuncts, given that they also exhibit different morphosyntactic behaviours from benefactive arguments, as this discussion shows.
33. A caveat is in order here: I have not yet done extensive testing of ‘benefactive’-marked adjuncts to determine conclusively that none of them can feed reflexive/reciprocal constructions. It is possible that (69c) is in fact ruled out on semantic grounds (i.e. the preferred interpretation

would give ‘we are cooking each other’), but that other ‘benefactive’-marked adjuncts can be reciprocals in cases where there is no such ambiguity. Further research is required.

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