como bem nos apontou João Costa durante a apresentação deste trabalho ao PPGLL/ UFAL. Note-se, entretanto, que esta possibilidade pouco ajudaria nossas hipóteses, segundo as quais gênero semântico, e não especificidade, é o fator primordial.

11 A nosso ver, o principal deles reside no fato de que a hipótese de que os ONs são pronominais prediz que devem ser regidos pelo Princípio B, e não pelo Princípio C, da Teoria da Ligação. Ainda que os proponentes da hipótese sustentem que esta predição se confirma (cf. Bianchi & Figueiredo Silva 1994, Kato 2003), gostaríamos de declarar aqui que ainda não estamos convencidos disso. Para alguma discussão das razões que temos para esta posição, ver Menuzzi (1994).

# SYNTACTIC ERGATIVITY AND ARGUMENT HIERARCHY IN KADIWÉU<sup>\*</sup>

Filomena SANDALO UNICAMP

#### RESUMO

Este artigo analisa dados do Kadiwéu e, com base na ordem dos constituintes e posição do advérbio, mostra que, assumindo-se a proposta de Jelinek e Carnie (2003), é possível identificar claras evidências de ergatividade sintática no Kadiwéu. Os dados deste artigo derivam de Sandalo (1995, 1997), de notas de campo (1993-1999) e de pesquisa de campo mais específica sobre esse tema.

#### ABSTRACT

This paper analyzes data of Kadiwéu and shows, via constituent order and adverb placement, that, assuming Jelinek & Carnie's proposal, it is possible to appreciate clear evidence for syntactic ergativity in Kadiwéu. The data for this paper come from Sandalo (1995, 1997), from field notes (1993-1999), and from more specific field research in this topic.

#### PALAVRAS-CHAVE

Ergatividade, Estrutura Argumental, Kadiwéu.

#### KEYWORDS

Ergativity, Argument Hierarchy, Kadiwéu

#### 1. Introduction

Person hierarchy has been a topic of concern in the typological literature since the seventies (cf. Dixon 1994). Only recently person hierarchy has been approached in formal linguistics. Aissen (1999, 2000) has formalized the phenomenon in terms of ranked constraints built out of relational hierarchies by means of Functional Optimality Theory. This is not, however, the only approach to person hierarchy in formal linguistics. Jelinek (1993, 2000), Isaak (2000), and Jelinek & Carnie (2003) have approached this topic in a very different perspective, and the papers by Aissen brought about an interesting quarrel about this phenomenon (cf. Carnie 2002). Jelinek & Carnie (2003) attempted to show that the phenomena of ergative splits, object shift, differential object marking, dative/accusative alternations, clitic placement, and voice alternations driven by argument hierarchies are sensitive to presuppositionality and they claim (following the work of Jelinek 1993, 2000 and of Isaak 2000) that all phenomena driven by argument hierarchies are better explained from the perspective of Diesing's (1992) mapping hypothesis syntactically encoded.

According to Diesing (1992), there is a direct mapping between syntactic constituent structure and semantic structures at some level of representation. In this hypothesis, the clause is divided into a nuclear scope (VP), that asserts the truth of the entities and provides the new information of the clause, and a restrictor, that asserts the presupposed information. Only non-presupposed material is allowed to stay in the nuclear scope. Presupposed material must leave the nuclear scope and be placed in the restrictive part of the clause.

This paper analyzes data of Kadiwéu and shows, via constituent order and adverb placement, that, assuming Jelinek & Carnie's proposal, it is possible to appreciate clear evidence for syntactic ergativity in Kadiwéu. The data for this paper come from Sandalo (1995, 1997), from field notes (1993-1999), and from more specific field research in this topic in January of 2004 (during the Field Methods

Class in EVELIN), and in November of 2003 and February of 2004 in the Kadiwéu territory.<sup>1</sup>

# 2. Agreement and ergativity

Kadiwéu does not have case marking morphemes on nouns, but its agreement morphology indicates an ergative case system, as discussed below.

Kadiwéu has agreement prefixes for internal and external arguments. But direct arguments are in complementary distribution. There is a person hierarchy, 2 > 1 > 3, that defines the argument that is morphologically marked. If the object is third-person, a transitive verb agrees with the external argument regardless of the person of the subject:  $^2$ 

- 1 jema: j-ema:n 1SUBJ-want/love 'I love him/her.'
- 2 jema:naGa j-ema:n-Ga 1SUBJ-want/love-pl 'We love him/her.'
- 3 ema:ni
  a-ema:n-i
  2SUBJ-want/love-pl
  You love him/her.'
- 4 yema: y-ema:n 3SUBJ-want/love 'He/she loves him/her.'

But the verb agrees with the internal argument if the external argument is third person and the internal argument is first or second person. In this case, the morpheme d:- 'inverse' must be present:<sup>3</sup>

- 5 id:ema:i-d:-ema:n1OBJ-inverse-want/love'He/she loves me'
- 6 God:ema:

  Go-d:-eman
  1plOBJ-inverse-want/love
  'He/she loves us'
- 7 Gad:ema:ni
  Ga-d:-eman-I
  2OBJ-inverse-want/love-pl
  'He/she loves you'

When there is no third person involved (that is, the direct arguments are first and second persons), the second person argument is marked. The inverse morpheme must be present.

- 8 Gad:ema:ni
  Ga-d:-eman-i
  2OBJ-inverse-want/love-pl
  'I love you'
- 9 ad:ema:ni
  a-d:-eman-i
  2SUBJ-inverse-want/love-pl
  'You love mc'

Intransitive verbs (i.e. unaccusatives, reflexives, and verbs that contain an incorporated noun) are marked by subject prefixes that differ from the subjects of transitive sentences. Below are some examples to illustrate the intransitive agreement pattern.

- 10 id:acotaGa
  i-d:-acodi-Ga
  3SUBJ-inverse-go.down-pl
  We go down.'
- 11 d:apiqo
  O-d:-apiqo
  3SUBJ-inverse-warm
  It is warm.'
- 12 id:aqakGa
  i-d:-aqag-Ga
  1SUBJ-inverse-squat-pl
  'We squat.'

To sum up, Kadiwéu has a tripartite agreement system. Figure 1 below presents the three sets of agreement markers. Figure 1 attests that the intransitive set of agreement markers is different from the set of transitive subject agreement markers. Note that the fact that intransitive verbs are marked by a set of subject markers that differs from the set that marks the subject of a transitive verb indicates an ergative system.

	SUBJECT	SUBJECT	OBJECT	
Service Service	(transitive)	(intransitive)	100000000000000000000000000000000000000	
1sg	j-salata de	ain 用指导系统	alm lesses and	
2sg	ai ***	ai	Ga-	
3sg	y w-	Ø-50-55		
1pl	jGa	iGa	Go	
2pl	a1 *** * 1 ***	a-1i	Gai	
3pl	yGa	0-0		

Figure 1: Agreement

One could, obviously, question whether the Kadiwéu agreement patterns indeed indicate an ergative system or whether its agreement system is merely a morphological idiosyncrasy. Next section shows by adverb positioning and other constituent order that Kadiwéu is indeed a syntactic ergative language that shows a split driven by person.

# 3. The mapping hypothesis and ergativity in Kadiwéu

There are syntactic facts that show that Kadiwéu is indeed a syntactic ergative language. The first of these facts concerns focalization of subjects. As in syntactic ergative languages (see Bittner & Halle 1996), one can focalize an internal argument of a relative clause in Kadiwéu. But it is necessary to antipassivize a transitive verb to focalize its external argument in the same situation:

16.José	ane	yema:	Maria.	
José	ane	y-ema:n	Maria	
José	relative	3SUBJ-want/loveMaria		
It is J	osé that Ma	ria loves.'		

17 José	ane	nema:ta	Maria.
José	ane	Ti-n-ema:n-t-e-wa	Maria
José	relative	3SUBJ-antipassive-want/love-EPN-3OBL-dative	Maria
It is	José tha	t loves Maria.'	

Other traditional tests for syntactic ergativity do not work consistently, however. Thus, if we coordinate sentences, the internal argument of a transitive sentence is preferred to be co-indexed with an intransitive subject but this is not obligatory. Also, it is better to anti-passivize a sentence to relativize its transitive subject but this is not obligatory. Thus, other tests must be developed to clarify the analysis of Kadiwéu case system. This is what follows.

As mentioned above, Jelinek & Carnie (2003) argue that all phenomena driven by argument hierarchies are a reflex of Diesing's (1992) mapping hypothesis syntactically encoded. Recall that, in Diesing's hypothesis, the clause is divided into a nuclear scope (VP), that asserts the truth of the entities and provides the new information of the clause, and a restrictor, that asserts the presupposed information. Only non-quantificational/non-presuppositional material (like non-specific indefinites) is allowed to stay in the nuclear scope. Presupposed material (like definite NPs) must leave the nuclear scope and be placed in the restrictive part of the clause.

Jelinek (1993) notes that split case systems driven by person tend to occur in languages that do not have determiners. In these languages, third-person arguments are non-specific indefinites and therefore they are allowed to stay in the nuclear scope. First and second person arguments are intrinsically definites and therefore they must leave the nuclear scope and be placed in the restrictive part of the clause.

In Kadiwéu, argument hierarchy affects agreement, as seen above, as well as constituent order, as it can be noticed in the data below. First/second person internal arguments must precede the verb (OV order) but third person internal arguments follow it (VO order):

18.Goti aqa:m:i Gad:ema:ni
Goti aqa:m-i Ga-d:-ema:n-i

Goti 2PRONOUN-pl 2OBJ-inverse-want/love-pl

'Goti loves you'

19.Goti yema Ekode

Goti y-ema:n Ekode

Goti 1SUBJ -want/love Ekode

'Goti loves Ekode'

The fact that first and second person, but not third person, internal arguments must precede the verb in Kadiwéu suggests that Jelinek & Carnie's proposal is on the right track. That is, this fact suggests that a definite internal argument must leave the VP.

Constituent order by itself, however, is not conclusive evidence. It is tradition in generative syntax to take adverbs as diagnostics for movement of other constituents. Assuming that adverbs are adjoined to VP, all elements preceding the adverb may be argued to be outside VP, and all elements following the adverb are inside VP.

Kadiwéu does not have many adverbs. Most of the notions expressed via adverbs in better known languages are expressed via predicates in this language, but there are at least three real adverbs: ejime 'perhaps', jaG 'already', and eG 'still'. 5 'These adverbs have exactly the same behavior concerning all the data discussed below.

# 3.1. Adverbs and external arguments:

Note that there is an interesting contrast in the pattern of adverb placement according to the person of the external argument:

20. jeG Ecabigo yema: Ekode

21. jeG Ecabigo aqa:mi Gadema:ni

22. \*jeG ee aqa:mi Gadema:ni

23. \*jeG ee jema: Ecabigo

A pronoun subject (first and second persons) cannot ever be preceded by an adverb, what shows, assuming that the adverb is adjoined to VP, that a subject pronoun must be in a high subject position (probably SPEC, TP) like the subjects of better known accusative languages.

As the examples above show, however, an adverb, in this case jaG 'already', can precede a third person external argument. The fact that an adverb precedes a third person external argument suggests that this subject is not in SPEC, TP. It must be in a lower position, inside vP. Many authors have claimed that an ergative subject is licensed in situ (e.g. Nash 1996, Bitter & Hale 1996). This is the case of third person external arguments in Kadiwéu. They are ergative.

### 3.2. External arguments in embedded clauses

A third person external argument can (optionally) occupy a pre-complementizer position in embedded clauses in Kadiwéu. An internal argument cannot, regardless of its person if the external argument is third person. In the data below the complementizer is me and it is underlined.

(3rd person subject, 3nd person object)

24.Paulo yo:wo Exabigo me yema: Ekode
Paulo 3SUBJ-thinks Exabigo COMP 3SUBJ-want/love Ekode

25.\*Paulo yo:wo Ekode me yema: Ecabigo Paulo 3SUBJ-think Ekode COMP 3SUBJ-love Ecabigo

Paulo thinks that Ecabigo loves Ekode'

(3rd person subject, 2nd person object)

26.\*Paulo yo:wo aqa:mi me Gadema:ni Ecabigo

27. Paulo yo:wo me aqa:mi Gadema:ni Ecabigo

28.Paulo yo:wo Ecabigo me aqa:mi Gadema:ni

'Paulo thinks that Ecabigo loves you'

Note, however, that a first/second person external argument cannot be placed in the pre-complementizer position. The object moves (optionally) instead regardless of its person:

(2nd person subject, 3rd person object)

- 30.\* Paulo yo:wo aqa:mi <u>me</u> ema:ni Ecabigo Paulo 3SUBJ-thinks 2PRONOUN COMP 2SUBJ-love/want-pl Ecabigo
- 31. Paulo yo:wo me aqa:mi ema:ni Ecabigo
- 32. Paulo yo:wo Ecabigo me aqa:mi ema:ni
- 33. Paulo yo:wo me Ecabigo aqa:mi emaani

'Paulo thinks that you love Ecabigo.'

(neither subject nor object 3rd person)

- Paulo yorwo ee <u>me</u> aqami Gademani
   Paulo 3SUBJ-think 1PRONOUN COMP 2PRONOUN 2OBJ-love-pl
- 35. Paulo yo:wo me ee aqa:mi Gademani
- 36. Paulo yo:wo aqa:mi me ee Gadema:ni

'Paulo thinks that I love you'.

The facts concerning the position of subjects in embedded clauses are further evidence for the claim that third person external arguments and first/second person external arguments do not occupy the same syntactic position.

#### 3.3. Adverbs and internal arguments

The adverbs ejime 'perhaps', jaG 'already', and eG 'still' can occupy any of the positions marked by (X) in the data below. The sentence is ungrammatical, however, if the adverb is placed in the position marked by (\*).

- 37.Ecabigo (X) yema: (\*) Ekode Ecabigo 3SUBJ-love Ekode
- 38.Ecabigo (X) aqa:mi (X) Gadema:ni Ecabigo 2PRONOUN 2OBJ-inverse-love-pl

Some examples follow:

- 39. Ecabigo ja yema: Ekode 40.\*Ecabigo yema: jeG Ekode
- 41. Ecabigo jaG aqa:mi Gadema:ni 42. Ecabigo aqa:mi jaG adema:ni

The data show that an adverb cannot interfere between the verb and a post-verbal object. Recall that an object is post-verbal (VO order) when it is third person. The facts concerning adverb placement show that a post-verbal internal argument is internal to VP.

First and second person direct internal arguments cannot ever be post-verbal, however. They must be placed before the verb (OV order) and the inverse morpheme appears obligatorily. An adverb can occur between the verb and the object if the object is preverbal, and it shows that a preverbal internal argument has moved to outside of VP. Preverbal internal position arguments are first and second persons. I believe that the inverse morpheme is the head of a functional projection that receives an internal argument dislocated out of the VP. Note that the fact that an adverb can intervene between an ergative subject and an absolutive object shows that this object occupies the specifier position of an independent projection rather than a second specifier of vP.

Note that although many theories of ergativity postulate that the internal argument of an ergative language occupies the SPEC position of TP (cf. Nash 1996 and Bittner & Halle 1995 for the language

es that they label syntactically ergative), Kadiwéu does not favor this hypothesis. Although a definite (first and second persons) internal argument leaves the VP, it is lower than any subject. There are two pieces of evidence that it is lower in syntax than the subject: (i) it linearly follows the subject and (b) in embedded clauses a third person subject (the one that is licensed *in situ*) has priority over an internal argument to move, as seen in section 3.2.

The Kadiwéu facts concerning internal arguments resemble some facts of North American languages. The inverse voice (morphologically marked here by the inverse d:-) is used when the internal argument is presupposed. Like in a passive, the internal object is fronted, but unlike the passive, there is no intransitivization and no argument is demoted.

Carnie & Jelinek adopt a particular view of phases that is different from the one proposed by Chomsky (2001). They state (2003:8):

"Chomsky proposes that phases are, in essence, propositional; they consist of a predicate and its arguments (vP), or a temporal and force operator (TP or CP). Carnie offers an alternative view of phase. In this approach, phases minimally consist of (a) a predicative element (v or V), (b) a single argument (NP), (c) a temporal operator that locates the predicate and argument in time and space (Asp or T). For a single transitive clause, then, the first phase of a sentence consists of a lexical predicate which expresses an event or state (V), any internal arguments, and the Asp head."

The authors propose that definite objects shift from inside the VP (possibly at LF in some languages) to the specifier of a projection above VP to get out of the nuclear scope defined by VP in better known languages. In Kadiwéu a presupposed internal argument (absolutive object) moves overtly. In other words, I believe that the inverse morpheme is a morphological realization of such projection.

# 4. Contrastive focus of objects

It is important to mention that while a first/second direct internal argument cannot ever be final, a third person internal argument can occupy a preverbal position. Note, however, that, in this case, it is interpreted as in contrastive focus. A preverbal focused object does not trigger agreement and the inverse morpheme does not appear:

43. Ecabigo Ekode yema:

Ecabigo Ekode 3SUBJ-love/want

Ecabigo loves Ecode (not somebody else)

One could question whether a third person in contrastive focus occupies the same position as the internal argument of the inverse voice (first/second person). Negation placement indicates that they do not occupy the same position: <sup>6</sup>

Ee aqa:mi a(G) Gademani 1PRONOUN 2PRONOUN NEG 2OBJ-inverse-love/want-pl I don't love you

44. Ecabigo a(G) yema: Ekode Ecabigo NEG 3SUBJ-love/want Ecabigo doesn't love Ecode.

45.\*Ecabigo Ekode a(G) yema: Ecabigo Ekode NEG 3SUBJ-love/want Ecabigo doesn't love <u>Ecode</u>

46. Ecabigo aG Ekode yema: Ecabigo NOT Ekode 3SUBJ-love/want Ecabigo doesn't love <u>Ecode</u>

As it can be noticed above, a verb can be modified by aG 'not' when there is a pre-verbal object pronoun (inverse voice) but the same is not true if the object is a focused noun. The negative morpheme must precede the object.

FILOMENA SANDALO

Additional evidence for the claim that a focused object and an internal argument pronoun are not in the same position comes from the fact that there is no complementary distribution between a preverbal pronoun and a focused third person:

47. aqa:mi <u>libole</u> jolataGadomi
2PRONOUN meat 1SUBJ-give-EPN-2OBL-benefactive
I give you the meat (not something else)

Note that the regular position of a noun object is final if not focused, even in a double object construction:

Ecabigo aqa:mi yolaGataGadomi libole.
 Ecabigo gives you the meat.

# 5. Intransitives adverb placement

Finally, it is important to mention that the behavior of intransitive sentences (unergative or unaccusative verbs) is different concerning adverb placement, what constitutes further evidence that transitive subjects are special. Thus, an adverb can precede or follow a subject, regardless of its person, in an intransitive clause:

- 49. jcG ee id:abidi already 1PRONOUN 1SUBJ-inverse-stand up Lalready stand up
- 50. ee jiG id:abidi 1PRONOUN already i-d:-stand up
- 52. ee ja jalokodi 1PRONOUN already 1SUBJ-run

That is, the position occupied by an absolutive argument is not the same as the one occupied by a transitive subject, regardless on whether the subject is nominative or ergative.

As a final remark, note that antipassives do not work as intransitives regarding adverb placement, they have the same behavior as transitive clauses:

53 \* jeG ee ineligota

jaGi ee i-n-eligo-t-e-wa
already 1PRONOUN 1SUBJ- antipassive-eat-EPN-3OBL-DAT
'I already eat it in my imagination'.

51. jeG ee jalokodi already 1PRONOUN 1SUBJ-run I already run

The difference between antipassives and intransitives is not the presence/absence of an oblique argument. Note that one can add an oblique argument in an intransitive clause, and still the behavior regarding adverbs positioning does not change:

51. jeG ee jalokoditaGadomi already 1PRONOUN 1SUBJ-run-EPN-2-benefactive I already run for you.

# 6. Conclusion

This paper attempts to show that Kadiwéu is a syntactic ergative language that presents strong arguments to believe that there are different positions for nominative and ergative subjects as well as different positions for accusative and absolutive arguments. Furthermore, it shows that absolutive objects do not fill the specifier of TP. It occupies a position outside of VP that is lower than the position of an ergative subject.

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## Notes

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- 1 Kadiwéu is a Waikurúan language spoken by about 1,000 Indians distributed over an area of 538,000 hectares in the State of Mato Grosso do Sul, Brazil. The Waikurúan language family has two branches: (a) the Waikurúan Branch, which includes Mbayá and its descendent Kadiwéu; and (b) the Southern Branch, which comprises four other languages: Toba, Pilagá, Mocoví, and Apibón (Ceria & Sandalo 1995). The Kadiwéus are the only surviving descendants of the Mbayá people, who in the 18th century dominated a large extension of the Brazilian and Paraguayan Chaco area (23,5° to 19° degrees of Latitude South, Sanchez Labrador, 1760). A short sketch in a 1760 grammar and dictionary by Sanchez Labrador (published in Susnik 1971) is

the only material available on Mbayá. Sanchez Labrador collected his data near Asunción, Paraguay, so his data represent a dialect that presumably already differed from the immediate ancestor of Kadiwéu. Some aspects of the Kadiweu grammar have been discussed by Griffths & Griffiths (1976), Braggio (1981), and Griffiths (1973, 1987, 1991). A grammar and dictionary of Kadiweu are in Sandalo (1995, 1997).

- 2 The following abbreviations are used in Kadiwéu examples in this work: 1 = first person, 2 = second person, 3 = third person, COMP = complementizer, NEG = negative, SUBJ = subject, OBJ = object, OBL = oblique argument, pl = plural, sg = singular. Note that Kadiweu does not allow hiatus; this language has [t] epenthesis to avoid hiatus, An epenthetic [t] is glossed EPN.
- 3 Typologically similar morphemes have been called *relational* in the literature of Brazilian Indian languages. I label *d:-inverse*, rather than relational, following a suggestion of Spike Gildea since it resembles some aspects of the inverse of North American languages. This paper attempts to show that the morheme *d:-* occurs when the object has been dislocated to a higher specifier position. It is unknown, however, whether the morphemes of other Brazilian languages that are labeled *relational* are indeed similar to the kadiwću *inverse* in its grammatical properties.
- 4 Unergative verbs are not marked like intransitive verbs; they are marked like transitive verbs whose internal arguments are third person. This pattern is also attested in languages like Basque and Georgian. Note that unergative verbs are analyzed as lexically transitive by Hale & Keyser (1993). Antipassive verbs can be marked by either the transitive or intransitive subject marker.
- 5 The adverb jaG 'already' undergoes vowel harmony. Note also that the phoneme / G/ drops before a consonant or glide and that the vowel harmony rule does not apply in this case.
- 6 Kadiweu negative marker is aG, recall that there is a phonological rule that deletes / G/ before a consonant.

# A REDUÇÃO VOCÁLICA NO PORTUGUÊS BRASILEIRO: AVALIAÇÃO VIA RESTRIÇÕES

Leda BISOL Pontificia Universidade Católica do Rio Grande do Sul José Sueli de MAGALHÃES Universidade Federal de Uberlândia

#### RESUMO

O presente trabalho refere-se à neutralização vocálica no Português Brasileiro à luz da Teoria da Otimidade, um modelo baseado em restrições. Mostraremos a anulação dos traços marcados que reduz o sistema de sete vogais a cinco e a três vogais, de modo paralelo.

#### Abstract

The present paper refers to neutralization of stressless vowels in Brazilian Portuguese under the framework of Optimality Theory, a constraint-based model. We will show the nullification of the marked features so that a seven vowels system is reduced to five and to three vowels in parallel fashion.

Palavras-chave Neutralização, redução vocálica, restrições

Key-words

Neutralization, vowel reduction, constraints

## Introdução

Na fonologia estrutural, a neutralização ocupou expressivo espaço em trabalhos que adotaram a proposta de Trubetzkoy, como em Câmara Jr. (1970); mas na fonologia gerativa de Chomsky and Halle (1968), em que cada mudança de traço era explicada por uma regra específica

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