

## Grammatical Relations in Katukina-Kanamari

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Katukina-Kanamari, possibly the only extant language of the Katukina family, features ergative alignment both in morphology and syntax. The paper is devoted to the description of the various domains of grammar where ergativity is present, as well as of a functionally conditioned accusative pattern. The main aim is to show, on the basis of empirical data, that on the formal side a syntactically ergative language can be quite isomorphic with an accusative language, the main differences being the always present split of transitivity in ergative languages and the interface between semantics and morphosyntax: the mapping of semantic roles onto grammatical relations is inverted between ergative and accusative systems, not only in the structure of the basic clause but also in valence changing processes.

### 0 Introduction

Katukina-Kanamari, or, more briefly, Katukina, belongs to the Katukina family of languages spoken in the state of Amazonas, Brazil, by approximately 2000 people between the rivers Purus and Javari. It comprises two dialects, Katukina, present on the river Bia, a tributary of the Jutai, which is itself a southern tributary of the middle Amazon or Solimões, and Kanamari, present in the rest of the area mentioned. It is a comparatively isolating language, head final, with sparse flexional morphology basically located in phrase heads, and strong constituency properties. Its predominant alignment type is ergative, at the morphological and, for the most part, at the syntactic level.

Finite clauses include verb predicates, saturated for their valence, and a variety of possible — not necessarily present — aspect-modality particles.<sup>2</sup> There are no more than two core arguments in verbal clauses. Aside from the verb for 'say', trivalent verbs do not seem to exist, since no clear formal device distinguishes what would be a third core argument — semantically recipient — from adjuncts. The subclass of divalent verbs requires two arguments; for strictly heuristic purposes, on an intuitive, prototype-semantics basis, I call

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<sup>2</sup> These are much less frequent in actual discourse in the Bia dialect, compared with the Kanamari dialect.

these *agent* and *patient*. The subclass of monovalent verbs only combines with one argument, which I call S.<sup>3</sup> Divalent verbs appear in two clause types, an ergative with its patient aligned with S, and an accusative with its agent aligned with S.

The article is organized in the following manner. I first present the basic properties of arguments, highlighting the differential treatments morphosyntax imposes on two-place verb arguments, which show a clear hierarchy between them. After having drawn preliminary conclusions about what this hierarchy means for grammatical relations, I proceed to observe several other phenomena that seem to weaken these conclusions. The last part of the paper is devoted to an attempt to account for the divergent patterns by including diachronic considerations in the overall picture.

## 1 Coding

In a divalent clause, the agent, obligatorily in pre-verbal position, is case marked, the patient being unmarked and typically post-verbal (1). In a monovalent clause, S is typically post-verbal and unmarked (2), aligning with the **paiko** argument of (1).

(1)<sup>ITQ</sup> **pi:da**      **na=ti**      **paiko**  
           jaguar      MKCASE=kill      grandfather  
           'The jaguar killed grandfather'<sup>4</sup>

<sup>3</sup> There is, in my view, something misleading in the use of pairs of symbols like *A/O*, *A/P*, and *x/y*, which are somewhat semantically based, somewhat formally based. In practice they are pervasively biased by surreptitious shifts between meaning and form. This forces the reader's mind into a routinized mechanism which consists of automatically translating, say *A/O*, to agent/patient or, worse, to subject/object. This is a bias that only manages to obscure the issues at stake. As for S, the label has a strictly *prima facie* observational base: the unique argument of a monovalent verb. For discussion on this issue and connected topics, see particularly Foley & Van Valin (1977), Comrie (1981), Rosen (1984), Du Bois (1987), Dixon (1994), Lazard (1997), Van Valin & LaPolla (1997), Mithun & Chafe (1999), Creissels (2008), Queixalós (2007), Queixalós & Gildea (this volume). One more terminological proviso: in my usage, *adjunct* is a syntactic notion, a phrase not in a core argument position; *oblique* is a coding notion, a phrase, be it syntactically core or adjunct, marked in a way similar to that of adjuncts.

<sup>4</sup> A few remarks on examples. I rarely give more than one single example in order to illustrate a particular construction, considering it as representative of equivalent instances contained in my field material; redundant examples would perhaps make the offered data appear more reliable, but would also inflate beyond measure the

(2)<sup>ITQ</sup> **tyuku wa:pa**

die dog

'The dog died'

A nominal clause has a noun phrase as its predicate, and an absolutive phrase as its argument.

(3)<sup>ITQ</sup> **piya adu**

man 1SINGULAR

'I am a man'

There are two other noun phrases marked by **na**: the genitive in a noun phrase where the head is a divalent ("inalienable") noun (see 6.3) and the object of a postposition:

(4)<sup>ITQ</sup> **daan ityaro na=tyo**

go.away woman MKCASE=daughter

'Woman's daughter went away'

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article. <sup>ITQ</sup> and <sup>BIA</sup> stand for rivers Itaquai and Bia respectively, but are intended to make explicit the dialectal origins of the data, the Itaquai being the place where most of Kanamari data were collected. 3) *MkCase* means 'marked case'. Phonetically, this example sounds like [**pi:da nati paiko**] but its grammatical structure is {**pi:da-na ti paiko**}, with the case marker bound to its noun phrase grammatical host. Similarly, the noun phrase containing a genitive in (4), and the postpositional phrase in (5), sound, respectively, like [**ityaro natyo**] and [**Yowai nakatu**], but pattern grammatically {**ityaro-na tyo**} and {**Yowai-na katu**} respectively. The mismatch between grammatical and phonological structures here is assumed to be the result of a diachronic process by which the case marker procliticizes to the phrase head. There are other examples of the same phonological shift in the language, particularly in auxiliarization (see Section 3). A quite close parallel of such a head attraction process can be seen in Movima — Bolivia, isolate —, where, within the verb phrase, the prenominal article cliticizes to the left-adjacent verbal head (Haude 2006). I further assume that case marker **na** is diachronically linked to the allative suffix (**hak-na**, 'to the house', phonetically [**hakna**]), the only adjunct function not marked by a postposition. 3) Symbols: **i** [i ~ e], **o** [u ~ o], **u** [u]; **ty**, **dy**, **ny** are the palatal phonemic counterparts of **t**, **d**, **n** respectively; **v**: stands for long vowel; in the Bia dialect, there is free phonetic alternation between long vowels and diphthongs in spite of the existence, in both dialects, of phonemic diphthongs (dos Anjos 2005).

- (5)<sup>ITQ</sup> **ho:ki-nin Makoana Yowai na=katu bo**  
 talk-DURATIVE Makoana Yowai MKCASE=SOCIATIVE.INSTRUMENTAL<sup>5</sup> EXCLAMATIVE  
 'Makoana is talking to Yowai!'

Both phrases can be predicates, each with its external argument and its internal, case marked, argument, respectively:

- (6)<sup>ITQ</sup> **Nodia na=obatyawa Owi**  
 Nodia MKCASE=wife Owi  
 'Owi is Nodia's wife'

- (7)<sup>BIA</sup> **Yako na=katu Dyoraidi**  
 Yako MKCASE=SOCIATIVE.INSTRUMENTAL Dyoraidi  
 'Dyoraidi is with Yako'

The absolutive is coded pronominally in the same way as free stressed forms:

(8)	ITQ	singular	plural
	1	<b>adu</b>	<b>adik</b>
	2	<b>idi:k</b>	<b>idi:ki</b>
	3	<b>anyan</b> <sup>6</sup>	<b>anyan hinuk</b>

<sup>5</sup> Lack of case marker within a postpositional phrase is common with non human noun phrases. See examples (54) and (55). Salience hierarchies other than humanhood are plausibly involved here — maybe definiteness or individuation —, but more data are needed.

<sup>6</sup> The third person has probably as its origin a deictic element of the demonstrative type (cf. Section 2.7), and has a different phonological form in the Bia dialect. It seems to behave as a noun. As for the plural form, a tentative account could be that **nuk** is a generic noun 'group' (see example 119). It can head a phrase with a lexical nominal modifier at its left, unmarked for case but followed by a collective suffix **-hi** which, as is common in this language, procliticizes to the head **nuk**, for instance in [**opatyin hi=nuk**], 'gang of children'.

(9)<sup>ITQ</sup> **pi:da na=duni idi:k**

jaguar MKCASE=catch 2SINGULAR

'The jaguar caught you'

(10)<sup>ITQ</sup> **ki:tan idi:k**

sleep 2SINGULAR

'You slept'

The other argument of a divalent clause, as well as the genitive of a divalent noun and the object of a postposition, must be coded as a prefix of the head element if not realised as a lexical phrase in its internal position:

(11)	BIA	singular	plural
	1	<b>yo-</b> <sup>7</sup>	<b>tyo-</b>
	2	<b>no-</b>	<b>na-</b>
	3	<b>a-</b>	<b>ma-</b>

(12)<sup>ITQ</sup> **no-ti paiko**

2SINGULAR-kill grandfather

'You killed grandfather'

(13)<sup>ITQ</sup> **daan no-tyo**

go.away 2SINGULAR-daughter

'Your daughter went away'

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<sup>7</sup> The first person singular has different allomorphy in the Itaquai dialect. Person categories are identical in both the Bia and Itaquai dialects: three persons, two numbers. I present the tables based on the simplest version in terms of allomorphic variations.

- (14)<sup>ITQ</sup> **ho:ki-nin Makoana no-katu bo**  
 talk-DURATIVE Makoana 2SINGULAR-SOCIATIVE.INSTRUMENTAL EXCLAMATIVE  
 'Makoana is talking to you!'

As can be inferred from the preceding remarks, the terms "internal" and "external" for arguments are used in their literal sense, which directly derives from constituent structure.<sup>8</sup> In my usage, they do not bear the semantic role connotation with which they have subsequently been assumed to present (e.g. Grimshaw 1990 : 33-43).<sup>9</sup>

## 2 Behaviour

Constituency determines a certain number of the ways in which noun phrases occur in the clause, so I will say a word about it first. In verbal clauses, the absolutive is external to the verb phrase. The other argument of divalent clauses, as well as the genitive of a divalent noun head, and the object of postposition, are internal to phrases headed by verb, noun and postposition respectively, as summarised in the examples:

- (15)<sup>ITQ</sup> [**pi:da na=ti**] **paiko**  
 jaguar MKCASE=kill grandfather  
 'The jaguar killed grandfather'

- (16)<sup>ITQ</sup> **daan [ityaro na=tyo]**  
 go.away woman MKCASE=daughter  
 'Woman's daughter went away'

<sup>8</sup> E.g. 'external': the argument *realised* outside the maximal projection of the predicate (Williams 1981).

<sup>9</sup> I am indebted to Katharina Haude (p.c.) for having drawn my attention to this potential source of metalinguistic ambiguity (as well as for having supplied several bibliographic references which helped much in contextualizing the issues addressed in this paper within current typological discussions).

- (17)<sup>ITQ</sup> **ho:ki-nin Makoana [Yowai na=katu] bo**  
 talk-DURATIVE Makoana Yowai MKCASE=SOCIATIVE.INSTRUMENTAL EXCLAMATIVE  
 'Makoana is talking to Yowai!'

A head and its case-marked dependent are strictly adjacent. Aspectual, modal, and discourse particles occur quite freely in the clause, but not between a head and its dependent.

- (18)<sup>ITQ</sup> **niama [pi:da na=ti] paiko**  
 then jaguar MKCASE=kill grandfather  
 'Then the jaguar killed grandfather'

- (19)<sup>ITQ</sup> **[pi:da na=ti] niama paiko**  
 jaguar MKCASE=kill then grandfather  
*idem*

- (20)<sup>ITQ</sup> **[pi:da na=ti] paiko niama**  
 jaguar MKCASE=kill grandfather then  
*idem*

- (21)<sup>ITQ</sup> **\*[pi:da niama na=ti] paiko**  
 jaguar then MKCASE=kill grandfather<sup>10</sup>

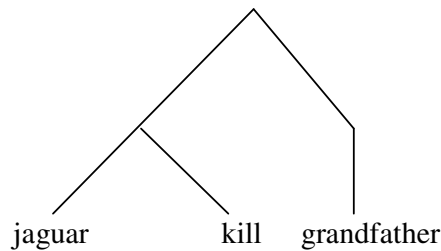
Other clues to the external / internal status of arguments are: pronominalization (unbound pronoun for external, personal prefix for internal argument, see above, Section 1), movement (other things kept equal, possible for external, impossible for internal argument, see below

<sup>10</sup> Nor is it possible to insert the particle following the case mark: **\*pi:dana niama ti paiko**

2.1), elision (other things kept equal, possible for external, impossible for internal argument, see below 2.2).

Taking (15) as an example, the constituency of the basic active divalent verbal clause is as follows:

(22)



I now turn to a closer examination of the asymmetries between arguments which, beyond constituency or as a result of it, reveal a clear ergative alignment in syntax.

## 2.1 Order and Movement

Constituency explains the rigid preverbal position of the agent—or internal—noun phrase in divalent clauses, as well as the possibility of movement for the absolutive—or external—noun phrase of both divalent and monovalent clauses.<sup>11</sup>

(23)<sup>ITQ</sup> **paiko pi:da na=ti**  
 grandfather jaguar MKCASE=kill  
 'The jaguar killed grandfather'

(24)<sup>ITQ</sup> **wa:pa tyuku**  
 dog die  
 'The dog died'

<sup>11</sup> With, I presume, little but not null pragmatic effect.



A different result is achieved when the agent noun phrase occurs outside the verb phrase. The noun, deprived of its case marker, no longer bears any grammatical relation to the verb. Its referent is represented inside the verb phrase by the personal prefix. Pragmatic effects are clear (25). In such a non-syntactic position, a third person agent can be pronominalized with the free forms of (8), but its referent remains represented inside the verb phrase by the personal prefix (26).

- (25)<sup>ITQ</sup> **pi:da** [a-ti]                    **paiko**  
           jaguar 3SINGULAR-kill      grandfather  
           'As for the jaguar, he killed grandfather'

- (26)<sup>ITQ</sup> **anyan**    **hinuk**<sup>12</sup> [ma-toman]    **wiri**  
           3SINGULAR    group            3PLURAL-shoot    peccary  
           'These people, they shot a peccary'

## 2.2 Elision

The external noun phrase can be elided, given appropriate pragmatic conditions for the recoverability of its referent (27-28), whereas elision of the internal argument leads to prefix pronominalization (29).

- (27)<sup>ITQ</sup> **pi:da**            **na=ti**  
           jaguar                    MKCASE=kill  
           'The jaguar killed him/her/it'

- (28)<sup>ITQ</sup>    **tyuku**  
           die  
           'He/she/it died'

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<sup>12</sup> See footnote 6.

- (29)<sup>ITQ</sup> **a-ti**                      **paiko**  
                   3SINGULAR-kill      grandfather  
                   'He/she/it killed grandfather'

This is plausibly the closest functional equivalent to the passive of syntactically accusative languages, given an indefinite reading of the third person prefix (see Section 8 *in fine*).

Otherwise, no special construction is at hand for unspecification of the agent. Since spontaneous data did not offer neat enough instances of the indefinite reading for the prefix, I once took advantage of an incident that occurred in real life to run a semi-spontaneous elicitation session, inducing speakers to utter something meaning that an unknown agent had taken away the glass beads. Besides the pragmatically innocuous (30), I got (31), almost identical to (29).<sup>13</sup>

- (30)<sup>BIA</sup> **baran tu diwakon**  
                   be.visible NEGATION glass.beads  
                   'The glass beads are not visible'

- (31)<sup>BIA</sup> **ma-dahu diwakon**  
                   3PLURAL-take.away glass.beads  
                   'They took away the glass beads'

In the remainder of Section 2 we will see a number of other properties that obtain for the external argument, be it a patient or S, which the internal argument only accesses through voice mechanisms, as will be seen in 4.2.<sup>14</sup>

<sup>13</sup> And quite parallel formally to "non promotional" passives in other languages (e.g. Bantu, Hagege 1978:19; Givón 1981:182), including several Spanish and Portuguese dialects of Latin America.

<sup>14</sup> An inquiry which has to be left for future research is to see whether some of the facts to be adduced below, in favor of an ergative alignment, single out a category *absolutive* by giving it exclusive access to certain syntactic processes, or negatively single out a category *ergative* by proscribing its access to these same mechanisms (for a general discussion on this issue, see the Introduction to the volume; for an instance of it, see below Section 2.5).

### 2.3 Ostension

Demonstratives combine with external arguments, but not with internal arguments.

(32)<sup>BIA</sup> **yo-hoki ityian oman**

1SINGULAR-put this log

'I put this log'

(33)<sup>ITQ</sup> **ki:tan itiyán<sup>15</sup> wa:pa**

sleep this dog

'This dog slept'

(34)<sup>ITQ</sup> **\*ityian pi:da na=ti paiko**

this jaguar MKCASE=kill grandfather

'This jaguar killed grandfather'

The external argument is always accessible to pronominalization through the free forms of (8), as we have seen above. As for the internal argument, only the third person pronoun is possible, and this is treated like any noun phrase (35). A demonstrative pronoun may serve as the external argument, but not as the internal argument (36-38).

(35)<sup>ITQ</sup> **anyan hinuk<sup>16</sup> na=toman wiri**

3SINGULAR group MKCASE=shoot peccary

'They shot a peccary'

(36)<sup>ITQ</sup> **Nodia na=bobo ityian**

Nodia MKCASE=beat this.one

'Nodia beat this one'

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<sup>15</sup> Note the slightly different pronunciation of the demonstrative between both dialects.

(37)<sup>ITQ</sup> **ki:tan itiyān**

sleep this.one

'This one slept'

(38)<sup>ITQ</sup> **\*itiyān na=bobo Nodia**

this.one MKCASE=beat Nodia

'This one beat Nodia'

For ostension on the agent expression in this clause type, see Section 4.2 on antipassive.

## 2.4 Coordination

Noun phrases in paratactic sequence are interpreted as coordinated, with no device other than intonation marking the relationship. Among arguments, only external ones can be coordinated.

(39)<sup>ITQ</sup> **Nodia na=hoho-nin Owi Hanani**

Nodia MKCASE=call-DURATIVE Owi Hanani

'Nodia is calling Owi and Hanani'

(40)<sup>ITQ</sup> **tyuku Nodia Owi**

die Nodia Owi

'Nodia and Owi died'

For coordination of the agent expression in this clause type, see Section 4.2 on antipassive.<sup>17</sup>

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<sup>16</sup> See footnote 6.

<sup>17</sup> In recent fieldwork what seems to be a coordination of internal arguments *in situ* was collected through elicitation:

## 2.5 Focalization

Contrastive focus is achieved by postposing the particle **kana**<sup>18</sup> to the focused constituent. It can have as its scope the verbal constituent<sup>19</sup>, as in

(41)<sup>ITQ</sup> **waro na=boni kana wa:pa**

parrot MKCASE=peck FOCUS dog

'The parrot *pecked* the dog'

(42)<sup>ITQ</sup> **waro ki:tan-nin kana**

parrot sleep-DURATIVE FOCUS

'The parrot just keeps *sleeping*'

or an argument. In this case the noun phrase is also moved to initial position. External arguments are straightforwardly accessible to focalization, but not internal ones.

(43)<sup>ITQ</sup> **Maranmaran na=tyo kana tona tyo**

Maranmaran MKCASE=daughter FOCUS go.away EXCLAMATIVE

'It's Maranmaran's daughter that went away!'

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**Oki Dapoma hinuk na=ohoho Owi**  
 Oki Dapoma group MKCASE=call Owi  
 'Oki and Dapoma called Owi'

This pattern is not yet well understood. Recall the interpretation of **hinuk**, proposed in footnote 6, as a noun **nuk**, 'group', preceded by a noun modifier together with its collective morpheme **hi** procliticized to the head. The predicate phrase here would thus look like **[[Oki Dapoma hinuk] na=ohoho]**, with a double modifier within a single agent, internal, and case marked phrase.

<sup>18</sup> A form **na** seems to be a variant, but sometimes it seems to present a rather mirative function. The variant is the only one found in the Bia dialect for focus.

<sup>19</sup> This is the announced (note 14) instance of a restriction on accessibility which doesn't properly circumscribe an *absolutive* category, not even an external core argument noun phrase, since it is compatible with the predicate phrase and, I suspect at this stage of inquiry, with adjuncts. It just singles out, negatively, a dependent noun phrase within a verb phrase, that is, an *ergative* category.

- (44)<sup>ITQ</sup> **a-obatyawa kana Aro na=nuhuk kariwa na=ton**  
 3SINGULAR-wife FOCUS Aro give white.man MKCASE=LOCATIVE  
 'It's his own wife that Aro gave to the white man'

For focalization of the agent expression in this clause type, see Section 4.2 on antipassive.

## 2.6 Interrogation

In questions that bear on a nominal constituent we observe the same asymmetry seen in the preceding sections: external arguments, but not internal arguments, are accessible to the mechanism considered.<sup>20</sup> An interrogative pronoun appears in clause-initial position.

- (45)<sup>ITQ</sup> **hanian tu Nodia na=hoho-nin?**  
 who(m) INTERROGATION Nodia MKCASE=call-DURATIVE  
 'Whom is Nodia calling?'

- (46)<sup>ITQ</sup> **hanian tu waokdyi-nin?**  
 who(m) INTERROGATION arrive.here-DURATIVE  
 'Who is arriving here?'

For interrogation on the agent referent in this clause type, see Section 4.2 on antipassive.

## 2.7 Relativization

This is one additional mechanism which reflects the same asymmetry between external and internal arguments. Only an external argument — S or patient — can be relativized. Although the available data are yet too fragmentary to constitute clear-cut evidence of the issue at stake, I provide here a fragment of these data as an initial step toward future inquiries.

In the Itaquai dialect, a relative clause is introduced by a deictic element **nyan** (reminiscent of the form of the third person pronoun **anyan**). A dependent clause follows, containing the relativized noun phrase in initial position or *in situ*. Dependency is marked by the verbal ending **-nin**, which has the double function of marking either the durative aspect of an independent verb, as in examples (45-46 and, outside the interrogative context, 87 below), or verb dependence. I assume that clauses subordinated by this morpheme are non-finite, since no TAM particles seem to occur *within* them.

(47)<sup>ITQ</sup> **yo**<sup>21</sup> **-hik**      **nyan** **Nodia** **na=dahudyi-nin**      **tukuna**

1SINGULAR-know    DEICTIC    Nodia    MKCASE=bring-DEPENDENCE    Indian

'I know the Indian that Nodia brought'

(48)<sup>ITQ</sup> **yo-hik**      **nyan** **waokdyi-nin**      **anyan** **piya**

1SINGULAR-know    DEICTIC    arrive-DEPENDENCE    this      man

'I know the man who arrived'

For relativization on the agent expression in this clause type, see Section 4.2 on antipassive.

### 3 Coreference

It seems that the ergative clause just described adopts no clear-cut reference pivot.<sup>22</sup>

Nonetheless, there is some evidence that coreference is ergatively biased, as we will see. Lack of pivot is clear at the intraclausal level between core arguments. For example the possessive can have either argument as its antecedent: in (49) the patient **Mayon**, which does not precede the anaphoric expression but which does, in generative parlance, c-command it, and in (50)

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<sup>20</sup> In the Bia dialect, a clause final particle **yu** serves as an interrogative marker; in the Itaquai dialect, this function is accomplished by a particle **tu** postposed to the questioned element, homophonous with, and perhaps diachronically linked to, negation.

the agent **Dawi**, which does precede the anaphoric expression but does not c-command it. It seems that there is no alternative condition on possessive reference control (i.e. "antecedent precedes *or* c-commands anaphoric expression"), since in (44), renumbered here as (51), the agent fulfills neither.

(49)<sup>ITQ</sup> [**a<sub>1</sub>-obatyawa na=todiuk**] **Mayon<sub>1</sub>**

3SINGULAR-wife MKCASE=hate Mayon

'Mayon<sub>1</sub>'s wife hates him<sub>1</sub> (lit.: His<sub>1</sub> wife hates Mayon<sub>1</sub>)'

(50)<sup>ITQ</sup> [**Dawi<sub>1</sub> na=bobo**] **a<sub>1</sub>-obatyawa**

Dawi MKCASE=beat 3SINGULAR-wife

'Dawi<sub>1</sub> beat his<sub>1</sub> wife'

(51) **a<sub>1</sub>-obatyawa kana Aro<sub>1</sub> na=nuhuk kariwa na=ton**

3SINGULAR-wife FOCUS Aro MKCASE=give white.man MKCASE=LOCATIVE

'It's his<sub>1</sub> own wife that Aro<sub>1</sub> gave to the white man'

Disjunct reference is also allowed, irrespective of c-command and linear order:

(52)<sup>ITQ</sup> **a<sub>2</sub>-obatyawa na=ohoho Nodia<sub>1</sub>**

3SINGULAR-wife MKCASE=call Nodia

'His<sub>2</sub> wife called Nodia<sub>1</sub>'

(53)<sup>BIA</sup> **pi:da<sub>1</sub> na=buro: a<sub>2</sub>-mimi**

jaguar MKCASE=leap 3SINGULAR-blood

'Jaguar<sub>1</sub> leaped his<sub>2</sub> blood'

<sup>21</sup> This is the Itaquai allomorph in this phonological environment.

<sup>22</sup> This section is a synthesis of Queixalós (2004), but enriched with more recent data.



Still, at the intraclausal level, the possessive on adjuncts shows a preference for ergatively oriented pivots, as in examples (54-55), where the antecedent is a patient and S respectively.<sup>23</sup> Although sometimes found, an agent antecedent is less natural.<sup>24</sup>

(54)<sup>ITQ</sup> **Dawi<sub>1</sub> na=bobo ityaro<sub>2</sub> a<sub>2</sub>-wa hak naki**

Dawi MKCASE=beat woman 3SINGULAR-RGN house LOCATIVE

'Dawi beat the woman<sub>1</sub> in her<sub>1</sub> house'

(55)<sup>ITQ</sup> **horon Dawi na=obatyawa<sub>1</sub> a<sub>1</sub>-wa panira katu**

get.burnt Dawi MKCASE=wife 3SINGULAR-RGN pot SOCIATIVE.INSTRUMENTAL

'Dawi's wife<sub>1</sub> got burnt with her<sub>1</sub> own pot'

With adverbs reporting a manner or location ascribed to a participant, provided that all semantic conditions are kept equal, pivots are clearly ergative (56-57). When pressed to link the adverb to the agent, the speaker resorted to a two clause utterance (58).

(56)<sup>BIA</sup> **Kontan na=hi:k pida<sub>1</sub> kododi<sub>1</sub>**

Kontan MKCASE=see jaguar up.there

'Kontan saw the jaguar up there'

(57)<sup>BIA</sup> **no:do: Kontan kododi**

be.sitting Kontan up.there

'Kontan was sitting up there'

<sup>23</sup> The gloss 'RGN' stands for Relational Generic Noun, described in section 6.3.

<sup>24</sup> Example (54) could read, in appropriate extralinguistic circumstances, 'Dawi<sub>1</sub> beat the woman in his<sub>1</sub> house'. But when this reading was proposed in elicitation, several speakers tried to rephrase it as '[...] her house'.

- (58)<sup>BIA</sup> **kododi<sub>1</sub> Kontan<sub>1</sub> no:do: a-hi:k pida<sub>2</sub>**  
 up.there Kontan be.sitting 3SINGULAR-see jaguar  
 'Kontan was sitting up there. He saw the jaguar'

At the interclausal level also, patient/S pivots are preferred, but not required. As with noun phrases, no coordination marker is used. What we have are paratactic sequences where the discourse connecting particle **niama** makes two sentences more tightly linked to each other than the lack of the particle (contrast 59-61 with 58). The patient/S pivot is illustrated in (59-60), and the agent/S pivot in (62).<sup>25</sup> Note that both (60) and (61) are extracted from the same episode of a single text.

- (59)<sup>ITQ</sup> **waokdyi Nodia<sub>1</sub>, Yowai<sub>2</sub> na=toman niama Ø<sub>1</sub>**  
 arrive Nodia Yowai MKCASE=shoot then  
 'Nodia<sub>1</sub> arrived, and then Yowai shot him<sub>1</sub>'

- (60)<sup>ITQ</sup> [...] **dyo:ri<sub>1</sub> na=man wa hinuk<sub>2</sub>, dadohan niama Ø<sub>2</sub>**  
 termite MKCASE=do woman group climb.up then  
 '[...] the termite told the women, then (the latter) climbed up [a tree]'

- (61)<sup>ITQ</sup> [...] **wa<sub>1</sub> na=daman dyo:ri<sub>2</sub>, daan niama Ø<sub>1</sub>**  
 woman MKCASE=say.while.leaving termite go then  
 '[...] the women said to the termite, then they went away'

Subordinating devices include (i) the use of the durative verbal ending to mark dependence, as we have observed above; (ii) several postpositions; and (iii) the discourse

<sup>25</sup> Ø is noted for expository purposes. Its relative linear position is only indicative. See also the apparent unique/agent pivot in (58), which differs because the agent, as internal argument, cannot be elided.

connector 'then' or clause coordinator, **niama**, also introducing purpose clauses. A reference pivot between matrix clause patient and dependent clause S appears in (62-63), and currently available data offers no clear accusatively-oriented alternative to this kind of pivot.

(62)<sup>BIA</sup> **a<sub>1</sub>-makaudyaran**  $\emptyset_2$  [**dyahian-nin** **ama**  $\emptyset_2$ ]

3SINGULAR-stride.over stand.up-DEPENDENCE GOAL

'He strode over her to have her stand up'<sup>26</sup>

(63)<sup>ITQ</sup> **koramanan na=tohi:k nuk<sub>1</sub>...**

snake MKCASE=lookat group

'The snake looked at them...

...[**pok-nin** **bapo-nin**  $\emptyset_1$  **kotyia** **na=katu**]

have.sex-DEPENDENCE finish-DEPENDENCE otter MKCASE=SOCIATIVE.INSTRUMENTAL

...as they finished having sex with the otter'

Even though coreference patterns are far from clearly and homogeneously built on an ergative basis, two facts seem to show that the background of this complex and often fuzzy domain of grammar is, in Katukina, ergatively coloured. As we will see in section 4.2, in order to give the agent full access to referent pivothood, speakers tend to shift to a derived clause structure typically found in ergative systems (i.e., the antipassive, *cf.* 4.2). As we will see now, auxiliary constructions offer yet another ergative pattern.

Two lexical verbs are apt to perform such grammatical functions as auxiliarization.

**Wu** 'to want', is a divalent verb in its full lexical occurrences:

<sup>26</sup> As a side effect of extension of the head procliticization of **nin** (*cf.* footnote 28 below), the sequence **nin ama** could stand at the diachronic origin of the connector **niama**. Synchronically, however, they are unconnected since **niama** appears in many left contexts from which **nin** would be proscribed.

- (64)<sup>ITQ</sup> **pidá na=wu tu niama tyohi**  
 jaguar MKCASE=want NEGATION then palm.sp.pap  
 'Then jaguar did not want the palm sp. pap'

**Wu** also works as a desiderative auxiliary,<sup>27</sup> in which function it heads an accusative independent clause. This accusative pattern is presented in section 4.1 below. I anticipate here, for the sake of clarity, the basic properties of the canonical accusative clause, an almost perfect mirror image of the ergative clause: 1) the patient is obligatorily in pre-verbal position, unmarked for case, and internal to the verb phrase, and 2) the agent is post-verbal, unmarked for case, external to the verb phrase, and supplied with all the formal properties attached to the external argument phrase; see (82) below for a monoclausal instance of the accusative pattern. In the auxiliary construction, the internal argument is a subordinate clause in complement function; within the subordinate clause, the external argument has no overt realisation, but is obligatorily coreferential with the external argument of the matrix clause. Thus, in (65), the external argument of **wu** 'want' is understood as being referentially identical to the missing internal argument of **waikpa** 'sing'.

- (65)<sup>ITQ</sup> **waikpa nin=wu<sup>28</sup> adu**  
 sing DEPENDENCE=want 1SINGULAR  
 'I want to sing'

When the subordinate and matrix external arguments are not coreferential (i.e., where the 'wanter' and the external argument of the desired event are not the same

<sup>27</sup> With sub-meanings such as imminent and counterfactual.

participant), the structure seen in (65) is not allowed. Instead, the full ‘want’ verb is used in an ergative sentence: the internal argument is the ‘wanter’ and the external argument is the subordinate clause expressing the desired event.

- (66)<sup>ITQ</sup> **yo-wu**            **Nodia donman-nin**    **tyo**            **bo**  
 1SINGULAR-want    Nodia    fish-DEPENDENCE    EXCLAMATIVE    EXCLAMATIVE  
 'I want Nodia to go fishing!'

Let us now look at auxiliary constructions containing divalent subordinate clauses, such as (67-70). What was said above about coreference for the monovalent subordinate clause of example (65) holds for divalent subordinate clauses: the complement clause's external argument (patient) lacks phonological realisation, having its antecedent in the external argument of the matrix clause (67-69). In addition, the external argument of **wu** ‘want’ no longer presents the 'wanter' meaning, since it is coreferential with the (patient) external argument of the subordinate clause.

- (67)<sup>ITQ</sup> **ma-hakhak**<sup>29</sup>    **nin=wu**  
 3PLURAL-spear            DEPENDENCE=want  
 'They intended to spear them'

- (68)<sup>ITQ</sup> **Nodia na=ti**            **nin=wu**            **adu**  
 Nodia    MKCASE=kill            DEPENDENCE=want    1SINGULAR  
 'Nodia wants to kill me'

<sup>28</sup> We observe, in auxiliariation, the same head attraction process seen above, whereby a dependence marker, here the subordinator **nin**, {**waikpa-nin wu adu**}, attaches phonologically to the immediately right-adjacent syntactic head of its grammatical host, generating [**waikpa ninwu adu**].

<sup>29</sup> **Hak** is a somewhat polysemic verb, whose basic meaning is something like 'perforate with an instrument'. I translate it according to the context. This reduplicated instance is perhaps indicative of iterative aspect/plurality of the patient.

(69)<sup>ITQ</sup> **no-pu**      **nin=wu**      **tu**      **barahai** **dawa**

2SINGULAR-eat    DEPENDENCE=want    NEGATION    game.meat    again

'You don't intend to eat game meat again'

And, also parallel to what was seen for intransitive subordinate clauses, disjunct reference between both external arguments blocks the appearance of the auxiliary structure, in favour of a full 'want' ergative pattern identical to (66), where the internal argument of **wu** 'want' is the first person 'wanter', and the external argument is the subordinate clause expressing the 'wanted' event (actually, 'not wanted' in 70).

(70)<sup>ITQ</sup> **yo-wu**      **tu**      **opatyin** **na=bi:wik-nin**      **kapayo** **tyo**      **bo**

1SINGULAR-want    NEGATION    child      MKCASE=eat-DEPENDENCE    papaya      EXCLAMATIVE    EXCLAMATIVE

'I don't want the child to eat<sup>30</sup> the papaya!'

It is worth noting that, as in (66), all participants in the subordinate clause of (70) are expressed through full noun phrases *in situ* (the case marked internal agent 'child', and the post-verbal external patient 'papaya').

Examples (68-69) present clear evidence that, in more explicit terms, the constituency and coreference structure of (67) must look like:

(71)<sup>ITQ</sup>    [[[**ma<sub>1</sub>-hakhak**]]      **nin=]wu**]       $\emptyset_2$

3PLURAL-spear                      DEPENDENCE=want

'They<sub>1</sub> intended to spear them<sub>2</sub>'

In (71), the zero is the null realisation of the external argument of the finite verb **wu**, a *pro* — which we know the language allows — obligatorily the patient of the wanted event, the 'spearee'. In contrast, the unrealised external argument of the complement clause, the same

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<sup>30</sup> Literally 'suck'.

'spearee', is a null pronoun argument in the non-finite complement clause of a control verb. This is the canonical definition of the so-called *PRO*, hallmark of subjecthood in generative grammar. In Katukina, it must refer to a *patient* in (67)-(69) and to *S* in (65).<sup>31</sup>

The other auxiliary construction observed to date involves the monovalent verb **bak**, 'to be good', which we see as a full lexical verb in (72) and as an intensive auxiliary in (73-74).

(72)<sup>ITQ</sup> **bak**    **oba**  
 be.good    tobacco  
 'Tobacco is good'

(73)<sup>BIA</sup> **dyo:**    **nin=bak**            **podak**  
 be.full    DEPENDENCE=be.good    canoe  
 'The canoe is pretty full'

(74)<sup>BIA</sup> **nayo,** **ikao**    **nin=bak**  
 mother    cry            DEPENDENCE=be.good  
 'Mother, I'm crying a lot!'<sup>32</sup>

Auxiliaries **wu**, *purposive*, and **bak**, *intensive*, behave identically. The external argument of the subordinate clause cannot be expressed *in situ*, but can only be understood as coreferential with the external argument of the matrix clause. This identity is confirmed

<sup>31</sup> While additional data might perhaps lead us to a slightly different analysis, I must emphasize that it will not impinge on what we are primarily interested in here, the strong ergative orientation of syntactic alignments in Katukina.

<sup>32</sup> This example is courtesy of Zoraide dos Anjos, in personal communication. The first person external argument is frequently omitted. A constructed example without this elipsis would be

<sup>BIA</sup> **ki:tan**    **nin=bak**            **adu**  
 sleep    DEPENDENCE=be.good    1SINGULAR  
 'I slept a lot'

by the **bak** auxiliary construction with a divalent subordinate clause, in which, again, the subordinate external argument does not appear overtly, but is understood to be coreferential with the external argument of the matrix clause.

(75)<sup>ITQ</sup> **a-tikok nin=bak kana tukuna tyo**  
 3SINGULAR DEPENDENCE=be.good FOCUS human.being EXCLAMATIVE  
 'He does know the guy well!'

(76)<sup>ITQ</sup> **ma-ti nin=bak tiyan**  
 3PLURAL-kill DEPENDENCE=be.good those  
 'They killed those, all of them'

Putting things in terms of constituency and coreference, I summarise below the single structure underlying auxiliarisations with **bak** (examples (73) and (76), hereafter (77) and (78) respectively), and with **wu** (examples (65) and (68) ), hereafter (79) and (80) respectively).

(77)<sup>BIA</sup> [<sub>a</sub> [<sub>b</sub> **dyo: nin=]<sub>b</sub> **bak]<sub>a</sub> **podak**  
 be.full DEPENDENCE=be.good canoe  
 'The canoe is pretty full'****

(78)<sup>ITQ</sup> [<sub>a</sub> [<sub>b</sub> **ma<sub>2</sub>-ti nin=]<sub>b</sub> **bak]<sub>a</sub> **tiyan<sub>1</sub>**  
 3PLURAL-kill DEPENDENCE=be.good those  
 'They<sub>2</sub> killed those<sub>1</sub>, all of them'****

(79)<sup>ITQ</sup> [<sub>a</sub> [<sub>b</sub> **waikpa nin=]<sub>b</sub> **wu]<sub>a</sub> **adu**  
 sing DEPENDENCE=want 1SINGULAR  
 'I want to sing'****

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Note the (obligatorily) covert argument of the complement verb.



(80) <sup>ITQ</sup>	[ <sub>a</sub> [ <sub>b</sub> <b>Nodia</b> <sub>2</sub>	<b>na=ti</b>	<b>nin=]</b> <sub>b</sub>	<b>wu]</b> <sub>a</sub>	<b>adu</b> <sub>1</sub>
	Nodia	MKCASE=kill	DEPENDENCE=want	ISINGULAR	
	'Nodia <sub>2</sub> wants to kill me <sub>1</sub> '				

In all four examples, [<sub>a</sub> matrix predicate phrase]<sub>a</sub> is headed by **bak/wu**, and [<sub>b</sub> subordinate predicate phrase]<sub>b</sub> is its internal argument. Despite the differences in the original, lexical, valence of verb roots — **wu** is divalent, **bak** is monovalent — they pattern identically.

Now, if we are to give a unitary account of both auxiliarisations, **wu** cannot be seen as a control construction. In fact, other than **wu** with a monovalent complement (*cf.* (65) with a 'singer<sub>1</sub>' and a 'wanter<sub>1</sub>', which could be seen as a side-effect of having a single participant throughout the whole event), in no auxiliary construction could the matrix external argument be said to refer to any semantic participant of the matrix verb. Even though 'want' and 'be good' have not been traditionally held as typical raising verbs, I would propose that raising provides a reasonable and unified analysis for all four constructions in (77-80). The subordinate external argument is raised to the matrix external argument position. Putting aside any on-going discussion<sup>33</sup> about the homogeneity / heterogeneity of control and raising structures, which is beyond the scope of this paper, the point to be made is that one single answer should impose itself to the double question "Who is raised to where?" *A patient / S external argument of the complement clause is raised to the external argument position of the main clause.*

Both interpretations, control and raising, give the same result — prominence of the patient — regarding our central issue: syntactic alignment and argument hierarchy in divalent clauses pattern ergatively.

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<sup>33</sup> Launched by Hornstein (1999).

## 4 Other Ergative-Oriented Phenomena

We will see here two alternative options to the basic active divalent clause, both typical of ergative systems: an alignment split (section 4.1) and an antipassive (section 4.2).

### 4.1 Split Transitivity

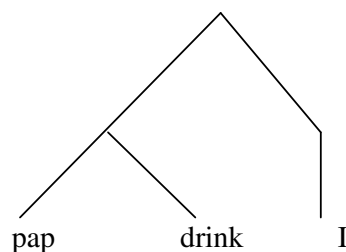
Compare what I have been calling the basic active divalent clause, seen again in (81), with the construction in (82).

(81)<sup>ITQ</sup> **pi:da na=ti paiko**  
 jaguar MKCASE=kill grandfather  
 'The jaguar killed grandfather'

(82)<sup>ITQ</sup> **koya o adu**  
 pap drink 1SINGULAR  
 'I drink pap'

In (82), the postverbal term is the most agent-like, and it is the external, nominative noun phrase (compare example (2)), whereas the preverbal term is a patient, internal, and also unmarked noun phrase. The constituent structure of this construction is given in (83).

(83)



While a few tests have yet to be carried out, the nominative here seems to capture the set of syntactic properties attached to the absolutive of the basic active divalent clause and of the monovalent clause. For example elision, (85), movement, (86), and focus (87).

(84)<sup>ITQ</sup> **tukuna**      **makoniok**      **Tamakori**  
 human.being    advise            Tamakori  
 'Tamakori gave advice to humans'

(85)<sup>ITQ</sup> **tukuna**      **makoniok**  
 human.being    advise  
 'He gave advice to humans'

(86)<sup>ITQ</sup> **Tamakori**    **tukuna**      **makoniok**  
 Tamakori        human.being    advise  
 'Tamakori gave advice to humans'

(87)<sup>ITQ</sup> **Tamakori na**    **tukuna**      **makoniok-nin**  
 Tamakori        FOCUS    human.being    advise-DURATIVE  
 'It was Tamakori who was giving advice to humans'

In accordance with the terminology used in this paper so far, (81) is an instance of an “ergative clause”, in contrast to (84-87), which are instances of “accusative clause”. The verb of the accusative clause requires a realised internal argument, but unlike for the ergative clause type, the internal argument of the accusative clause does not take any marked case, nor does it alternate with the personal paradigm of verbal prefixes. Due to this second characteristic, the verb always appears in its citation form, which makes it more similar to the monovalent verb than its person-inflectable counterpart.

That the accusative clause is non-basic can be inferred from its low frequency in discourse—about one tenth that of the ergative type—and from the semantic properties of its object noun phrase, which generally refers to a generic participant, as in (84-87). This semantic distinction can be seen in the contrast between the (specific) individuated patient seen in the ergative clause in (88) versus the generic plural reading in the accusative clause in (89).

(88)<sup>ITQ</sup> **Tamakori na=buhuk tukuna**  
 Tamakori MKCASE=make human.being  
 'Tamakori created a/the person'

(89)<sup>ITQ</sup> **tukuna buhuk Tamakori**  
 human.being make Tamakori  
 'Tamakori created the people'

This tendency is clear, but there are exceptions. For example, in elicitation sessions a noun determined by a numeral is accepted in the object position (90). (While the numeral prevents the noun from being interpreted generically, the latter does remain indefinite.)

(90)<sup>BIA</sup> **obawa poako ho:na Hayo**  
 two paddle bring Hayo  
 'Hayo brought two paddles'

Speakers reject speech act participant pronouns as the patient of an accusative clause, but some accept a proper noun. Speakers of the Itaquai dialect (but not Bia speakers) accept

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<sup>34</sup> Remember the proviso *circa* (83) concerning empirical tests.

both a third person pronoun and a noun plus a demonstrative determiner. More work on spontaneous speech is needed with regard to this topic.<sup>35</sup>

No exhaustive inquiry has been carried out yet on the coreference patterns displayed by the accusative construction, but several observations converge toward neat accusative pivots. The internal argument, the patient, is unable to control the possessive on the agent (91), in spite of its precedence in linear order—compare (91) with ergative examples (49-50), where both arguments are allowed to control possessor coreference (whatever the configuration in terms of word-order and c-command).

(91)<sup>BIA</sup> **anya<sub>1</sub> otohik a<sub>2</sub>-okpu**

woman look.for 3SINGULAR-SON

'His/her son looks for a woman [to live with]'

Coordination is homogenously accusative as well. In (92) a reference pivot is established between an agent antecedent and an S target, whereas in (93) S is the antecedent, and the agent is the target.

(92)<sup>ITQ</sup> **tukuna buhuk Tamakori<sub>1</sub> tona niama Ø<sub>1</sub>**

human.being make Tamakori leave then

'Tamakori created the people and then left'

(93)<sup>BIA</sup> *a* **daandi Tamakori<sub>1</sub> hak-dik ...**

come Tamakori house-LOCATIVE

'Tamakori<sub>1</sub> came out of his house ...

*b* ... **wanadakbi: haori buhuk niama Ø<sub>1</sub>**

palm.sp rope make then

... and then he<sub>1</sub> made a palm sp. rope<sup>136</sup>

<sup>35</sup> Also, imperfectivity cannot be discarded as a conditioning factor of some accusative constructions.

(94) shows that the accusative construction is allowed in the auxiliary construction seen in 2.8, provided the patient meets the semantic condition of being generic. This, of course, yields a much more familiar situation, where the external argument of the complement non-finite clause has no overt expression and looks for antecedence in the external argument of the matrix clause.<sup>37</sup>

(94)<sup>ITQ</sup> **takara oma nin=wu adu tyo**  
 chicken buy DEPENDENCE=want 1SINGULAR EXCLAMATIVE  
 'I want to buy hens!'

Although the title of Section 4 may have created other expectations, there is no doubt that the existence of an accusative pattern is, in itself, not evidence for the existence of ergative alignment. On the other hand, its non-basic status in some way is.

## 4.2 Antipassive

Restrictions obtaining in the access of several syntactic mechanisms to the agent internal noun phrase are obviated through the use of a construction in which (i) the verb is marked for reduction of valence by a prefix **wa-**, which occupies the morphological slot of the personal agent prefix, (ii) the agent appears as an absolutive external noun phrase, and (iii) no other nominal bears a direct grammatical relation to the verb. The patient can be omitted (96), instantiated through a bare noun (97), or instantiated by an adjunct phrase marked as such by the sociative-instrumental postposition **katu** (98).

<sup>36</sup> Data from Zoraide dos Anjos G.S. (p.c.).

<sup>37</sup> Due to the marked status of the accusative construction, instances of this clause type as complement of auxiliaries are less frequent. For instance, no example of it with auxiliary **bak** is yet available. This makes a discussion on the issue of control vs. raising premature. In addition, such a discussion would be irrelevant here, since its basic motivation rests on the issue of alignment and hierarchy in the ergative pattern.

(95)<sup>ITQ</sup> **i-pu tu barahai**

1SINGULAR-eat NEGATION meat

'I didn't eat the meat'

(96)<sup>ITQ</sup> **wa-pu tu adu**

ANTIPASSIVE-eat NEGATION 1SINGULAR

'I didn't eat'

(97)<sup>ITQ</sup> **piya wa-pu-nin barahai**

men ANTIPASSIVE-eat-DURATIVE meat

'Men are eating meat'

(98)<sup>BIA</sup> **wa-toman adu wiri katu wa**

ANTIPASSIVE-shoot 1SINGULAR peccary SOCIATIVE.INSTRUMENTAL PROSPECTIVE

'I am going to shoot peccaries'

Motivations for use of the antipassive construction are syntactic and, probably, functional as well. Among the latter, a generic<sup>38</sup> patient seems sometimes to play a role (98), as well as a kind of emphasis on the agent, presumably different from the contrastive focus seen in 2.4.<sup>39</sup>

(99)<sup>ITQ</sup> **waro wa-minkudak-boni wa:pa**

parrot ANTIPASSIVE-hindquarters-peck dog

'It is the parrot that pecked the dog's hindquarters'

The syntactic motivation for the antipassive consists in making the agent accessible to mechanisms or statuses that are forbidden for it in the basic active divalent clause, such as

<sup>38</sup> Or indefiniteness. This point is unclear.

<sup>39</sup> In spite of the apparent contrastive reading in my translation of (99).

ostension (100, see 2.3), true contrastive focus (101, see 2.4), coordination (102, see 2.5), interrogation (103, see 2.6), relativization (104, see 2.7), coreference pivothood in clause coordination (105) and clause subordination (106-107).

(100)<sup>ITQ</sup> **itiyan wa-ohoho**

this.one ANTIPASSIVE-call

'This one called'

(101)<sup>ITQ</sup> **itiyan kawahiri kana wa-duni tyon**

this cat FOCUS ANTIPASSIVE-catch rat

'It's this cat that caught the rat'

(102)<sup>ITQ</sup> **Nodia Hanani wa-hoho-nin Owi**

Nodia Hanani ANTIPASSIVE-call-DURATIVE Owi

'Nodia and Hanani are calling Owi'

(103)<sup>BIA</sup> **hanian tan wa-dyuman tahi yu?**

who here ANTIPASSIVE-spread water INTERROGATION

'Who spread the water here?'

(104)<sup>ITQ</sup> **i-hik nyan piya wa-dahudyi-nin Hanani**

1SINGULAR-know deictic man ANTIPASSIVE-bring-DEPENDENCE Hanani

'I know the man who brought Hanani'

(105)<sup>ITQ</sup> **[Nodia<sub>1</sub> na=pikan] Owi<sub>2</sub>, wa-tohik tu niama Ø<sub>2</sub>**

Nodia MKCASE=hear Owi ANTIPASSIVE-see NEGATION then

'Nodia<sub>1</sub> heard Owi<sub>2</sub>, but she<sub>2</sub> did not see [him<sub>1</sub>]'



- (106)<sup>ITQ</sup> **i-toman**      **anyan<sub>1</sub>**   **tya**   **bo,**      **wa-bi:wik-nin**      **Ø<sub>1</sub>**   **kotuda**  
 1SINGULAR-shoot   3SINGULAR   FUTURE   EXCLAMATIVE   ANTIPASSIVE-SMOKE-DEPENDENCE      again  
 'I'll shoot that one if he smokes<sup>40</sup> again!'

- (107)<sup>ITQ</sup> **donmana**   **Makuana<sub>1</sub>**   **wa-pu**      **niama**      **Ø<sub>1</sub>**  
 go.fish      Makuana      ANTIPASSIVE-eat      DEPENDENCE  
 'Makuana went fishing in order to eat'

Despite the absence of the patient in some of the last examples adduced, in this syntactic antipassive, where the motivation is primarily to promote the agent to absolutive-external noun phrase, the clause tends to retain the expression of the patient, which occurs, more often than not, as a bare noun in a position that is not typically peripheral (108).

- (108)<sup>ITQ</sup> **hanian tu**      **adu**      **wa-pikik**      **niama**  
 who      INTERROGATION   1SINGULAR   ANTIPASSIVE-drip      then  
 'Who is dripping [liquid on] me, now?'

It is an issue for future research whether the patient in the syntactic antipassive bears — or is on its way to acquire — any grammatical relation to the predicate.<sup>41</sup>

## 5 Grammatical Relations: A First Synthesis

So far, we have seen that the basic divalent clause — the ergative clause, as I have called it — shows a clear asymmetry between its two arguments: in intuitive prototypical

<sup>40</sup> Literally 'suck', divalent.

<sup>41</sup> An inverse pattern could be at a diachronic incipient stage. I owe to Stephan Dienst (p.c.) the idea that inverse could be somehow involved here.

semantic terms, the agent and the patient. Morphology (case marking on noun phrases, form of the pronominal elements) and syntax (constituency, order, movement, elision, ostension by determiner or pronoun, coordination, and extraction processes such as focalization, interrogation, and relativization) all point to the same conclusion: the patient is ranked above the agent (i.e. it has privileges in accessibility constraints) and aligns with S. When the agent needs to overcome access restrictions imposed on privileges exclusive to the patient of the divalent basic structure, the speaker may resort to other structures which will rank the agent above the patient, namely, antipassive and accusative constructions. Except for control/raising constructions, which are clearly ergative, coreference is not conclusive, but it features in a more ergative than accusative fashion.

The whole group of converging phenomena constitute neat evidence for the mappings in Table 1.

<i>Semantic role</i>	<i>Coding &amp; constituency properties</i>	<i>Behaviour properties</i>
PATIENT	ABSOLUTIVE	SUBJECT
AGENT	ERGATIVE	OBJECT

Table 1. Semantic, coding and behaviour mappings in the ergative clause

The pragmatically and statistically marked divalent clause — the accusative clause — shows a parallel asymmetry between its core arguments (except for the lack of case morphology / bound pronominal forms for the internal-patient argument): pronominal unbound forms align the agent with S, and syntactic properties (constituency, order, movement, elision, and extraction processes, as well as control of coreference) show that the agent is ranked above the patient, and aligns with S, yielding the mappings in Table 2.

<i>Semantic role</i>	<i>Coding &amp; constituency properties</i>	<i>Behaviour properties</i>
AGENT	NOMINATIVE	SUBJECT
PATIENT	ACCUSATIVE	OBJECT

Table 2. Semantic, coding and behaviour mappings in the accusative clause

Since the agent external argument of the accusative clause *also* aligns in coding and behavioural properties with the patient of the basic divalent clause, a further generalization can be attained by collapsing the *absolutive* argument of the ergative clause type and the *nominative* of the accusative clause type into a single category. Properties of absolutes are not, in all ergative languages, as straightforwardly reducible to those of nominatives (see Massam 2006). Nevertheless, in the case of Katukina this generalization is not only possible, but is invited by grammatical patterns, which clearly link:

- S of all monovalent verbal predicates, including lexically monovalent verbs and de-transitivized verbs (reflexive, antipassive)
- The external phrase of noun and postposition predicates
- For lexically divalent verbs
  - o the patient in the ergative clause type, and
  - o the agent of the accusative clause type.

The unmarked case, or NOMINATIVE, is found marking both what would traditionally be called the *absolutive* in ergative clauses and the *nominative* in accusative clauses, as well as the S of derived monovalent clauses such as the antipassive. The MARKED CASE also subsumes multiple types of arguments: what would traditionally be called the *ergative* case in ergative clauses, plus the genitive within a noun phrase headed by a divalent noun (see below 6.3), the object of a postposition and, since we rely on the unmarked character of nominative beyond strict case inflectional morphology, the *accusative* in accusative clauses. A synoptic

table of the mappings between the three levels of structure in both divalent clause-types is showed in Table 3.

<i>Clause type</i>	<i>Semantic role</i>	<i>Coding &amp; constituency properties</i>	<i>Behaviour properties</i>
ERGATIVE	PATIENT	NOMINATIVE	SUBJECT
	AGENT	MARKED	OBJECT
ACCUSATIVE	AGENT	NOMINATIVE	SUBJECT
	PATIENT	MARKED	OBJECT

Table 3. Semantic, coding and behaviour mappings in divalent clause-types

In my view, the syntactic functions (or grammatical relations) of *subject* and *object* as such are purely formal entities, based strictly on the hierarchies between arguments which behavioural and control properties highlight (Anderson 1976). In every language, we observe a great deal of interference — be it synchronic or diachronic — between the syntactic functions of arguments and (i) the semantic properties of participants (the parts they play in the event, their inclusion in specific classes of beings, and so on) and (ii) the pragmatic treatment of referents (relevance and pre-eminence at the moment of the speech act). In spite of this, I maintain that a level of formal structure has to be taken into account if we are to understand something of how speakers build their utterances and how listeners process them. In a language like Katukina, this leads to the conclusion that, in the basic active divalent verbal clause, the patient is a subject, and the agent is an object.

A clear illustration in this language of the necessity of keeping grammatical relations apart from other levels of morphosyntactic organization — not only roles, but cases as well — can be seen in the different treatment given to the internal argument — the case-marked noun— of the verb phrase vs. the noun phrase. As we have seen above (2.3), the agent - ergative - object is not accessible to ostension, whether the latter is manifested by a

determiner or by the pronominal counterpart. In contrast, the marked genitive noun, which otherwise displays the same coding and constituency properties, is (109-110). In the same vein, the genitive is also accessible to interrogation, which the agent - ergative - object is not (111). As a consequence of this, the *participant* coded as ergative can be relationally promoted through the antipassive, whereas the *participant* coded as genitive cannot.<sup>42</sup>

(109)<sup>ITQ</sup> **daan niama itiyán ityaro na=tyo**  
 go then this woman MKCASE=daughter  
 'This woman's daughter went away'

(110)<sup>ITQ</sup> **itiyán na=tyo tona**  
 this.one MKCASE=daughter go  
 'This one's daughter went away'

(111)<sup>ITQ</sup> **hanian na=okpu tu an-nin?**  
 who MKCASE=son INTERROGATION COPULA-DURATIVE  
 'Whose son is he?'<sup>43</sup>

Such syntactic discrepancies between ergative and genitive noun phrases, if not accounted for by case or constituency, can only be attributed to behaviour, the domain of grammatical relations. In other words, in spite of their case and constituency isomorphism, the "possessor" expression plays a role at the phrase level (adnominal modifier), while the

<sup>42</sup> A difference quite parallel to that obtaining between ergative and instrumental in Dyrbal (Dixon 1994:1971).

<sup>43</sup> It is unclear under which conditions the copula occurs in nominal clauses. In many instances, the nominal predicate appears without this element.

agent expression, notwithstanding its inclusion in an immediately larger phrase, plays a role at the clause level (co-argument of a predicate).

As to putative grammatical relations obtaining in the accusative clause, the available evidence — which, in my reckoning, is not prolific — points to a common accusative-type mapping: the agent - nominative - external - subject is opposed to the patient - (accusative)<sup>44</sup> - internal - object.

## 6 Argument Structure Variations

It is generally assumed that derived constructions which affect argument structure are founded on — and hence reveal — the hierarchy of arguments in the basic construction they derive from. In this section we consider first the reflexive construction, which is neutral with respect to alignment, then proceed to argue that applicative, noun incorporation and, to a lesser extent, causative constructions can be considered as three clearly accusative-oriented phenomena, weakening the overall ergative pattern of the language.<sup>45</sup>

### 6.1 Reflexive

Only one argument is present in the reflexive structure. Nothing like a reflexive noun phrase appears. The formal properties of the extant argument are those of an external argument (or subject as defined in Section 5).<sup>46</sup> The verb gains an intransitivation suffix **-hik**<sup>47</sup> and loses its capacity to host the paradigm of person prefixes (113, 115).

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<sup>44</sup> No case marker.

<sup>45</sup> This section is a synthetic — but at times more fine-grained — version of Queixalós (2003b).

<sup>46</sup> Since what is at stake herein is the hierarchy of divalent clause arguments, and not to prematurely bias the issue, when talking about the arguments of new constructions I will refrain from using grammatical relations terminology — subject and object — and keep with more neutral labels like intuitive agent and patient or constituency-based internal vs. external.

<sup>47</sup> In both dialects, **-hik** is the base form; **-ik**, **-i** and **-k** are variants (which, notwithstanding, do not seem to quite have the status of allomorphs).

(112)<sup>ITQ</sup> **Owi na=hak Nodia**

Owi MKCASE=stab Nodia

'Owi stabbed Nodia'

(113)<sup>ITQ</sup> **hak-i Owi**

stab-INTRANSITIVISER Owi

'Owi stabbed herself'

(114)<sup>ITQ</sup> **i-hak Nodia**

1SINGULAR-stab Nodia

'I stabbed Nodia'

(115)<sup>ITQ</sup> **hak-i adu**

stab-INTRANSITIVISER 1SINGULAR

'I stabbed myself'

In none of these clauses can we determine whether the stabber or the stabbed controls the reflexive. In the reciprocal construction, the intransitivisation suffix and the sole remnant noun phrase are the same as in the reflexive construction. A noun phrase-like constituent yielding the reciprocal meaning appears before the verb. Its form is a pronoun 'another one', which we see in (116-117), and which may also have a noun phrase determiner function, as in (118).

(116)<sup>ITQ</sup> **wuradyi o**

wake.up another.one

'Another one woke up'

(117)<sup>ITQ</sup> **o na=hi:kna niama kotuda**

another.one MKCASE=find.over.there then again

'Then another one found it over there again'

(118)<sup>ITQ</sup> **itaro na=o o koya**

woman MKCASE=drink other pap

'The woman drinks other paps'

With this as background, consider the examples of the reciprocal construction in 119-121). In all three cases, the verb appears in its intransitivized form, preceded by the pronominal form **o**. In (119), there is an explicit external noun phrase and in (120) this same noun phrase has been elided. In (121), the reciprocal is used for an event involving only two individuals — the scene is a call to an opponent to fight a duel.

(119)<sup>ITQ</sup> **o pu-k nuk**

another.one eat-INTRANSITIVISER group

'The people ate one another'

(120)<sup>BIA</sup> **o tohi:k-i**

another.one lookat-INTRANSITIVISER

'They looked at one another'



- (121)<sup>ITQ</sup> **o**            **hak-i**            **adik**    **tyo**  
 another.one    spear-INTRANSITIVISER    IPLURAL    EXCLAMATIVE  
 'Let's spear each other'

If we assume that the reciprocal construction is simply built upon the reflexive construction, there is something counterintuitive in adding to an intransitivized clause a second core argument noun phrase, the **o** pronoun. We will return to this matter below in order to account for the syntactic status of the **o** phrase (*circa* (160), section 7).

## 6.2 Applicative

In the applicative construction, a participant which in the basic clause can only be coded obliquely (i.e. in a postpositional phrase) becomes a core argument of the applicative verb. The postposition is incorporated into the verb, with the effect of an increase in valence. Comparing the monovalent clause in (122) to the divalent applicative clause in (123), the external argument of the monovalent clause, **kariwa** 'non Indian', becomes the internal argument of the ergative applicative clause; the external argument slot it leaves behind is taken up by the promoted participant. Examples (124-125) show the same comparison between sentences with pronominal forms, and examples (126-127) show the same comparison, but with another postposition, the recipient-benefactive **ama**.

- (122)<sup>ITQ</sup> **hoki kariwa Poroya na=katu**  
 talk    non.Indian    Poroya    MKCASE=SOCIATIVE.INSTRUMENTAL  
 'The non-Indian is talking to Poroya'

(123)<sup>ITQ</sup> **kariwa na=katu-hoki Poroya**

non.Indian MKCASE=APPLICATIVE-talk Poroya

'The non-Indian is talking to Poroya'

(124)<sup>ITQ</sup> **hoki adu no-katu**

talk 1SINGULAR 2SINGULAR-SOCIATIVE.INSTRUMENTAL

'I am talking to you'

(125)<sup>ITQ</sup> **i-katu-hoki i:dik**

1SINGULAR-APPLICATIVE-talk 2SINGULAR

'I am talking to you'

(126)<sup>ITQ</sup> **Dyomi na=donman-na Mayon na=ama**

Dyomi MKCASE=go.fishing-DIRECTIONAL Mayon MKCASE=RECIPIENT

'Dyomi went fishing for Mayon'

(127)<sup>ITQ</sup> **Dyomi na=ama-donman-na Mayon**

Dyomi MKCASE=APPLICATIVE-go.fishing-DIRECTIONAL Mayon

'Dyomi went fishing for Mayon'

Applicative on divalent verbs results in demotion of the patient to an obliquely marked adjunct phrase, thus keeping untouched the two-place valency of the predicate.

(128)<sup>BIA</sup> **yo-ama-wandoki idi:k don-katu wa**

1SINGULAR- APPLICATIVE-COOK 2SINGULAR fish- SOCIATIVE.INSTRUMENTAL PROSPECTIVE

'I am going to cook fish for you'

Not all applicative constructions result from the incorporation of something as clearly identifiable as a postposition. For example, the applicative prefix **o-** (129) is unattested as a postposition.<sup>48</sup> This applicative seems to cover a large span of meanings around the notion of benefactive-malefactive.

(129)<sup>BIA</sup> **hiya** **Ayobi**

be.afraid Ayobi

'Ayobi is afraid'

(130)<sup>BIA</sup> **Ayobi na=o-hiya** **idi:k**

Ayobi MKCASE=APPLICATIVE-be.afraid you

'Ayobi is afraid of you'

The crucial observation to be made here is that the syntactic position open to host the promoted participant is that of the external argument, prototypically the position of the patient.

### 6.3 Noun incorporation

Noun incorporation in Katukina is not as developed as in other languages of the region, but its motivation seems to be clearly syntactic: It is of the redistributive kind, i.e. its purpose is to demote a participant in order to allow another, syntactically lower ranked, participant, to fill the position that the demoted participant left vacant; as such, there is no change in valence value.

A necessary preliminary to the discussion of noun incorporation is to identify a distinction between mono- and divalent nouns, a morphosyntactic rephrasing of the semantic labels “alienable” and “inalienable”, respectively (see Queixalós 2005). Divalent

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<sup>48</sup> Its origin may perhaps be traced back to the pronoun **o** 'other' seen in 6.1.

nouns are heads of phrases within which a dependent referent has obligatorily overt expression, coded as a case-marked noun phrase or a personal prefix to the head. We saw examples of that structure when introducing the genitive in (4) and (13). When put in predicative function other than existential, these nouns also take an external argument, hence their assumed diadic argument structure. Monovalent nouns, which as predicates also take an external argument, cannot directly be heads of phrases containing a genitive, be it a case-marked noun phrase or a personal prefix to the head. They have to engage in a complex structure, not radically different from the applicative in form, where a 'relational generic noun' (RGN) **wa**, a sort of dummy divalent noun,<sup>49</sup> intermediates between them and their case-marked noun or personal prefix (131-132).

(131)<sup>BIA</sup> **Kontan no=wa<sup>50</sup> hak**  
 Kontan MKCASE=RGN house  
 'Kontan's house'

(132)<sup>BIA</sup> **a-wa hak**  
 3SINGULAR-RGN house  
 'His house'

Divalent nouns may be incorporated into the verb in order to leave their syntactic position free to host another participant, the dependent in the noun phrase they originally head. In (133-136), the promoted participant is expressed pronominally through bound / unbound forms: in a monovalent clause in (133)-(134) and a divalent clause in (135)-(136). In (137-138), the promoted participant has full lexical expression. The functional motivation

<sup>49</sup> Other languages can have a more or less extensive class of these relational generic nouns, the so-called 'genitive classifiers', with more specific but still generic meanings. In Katukina, **wa** is the sole one of its kind, hence no particular meaning beyond 'possessed thing' attaches to it. In the Bia, but not in the Itaquai dialect, the case marker **/na/** requires an allomorph **/no/** when attached to **wa**; rounding is a plausible phonological consequence of the procliticization of **/...a/** to **/w.../**.

for this so-called possessor-promoting incorporation is clearly the foregrounding of a more salient participant.

(133)<sup>BIA</sup> **ti:k yo-ki**

be.black 1SINGULAR-head

'I have plenty of hair [lit.: my head is black]'

(134)<sup>BIA</sup> **ki-ti:k adu**

head-be.black 1SINGULAR

'I have plenty of hair [lit.: I am head-black]'

(135)<sup>BIA</sup> **yo-kohi yo-mi**

1SINGULAR-clean 1SINGULAR-bottom

'I cleaned my bottom'

(136)<sup>BIA</sup> **no-tya-tyurukman adu tyo**

2SINGULAR-penis-chop 1SINGULAR EXCLAMATIVE

'Chop my penis off!'

(137)<sup>ITQ</sup> **Mayon na=tuku Aro na=bakon**

Mayon MKCASE=cut Aro MKCASE=finger

'Mayon cut Aro's finger'

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<sup>50</sup> In the Bia, but not in the Itaquai dialect, the case marker requires here an allomorph /no/, a plausible phonological consequence of its procliticization to **wa**.

(138)<sup>BIA</sup> **Hi:wuk na=pan-tyurukman Dyirimi**

Hiwuk MKCASE=arm-chop Dyirimi

'Hiwuk chopped Dyirimi's arm off'

Monovalent nouns do not incorporate themselves as straightforwardly. No instances are available of such nouns incorporating into monovalent verbs; the few cases of plain incorporation — that is, incorporation being the sole formal change observed on the verb — involve divalent verbs, and these generate monovalent lexical compounds. For example **bara** 'game', and **don** 'fish', combine with **man** 'make' to yield **bara-man** 'go hunting' (lit. 'game-make'), and **don-man** 'go fishing' (lit. 'fish-make', cf. example (126)). Attempts to create sentences typical of productive noun incorporation were rejected (140). Similarly, attempts to create examples of "possessor" promotion with monovalent nouns were rejected (142). Only in combination with the applicative construction is it possible to find productive incorporation of a monovalent noun (144—compare to 127 above).<sup>51</sup>

(139)<sup>BIA</sup> **Hayo na=ho:na poako**

Hayo MKCASE=catch paddle

'Hayo caught a paddle'

(140)<sup>BIA</sup> **\*Hayo na=poako-ho:na**

Hayo MKCASE=paddle-catch

<sup>51</sup> Generic **don**, 'fish', has lexicalized its combination with **man**, 'make, get'. There is no lexicalization on specific zoological nouns as **amatyuru**.

(141)<sup>BIA</sup> **Hayo na=ho:na atya poako**

Hayo MKCASE=catch my paddle

'Hayo caught my paddle'

(142)<sup>BIA</sup> **\*Hayo na=poako-ho:na adu**

Hayo MKCASE=paddle-catch 1SINGULAR

(143)<sup>BIA</sup> **Hayo na=o-poako-ho:na adu**

Hayo MKCASE=APPLICATIVE-paddle-catch 1SINGULAR

'Hayo caught my paddle'

(144)<sup>ITQ</sup> **Dyomi na=ama-amatyuru-man-na adu**

Dyomi MKCASE=APPLICATIVE-fish.sp<sup>52</sup>-make-DIRECTIONAL 1SINGULAR

'Dyomi fished *amatyuru* (fish sp.) for me'

Let us admit that something like Haspelmath & Müller-Bardey's (2004) assumption holds for Katukina, that there are upper limits which lexical primitive verbs impose on the valence of derived predicates, such that if no trivalent verbs exist in the lexicon, then no trivalent derived construction will be allowed. A plausible reason for the observed state of affairs could be that, since monovalent nouns trigger a reduction of verb valence,<sup>53</sup> the only way for a divalent verb to open a syntactic position to an incoming salient participant is to lose a place through incorporation, then create one through applicative. A fine spontaneous example is seen in (145).

<sup>52</sup> In Brazilian Portuguese: *tambaqui*.

<sup>53</sup> More precisely: ...presumably used to trigger at the diachronic stage of the language that saw the creation of lexicalized **don-man** and others.

- (145)<sup>BIA</sup> **a-o-korion-tokman**            **pi:da**  
 3SINGULAR-APPLICATIVE-vine-cut    jaguar  
 'He cut jaguar's vine [the vine the jaguar was hanging from]'

For our current concern, the crucial observation to be made is that the syntactic position from which the noun is demoted to incorporated status is the one initially filled by the external, patient argument.

#### 6.4 Causation

Causatives are achieved through two basic devices: synthetic and analytic. The former appeals to two verb suffixes. The first, **-ti:ki**, allows direct causal as well as permissive meanings.

- (146)<sup>ITQ</sup> **bak**            **barahai**  
 be.good    game.meat  
 'Game meat is good'

- (147)<sup>ITQ</sup> **aobatyawa na=bak-ti:ki**            **barahai**  
 his.wife            MKCASE=be.good-CAUSATIVE    game.meat  
 'His wife improved [seasoned] the meat'

- (148)<sup>ITQ</sup> **aobatsawa na=tyuku-ti:ki**            **Yowai**  
 his.wife            MKCASE=die-CAUSATIVE    Yowai  
 'Yowai's wife let him die'



The second causative suffix, **-man**, is derived from the verb 'make, get, say',<sup>54</sup> yielding a causative construction which in certain cases (e.g. 149) is parallel to (i.e. not discernibly different in meaning from) the **-ti:ki** causative of (147), whereas in others (e.g. 150), it conveys a manipulative causation. By virtue of either suffix, the verb increases its valence, the causee stays intact, and the causer enters the construction at the agent position in an ergative type clause.

(149)<sup>ITQ</sup> **aobatyawa na=bak-man barahai**  
 his.wife MKCASE=be.good-CAUSATIVE game.meat  
 'His wife improved [seasoned] the meat'

(150)<sup>ITQ</sup> **a-wa nyama na=dadohi-man Yowai**  
 3SINGULAR-RGN mother MKCASE=run-CAUSATIVE Yowai  
 'Yowai's mother told him to run'

In analytic two-clause constructions, the main clause is also of the ergative type, headed in the Kanamari dialect by the full verb **man** 'make, get, say' or (less frequently) **nobu** 'give an order', and in the Bia dialect by **ba:bu**, 'make do, give an order'. The causer enters the agent slot of the main clause and the patient slot of the main clause is filled by the caused event together with its participants. Compare synthetic and analytic causation in (151-152). So far, we lack evidence of any difference in content. In (153), we see that manipulation is not an intrinsic semantic function of analytical causation. For divalent verbs, analytical causation is obligatory (154). As before, derived constructions which would create trivalent clauses are avoided.

<sup>54</sup> "Suffix" because if **man** were used as an auxiliary, the two-verb sequence here would be intermediated by the subordinating **nin**, see 2.8.

(151)<sup>BIA</sup> **Raymunda na=dyan-ti:ki Kopa**  
 Raymunda MKCASE=go.hunting-CAUSATIVE Kopa  
 'Raymunda sent Kopa to go hunting'

(152)<sup>BIA</sup> **Raymunda na=babu Kopa dyan-nin**  
 Raymunda MKCASE=make.do Kopa go.hunting-DEPENDENCE  
 'Raymunda sent Kopa to go hunting'

(153)<sup>BIA</sup> **Kopa na=babu oman dawuhan-nin**  
 Kopa MKCASE=make.do tree fall-DEPENDENCE  
 'Kopa felled the tree'

(154)<sup>ITQ</sup> **ma<sub>1</sub>-man-na wiri<sub>3</sub> a<sub>2</sub>-toman-nin**  
 3PLURAL-make-DIRECTIONAL wild.pig 3SINGULAR-shoot-DEPENDENCE  
 'They<sub>1</sub> sent him<sub>2</sub> to shoot wild pigs<sub>3</sub>'

In this section, the crucial observation is that the syntactic position at which the irruptive causer occurs is the one reserved to the main clause agent, instantiated in (154) by the third person plural prefix **ma-** 'they'. As mentioned above, the dependent clause contains the expression of the event, 'shoot', and all its participants, the causee-killer, third person singular prefix **a-**, and the killed, 'pigs'.

## 7 Grammatical Relations and the Diachrony of Ergativity

We established in Sections 1-5 that basic clause alignments, morphological as well as syntactic, clearly entail a hierarchy of core arguments where the patient argument is ranked above the agent argument. We considered this as evidence of a relation between a set of

semantic roles and a set of grammatical relations where the patient maps to the subject (a picture already outlined by Marantz [1984] and a few others, be it in formal frameworks or not)<sup>55</sup> and the agent maps to the object. In Section 6 we saw four processes involving argument structure changes, one more or less neutral in terms of argument hierarchy, the other three neatly biased toward a hierarchy where the agent ranks above the patient. To be more precise, two of them select a syntactic position — host for an applicatively promoted participant, and launcher for an incorporated noun — which typically, universally perhaps, is lower in divalent clauses, and which, both in Katukina and in other languages, is assigned to the patient, and the third selects a syntactic position — host for a causer participant — which typically, universally perhaps, is higher in divalent clauses, and which, again in Katukina as in other languages, is devoted to the agent. In short, (i) basic clause morphosyntax is quite homogeneously ergative, with an antipassive serving the overall ergative pattern and an accusative pattern clearly marked semantically and discursively; but (ii) except for voice (antipassive), derived clause morphosyntax patterns in a very clear accusative fashion, and where it does not, neither does it pattern in an ergative fashion.

Following Baker (1988 : 427-428) this kind of split should not exist, since in an ergative syntax, noun incorporation, for example, should involve the agent argument; only in accusative syntaxes should it involve the patient argument. Yet in Katukina syntax, it involves the patient. The lack of cross-linguistic evidence for agent incorporation should thus, following Baker, be taken as a sign that ergative syntax does not exist altogether. Nevertheless, as far as basic clause structure is concerned, ergative syntax exists in Katukina. This undeniable fact suggests two possible explanations, which may not be mutually exclusive: (i) argument structure changes like those discussed in Section 6 are more driven by

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<sup>55</sup> E.g. Johns (1984), Kibrik (1985), Mel'čuk (1988), Levin (1993), Jacquesson (1994), Manning (1996). Of course, differences in frameworks may lead to differences in proposals. More noteworthy, however, is the fact that along with the assumption that the transitive patient is a subject, we face a pervasive reluctance to draw the

semantic role than is usually suggested by theories, and (ii) the kind of mismatch we are dealing with is typically the result of diachronic drifts that affect different layers of grammar at different rates of speed. I consider each in turn.

Currently, processes that entail argument structure changes are accounted for in syntactic terms: subject, direct object, and so on (e.g. Keenan & Comrie's hierarchies, 1977). If we recognize the ergative nature of Katukina syntax, then accessibility constraints in applicative, incorporation and causative constructions cannot be seen as purely form-dependent, since they clash with the syntactic hierarchy of arguments. In terms of these processes, what Katukina has in common with accusative languages is, in very simplified words: things happen either to agents or to non-agents, involving respectively the agent place and the non-agent place in the divalent clause. Thus, in a causative construction, the causer goes to an agent position (subject in the accusative syntax, object in the ergative syntax); in an applicative construction, benefactive-malefactive participants and the like go to a non-agent position (object in the accusative syntax, subject in the ergative syntax); in incorporation, a non-agent abdicates its non-agent position (object in the accusative syntax, but subject in the ergative syntax). These assumptions may seem a little provocative, but I adduce two facts in favour of the idea that argument structure changes such as the ones considered here may to a certain extent be semantically driven (Croft 1991; Manning 1996; Haspelmath & Müller-Bardey 2004). First, it is notoriously difficult to characterize incorporable nouns cross-linguistically in straightforward syntactic terms. On the one hand, objects are good candidates for incorporation, but adjuncts may incorporate too, as do subjects. On the other hand, not all objects, not all adjuncts, and even fewer subjects incorporate; further, the observable filters imposed on candidates for incorporation seem indeed to be semantically motivated, e.g., when subjects incorporate, they are necessarily poor agents or not agents at all — subject of an

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conclusion that the transitive agent, while clearly a core argument, is an object (Marantz [1984] and, to a lesser extent, Dowty (1991) and [Mahieu [2004] counting among the exceptions).

unaccusative verb, or inanimate subject of a transitive verb.<sup>56</sup> Second, we must decide what kinds of definitions we want for grammatical entities in typology. For example, if we were to give a really functional definition to applicatives, we should have to admit the possibility of applicative constructions where the promoted participant occurs in the subject's position, not the object's.<sup>57</sup> Another track that appears to be attractive in order to account for the mismatch, in Katukina, between formally defined grammatical relations and argument manipulations at work in argument structure changes, lies in diachrony.<sup>58</sup> Verbs, as well as nouns, are unsaturated predicates (Frege 1984 [1891]). Each lexical entry has its intrinsic valence (Tesnière 1959). Let us assume, relying on the similarity between divalent verb phrases and divalent noun phrases — compare (1) and (6) — that contemporary basic clause structure in Katukina started as comparable ones did in other parts of the world (be they recognized as ergative or not), e.g. Austronesian (Haudricourt 1979; Starosta, Pawley & Reid 1982/83, Himmelmann 1991), West Caucasian (Paris 1979), Eskimo (Lowe 1978; Johns 1992), Uralic (Perrot 1994), Maya (Sasse 1991):<sup>59</sup> the divalent verb, found in its basic form in finite accusative-patterned verb phrases, appears also in a non-finite, nominal-like phrase, whose external argument is the patient and whose genitive internal argument refers to the agent, something like the pair in (155).

(155) *a* **the jaguar [killed grandfather]** / *b* **grandfather [(is) the jaguar's killed one].**

<sup>56</sup> Rice (2008) provides nice Athapaskan examples of semantically atypical subjects of transitive which undergo incorporation.

<sup>57</sup> Extremely common in several Romance languages, like this real life instance from Brazilian Portuguese, in its literal English translation: 'Damn it! It's been a bad day. **I** had *the car* stolen, *the foot* cut, and *the wife* taken to the hospital.' (Walkiria Praça, p.c.). An indirectly involved participant — owner, whole, partner — of the respective patients — car, foot, wife — enters the core not as the object of an applicative verb, but as the subject of a main (if semantically vacuous, indicating nothing more than involvement) predicate.

<sup>58</sup> This part of the argument owes much to conversations with Spike Gildea. I must admit that it has a strong speculative bias (for which I claim full responsibility, of course), since no comparative data are available for reconstruction.

<sup>59</sup> For a more recent survey than Allen (1964), see Lazard (2004)

Several questions arise. Concerning motivation, we can tentatively try to figure out what functional factors might have led speakers to create a patient-orientated nominalization, the *b* synchronic alternative to (155)*a*, reversing the grammatical hierarchy between the killer and the killed: obliterating/lowering the salience of an event's agent is a linguistic attitude that speakers from everywhere adopt permanently in daily life, and is probably more frequent than — but not exclusive of — highlighting a non-agent. Can this lead to morphosyntactic crystallisation beyond the cross-linguistically multiple and well documented productive derivational mechanisms devoted to this task? By "morphosyntactic crystallisation" I mean that the *b* option eventually becomes the primary, basic way to describe an event. Grammaticalization necessarily entails form progressively taking over function and introducing arbitrariness — structure — in linguistic expressions. As a result, the original motivation for a given pattern may get eroded up to complete disappearance. If Foster's (1979) observations are right, a split in transitivity leading to the creation of an ergative clause type is on its way, before our eyes, in a variety of American English, with obvious cultural and cognitive factors involved.

A second question deals with the possibility of positing the accusative clause in (82) as a remnant of the basic divalent clause prevailing before the upheaval in which (155)*b* becomes basic. Provided, of course, that the monovalent clause remains unchanged through time. One clue to the validity of this assumption is that it lends a simpler picture of the way the ergative pattern appeared, by preserving the sequential order *predicate - subject*. Furthermore, the synchronic semantic restriction — genericity — imposed on its object is accounted for in a natural way as an effect of the very general affinity between subjecthood and specific reference: divalent clauses with generic objects did not shift to the ergative pattern (*cf.* Trask's explanation for noun phrase splits [1979:394]).

Another question raises the issue of the destiny of the grammatical devices — the equivalents of past and copula morphemes in the English rendering in (155) — that are presumed to have given the clause its finite character before the verb phrase took its nominal move. The fact is that today no TAM morphology shows up in verbs, in either of the transitive patterns or in the intransitive clause. The lack of finite morphology on today's accusative construction points to two logical possibilities: 1) no such morphological devices existed at the time accusativity obtained in the language, and the accusative construction is indeed a relic of the former basic finite clause; or 2) the accusative construction too is the result of a nominalization. I would be prone to favor the first option for the following reasons: the ergative construction is the only one to display explicit morphology typical of nominalizations, namely the affixation of a "possessive" pronominal form to the verb;<sup>60</sup> seeing the accusative construction as a nominalization forces us to see the intransitive construction in the same way, that is a nominalized verb. Particles perform, today, the task of expressing finiteness — together, perhaps, with the as yet poorly-studied copula on true nominal predicates. If particles were present in the accusative times, the nominalizing process of the verb could have been easier to deal with in terms of morphological apparatus. Contemporary particles (another still poorly-studied area of Katukina grammar) are fully used only in verbal independent clauses, a fact which strengthens the idea that former deverbalized constructions have recovered finite properties.

The last question bears on the status of arguments through time. It is important to see that the killer in (155)*b* (**jaguar**) is by no means an adjunct phrase: it is the internal argument of the predicate phrase headed by the noun **the-killed-one**. The reanalysis undergone by (155)*b* consists in reading the constituent between square brackets as a finite verbal phrase. As a consequence, its internal noun phrase ceases to be the modifier of a nominal head and

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<sup>60</sup> See the punctual-perfective predicates in Indonesian (Verhaar 1983) for an example of nominalization achieved through this same single device.

captures some properties of a clause level co-argument, precisely those which select the lower ranked co-argument of the predicate, that is, an object (see Section 5 *in fine*). Now, I take the lack — or the weakness — of coreference pivots (Section 3) as a symptom that the agent not only shifted from the status of a phrase structure element to the status of a clause structure element, but that it took its first step toward the gradual attracting of the subject properties until then exclusively owned by the patient-subject. This point is crucial: in its drift from "non-term" status — noun phrase modifier<sup>61</sup> — to subject status, I see it as highly probable that the agent goes through a phase where it typically has the status of a lower ranked core argument, *not* of an inverse clause — and this is crucial, see Section 8 — *but* of a basic clause. This phase is exactly that which Katukina data attest (see Section 8 for the significance of this state of affairs). What the future steps should be is a fascinating theme of investigation for languages where comparative work is possible, but we can assume that eventually the agent phrase will leave the verb phrase (see Mahieu [2004] for an illuminating discussion of this issue in Eskimo).

Now we return to the mismatch between basic clause patterns and argument structure changes. We may safely speculate that in the accusative ages speakers already needed to pack the delivered information into reflexive, reciprocal, applicative, incorporative, and causative moulds and that they did this based on the patterns that obtained at that time, specifically, nominative-accusative alignment:

(156)<sup>ITQ</sup> **koya o adu**  
 pap drink 1SINGULAR  
 'I drink pap'

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<sup>61</sup> Or obliquely marked adjunct such as instrumental or others, so often observed in Australian languages.



(157)<sup>ITQ</sup> **tyuku wa:pa**

die dog

'The dog died'

As far as divalent basic clauses were concerned, it was the positions occupied by the patient and the agent in (156) that argument structure-changing mechanisms took as the origin and/or target of the displacements imposed on participants. The historical scenario is not that the basic clause alignment switched to ergative and then speakers wondered how to achieve argument structure changes within the new situation, but that they kept the old mechanisms as they were and mapped upon them the nominal-like predicate phrase structure that gave birth to the ergative pattern. This is because what speakers are interested in is what to do with participants, not what to do with syntactic positions. In a word, I assume that today's situation is a mix of — putatively — cross-linguistic semantic-based argument structure variations, and recent ergativization of basic clauses that has left almost untouched the mechanisms by which these variations were accomplished.

Some evidence of the accusative clause as the soil on which variation mechanisms took place comes from two different sources. (i) Causation is still possible on the contemporary accusative clause when its patient bears generic reference, as in (158)<sup>62</sup> morphologically causativizing a monovalent, and (159) analytically causativizing a divalent clause.

(158)<sup>BIA</sup> **nayo tahi piaya-ti:ki**

mother water be.hot-CAUSATIVE

'Mother heated water'

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<sup>62</sup> Note this instance of agent movement from post-verbal to initial position.

(159)<sup>ITQ</sup> **tyo-nobu niama koya bu-nin**

1PLURAL-order then pap do-DEPENDENCE

'We then sent her to make pap'

(ii) Recall that the reciprocal construction (as in 160, formerly 121) is built on the intransitivizer suffix which serves the purpose of reflexivization, plus a pronoun 'other' in preverbal position. A possible way of accounting for the somewhat strange occurrence of an extra core argument — pronoun **o** — in a monovalent clause [[verb-**i**] [external argument]] is to assume that the valence-reducing mechanism is based on the accusative pattern. Under this analysis, the 'one another' phrase began as a dummy, non-referring argument occupying the patient internal position of a divalent verb phrase in an accusative clause which, eventually, attracted the valence reducing suffix.

(160)<sup>ITQ</sup> **o hak-i adik tyo**

another.one spear-INTRANSITIVISER 1PLURAL EXCLAMATIVE

'Let's spear each other'

To sum up, I assume that the shift to ergativity is a very recent event in this language. For this reason, even though ergative patterns are pervasive, argument structure-changing devices still operate in old moulds, appearing perhaps as a conservative domain of syntax.

## 8 Conclusion

Whatever theoretical background the observer relies on, ergativity shows up as a kind of a puzzle for two reasons. First, current paradigms — notably built on European languages — are at odds with grammatical systems which seem to suffer from a sort of

schizophrenic disease — an object that looks like a subject and so on. Second, currently labelled ergative languages display extraordinarily heterogenous patterns, internally and cross-linguistically. This could lead us to cast doubt on the very existence of ergativity as a licit object of scientific thought, an idea that follows the lines of: this object, having no consistent internal structure to be described, is no scientific object at all (see DeLancey 2004).

In my opinion, an ergative pattern is one in which core arguments of a basic divalent construction display a mapping between their semantic roles and their morphosyntactic properties so that the patient formally outranks the agent. "Basic" is to be understood in terms of semantic prototypicality, simpler formal defining features, and higher frequency in discourse. "Outrank" has two meanings: a) an argument is non-marked in terms of coding devices, i.e. it is coded in the same way as the sole argument of the basic monovalent construction; b) an argument is privileged for accessing syntactic phenomena sensitive to some hierarchy of arguments, in much the same way as the sole argument of the basic monovalent construction. Thus, merging ergativity with the passive is discarded because the passive is neither basic nor divalent; nor could this be done with the inverse because the inverse is not basic; nor with split intransitivity (classically, so called active/stative systems) because there is, in this case, no monovalent construction that may be called more basic than another. Moreover, this definition of ergativity also leads us to discard what we may call ubiquitous ergativity, pervasive in many phenomena — not necessarily peripheral in grammar but, indeed, not at the core of finite basic clause patterns — throughout all types of languages (e.g. plurality of an absolutive argument on suppletive or reduplicated verbal forms, but also nominalizations). Whether or not one and the same argument captures properties a) and b) yields, respectively, homogenous ergativity (morphology and syntax) or heterogenous ergativity (only morphology). Note that by this

definition, the difference between the nominative-accusative pattern and the absolutive-ergative pattern rests solely on how semantic roles map onto morphosyntactic entities. (A clear parallel to this is the direct-indirect object vs. primary-secondary object distinction launched by Dryer 1986.) From a strictly formal point of view, both patterns are identical and, in name of parsimony in science, no need for different concepts arises. This is Marantz's (1984) position on ergativity (and my own [2003a] on the hierarchy of objects).

Concerning ergativity, I take the stand that a formal account that consists in rejecting the relevance of semantic roles is healthy up to a point, when the goal is to describe *how* the grammar works. If beyond that point the goal turns out to be understanding *why* grammar works as it does, something more than synchronic form is needed. Given the increase in the number of descriptions and in the number of more or less theoretically oriented accounts of ergative systems during the last thirty-five years or so, I assume that if ergativity continues to be a puzzle, it is because we have overlooked the intertwining of two fundamental factors at work in the shaping of linguistic form: cognition and diachrony.

As for cognition, I put forward the *cognitive accusativity* hypothesis. I assume that the human mind introduces asymmetry when processing the two participants of a transitive event, as a consequence of being pre-conditioned to pay attention to — other things equal, especially humanness — entities that move, especially when they have a visible effect on other entities in the world. This lends the agent a clear privilege for attracting attention, which, as Tomlin has experimentally established (1997), correlates well with properties associated with subjecthood in natural language.<sup>63</sup> Grammars map this cognitive bias toward agent when they adopt accusative morphosyntactic alignments. Ergativity is thus to be seen as a highly marked pattern for morphosyntax. The label "cognitive accusativity" is perhaps new, but the idea behind it certainly is not (see Silverstein 1976; Keenan 1976;

Dixon 1979; Givón 1981). The problem here is that the idea has been appealed to solely by linguists speaking about grammar. This issue definitely demands the support of evidence coming from experimental psychology.<sup>64</sup>

Turning to diachrony, the cognitive accusativity hypothesis and its corollary, ergativity as a marked pattern, have a plausible consequence: such a grammatical system should be diachronically unstable (see Comrie 1978; Estival & Myhill 1988).<sup>65</sup> This would account for the observed fact that ergative languages are much less frequent than accusative ones (Mallinson & Blake 1981) and that homogeneously ergative languages such as Katukina are a minority within this minority. Their ergative architecture fades faster due to its mismatch with cognitive accusativity, therefore it must be less observable "in nature". This leads me to posit a complementary hypothesis, that of the *reaccusativisation path*. It involves the grammatical status of the agent. When, for whatever reasons in the history of the language, a structure with a lower ranked agent takes over from another type of basic clause pattern, the agent immediately starts on its way to recovering the privileges that the ergative upheaval suddenly let the patient take for itself. This is accomplished gradually, and another — and related — fascinating research programme would consist in seeing whether this reaccusativisation path is uniformly unidirectional, and predictable in its successive stages. For example, I take the weakness, or lack, of coreference pivots in Katukina as clear evidence that the agent already engaged in the reaccusativisation path.<sup>66</sup>

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<sup>63</sup> Thanks again to Spike Gildea for helping me formulate this idea more elegantly.

<sup>64</sup> Goldin-Meadow's (2003) experiments on deaf children are exactly the type of tests we are in need of. I say "tests", not results: the author reaches the conclusion of the existence of a cognitive ergativity (my terms). Nevertheless, the actual results are in fact revealing of something different, namely what I call the all-intransitive — stage of — languages: a grammatical architecture whereby no lexical verb root has a primitive valence superior to one (much in the vein of Nichols [1982] and Mel'čuk [1988] on North-East Caucasian languages, Dixon [1988] on Polynesian, or Beck [2000] on Salishan: most or all transitive verbs are explicitly derived). A stage which I consider to be, along with derived monovalent predicates (either verbal or deverbalized), the only other possible origin of homogenous ergativity. I am indebted to Andrew Nevins and Gilles Authier for calling my attention to Goldin-Meadow's and Beck's works, respectively.

<sup>65</sup> Note, however, the strong time stability that Kaufman (2007) credits comparable structures in Austronesian, which, nonetheless, have undergone "disintegration" in the Indonesian branch, as the same author points out.

<sup>66</sup> Recent observations suggest that the Bia dialect is more conservative than Kanamari in this respect. Yanomami, as described by Ramirez (2003), seems to be at a slightly earlier stage than Katukina.

the linguistic expression of the agent began to capture subject properties with respect to coreference. In fact, I assume, based on fragmentary empirical observation and the consideration of 1) discourse topicality of agents (Du Bois 1987), 2) ease of reanalysis, that this is the very first step which diachrony takes cross-linguistically once the agent is back into the sphere of core arguments. Another example, at the opposite end, is: extraction mechanisms, and particularly relativization, could be among the last ergative syntactic patterns to be dropped.<sup>67</sup>

In my view, the puzzle, the schizophrenia, the heterogeneity which are so frequently assigned to ergativity boil down to the fact that this once — not so long ago — exotic feature of grammars is, more often than not, scrutinized through strictly synchronic slices, and that when diachronic considerations enter the scene, no such model as the reaccusativisation path is at hand.

I conclude with one of those field work anecdotes which — if I may paraphrase Givón's (1973) metaphor — make the linguist feel like an archaeologist stumbling over a stone axe. The assumption that ergativity is recent in Katukina ensues from (i) the strong homogeneity of ergative patterning, (ii) in part, the still clearly accusative bias of argument structure-changing mechanisms, (iii) the incipient renegotiation of coreference rules, *and* (iv) a tiny clue to some kind of a relic of functional motivation for the ergative construction, involving focus on the patient. During an elicitation session with an informant, I was once working on the accusative construction, illustrated in (82), which I recall here as (161). Eventually we came to test the compatibility of determiners with the internal complement of the accusative construction, and I suggested (162), which was

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<sup>67</sup> For Van Valin (1981), relatives — and clefts, both extraction processes — would be at both ends of the diachrony of ergative syntaxes. Shipibo-Konibo relatives — the only ergative syntactic feature — could be a relevant instance of my assumption (Valenzuela 2004; but since relatives are akin to nominalizations, what we have is perhaps a mere instance of ubiquitous ergativity — see above for this notion). Also Yupik (Miyaoka 1986). Many discussions with Nicole Tersis and Marc-Antoine Mahieu led me to the strong feeling that Eskimo variants, if observed through the double prism of the diachronic axis past-present and the geographic axis west-east, offer us a near-perfect movie picture of the reaccusativization path. See also Johns (2006).

straightforwardly rejected as ungrammatical. Correcting the sentence, the informant proposed spontaneously the ergative (163), with the demonstrative on the patient showing up as a sort of floating determiner.<sup>68</sup>

(161)<sup>ITQ</sup> **koya o adu**

pap drink 1SINGULAR

'I drink pap'

(162)<sup>BIA</sup> **\*itohuyan anya hi:k opatyin**

that woman find child

'The child found that woman'

(163)<sup>BIA</sup> **itohuyan a-hi:k anya**

that 3SINGULAR-find woman

My expectation was that, following the common definite reading of the personal prefix, the translation of the example would have been 'He found that woman', with perhaps some emphasis on the ostensive intention about the woman. But when asked for its equivalent in Portuguese, and in spite of both of us having been talking at length about the child as the finder, the informant uttered: 'Foi achada aquela mulher', literally 'Was found that woman'. Now, a canonical passive is less than common in Bia Katukinas' Portuguese, who are far from fluent in that language. In fact I have never heard a spontaneous one since that day. Thus, we must credit my informant with a good reason for proposing such a translation. For me, the reason is that the ergative pattern is so recent that it still retains something of its original pragmatic motivation, namely, relegating the agent.

<sup>68</sup> A fact not irrelevant for the hierarchy issue: Shibatani (1991), for instance, mentions the ability to launch

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floating quantifiers as a subject property controlled by topichood.

<sup>69</sup> Available at [http://celia.cnrs.fr/FichExt/Documents%20de%20travail/Ergativite/Introductions\\_ergativite.htm](http://celia.cnrs.fr/FichExt/Documents%20de%20travail/Ergativite/Introductions_ergativite.htm).



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<sup>70</sup> See footnote 71.

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<sup>74</sup> See footnote 71.

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