

# Case and agreement: person hierarchy in Kadiwéu\*

Filomena Sandalo<sup>1</sup>

<sup>1</sup>Instituto de Estudos da Linguagem – Universidade de Campinas (UNICAMP)/CNPq  
sandalo@iel.unicamp.br

## 1. Introduction

Person hierarchy has been a topic of concern in the typological literature since the seventies (cf. Dixon 1994). On the typological framework standpoint, the phenomenon relies on a tight relationship between morphological expression and constructional markedness as defined by markedness hierarchies. Such markedness hierarchies predict what arguments are more likely to take the role of subjects. Arguments high on the scale make better subjects and those low on the scale are better objects. According to this theory, when unexpectedly a hierarchy-high argument is object and/or a hierarchy-low argument is subject this argument is morphologically marked.

Only recently person hierarchy has been approached in formal linguistics. Aissen (1999, 2000) has formalized the typological analysis sketched above 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) attempt 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 semantics structures at some level of representation. In this hypothesis, the clause is divided into a nuclear scope (VP), that asserts the true 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 this language presents strong evidence in favor of Jelinek & Carnie's proposal.<sup>i</sup> This 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.

## 2. Agreement and ergativity

Kadiwéu does not have case marking morphemes on nouns, but its agreement morphology indicates a split 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:<sup>ii</sup>

( 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>iii</sup>

( 5 )    *id:ema:*  
          *i-d:-ema:n*  
          1OBJ-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*  
1SUBJ-inverse-want/love-pl

‘You love me’

Intransitive verbs (i.e. inacusatives, reflexives, antipassives and verbs that contain an incorporated noun) are marked by subjects prefixes. <sup>iv</sup> The prefixes that mark the subjects of intransitive verbs, however, are not the same as the ones that mark transitive subjects. Below are some examples to illustrate the intransitive agreement pattern.

( 10 ) nemata  
*Ø-n-ema:n-t-e-wa*  
3SUBJ-antipassive-want/love-EPN-2OBL-dative

‘He/she loves you’.

( 11 ) d:apiqo  
*Ø-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 (transitive)	SUBJECT (intransitive)	OBJECT
<b>1sg</b>	j-	i-	i-
<b>2sg</b>	a-...-i	a-...-i	Ga-
<b>3sg</b>	y- ~ w-	∅- ~ n-	---
<b>1pl</b>	j-...-Ga	i-...-Ga	Go-
<b>2pl</b>	a-...-l	a-...-i	Ga-...-i
<b>3pl</b>	y-...Ga	o-∅	---

Figure 1: Agreement

One could, obviously, question whether the Kadiwéu agreement patterns indeed indicate a split case system or whether its agreement system is merely a morphological idiosyncrasy.

The fact that Kadiwéu has antipassives indicates that this is an ergative language. I analyze example 13 (presented above as example 10) as a case of antipassive because the verb is marked by an intransitivizing morpheme, *n-*, and the internal argument is demoted to an indirect object. Note that Kadiwéu does not have independent adpositions. Oblique arguments (including indirect objects) are marked by an enclitic followed by an incorporated adposition. The incorporated adposition is always *-wa* ‘dative’ in antipassives. Compare below the same verb root in its transitive form and in its antipassive form. The Kadiwéu speakers seem to use the antipassive form when the object is somehow less affected. Compare also the oblique argument of an antipassive and an indirect object in 15.<sup>v</sup>

- ( 13 ) yema:  
*y-ema:n*  
 3SUBJ- want/love

‘He/she loves him/her’.

( 14 )    *nema:ta*  
           *∅-n-ema:n-t-e-wa*  
           3SUBJ-antipassive-want/love-EPN-3OBL-dative

‘He/she loves him/her’.

( 15 )    *yajigota*  
           *y-ajigo-t-e-wa*  
           3SUBJ-give-EPN-3OBL-dative

‘He gives it to him’.

Another aspect of Kadiwéu that indicates that this is an ergative language concerns focalization of subjects. As in several ergative languages, 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.
	<i>José</i>	<i>ane</i>	<i>y-ema:n</i>	<i>Maria</i>
	José	relative	3SUBJ-want/love	Maria

‘It is José that Maria loves.’

( 17 )	José	ane	nema:ta	Maria.
	<i>José</i>	<i>ane</i>	<i>∅-n-ema:n-t-e-wa</i>	<i>Maria</i>
	José	relative	3SUBJ-antipassive-want/love-EPN-3OBL-dative	Maria

‘It is José that loves Maria.’

Kadiwéu does not seem to be consistently ergative, however. Note that the same phenomenon does not occur if the arguments are first or second person. In this case, like any other accusative language, one can focalize either the internal or the external argument of a relative clause without any intransitization process. This is evidence for a split case system driven by person.

( 18 )    Ee            ane            aqa:mi    Gad:ema:ni  
               *Ee*            *ane*            *aqa:m-i*    *Ga-d:-ema:n*  
               1PRONOUN    relative    relative    2OBJ-inverse-want/love

‘I am the one that loves you.’

( 19 )    aqa:mi            ane            Gad:ema:ni  
               *aqa:mi*            *ane*            *Ga-d:-ema:n-i*  
               2PRONOUN    relative    2OBJ-inverse-want/love

‘It is you the one that I love.’

### 3. The mapping hypothesis and split ergativity in Kadiwéu

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 true 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. This section shows that Jelinek & Carnie’s proposal presents a straightforward account for Kadiwéu split ergativity.

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):

( 20 )	Goti	aqa:m:i	Gad:ema:ni
	<i>Goti</i>	<i>aqa:m-i</i>	<i>Ga-d:-ema:n-i</i>
	Goti	2PRONOUN-pl	2OBJ-inverse-want/love-pl

‘Goti loves you’

( 21 )	Goti	yema	Ekode
	<i>Goti</i>	<i>y-ema:n</i>	<i>Ekode</i>
	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’. 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: <sup>vi</sup>

22. jeG Ecabigo yema: Ekode

23. jeG Ecabigo aqa:mi Gadema:ni

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

25. \*jeG ee jema: Ecabigo

A pronoun subject (first and second persons) cannot ever be modified 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, 3rd person object)

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

27. \*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)

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

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

30. 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)

31. \* Paulo yo:wo aqa:mi me ema:ni Ecabigo  
 Paulo 3SUBJ-thinks 2PRONOUN COMP 2SUBJ-love/want-pl Ecabigo

32. Paulo yo:wo me aqa:mi ema:ni Ecabigo

33. Paulo yo:wo Ecabigo me aqa:mi ema:ni

34. Paulo yo:wo me Ecabigo aqa:mi ema:ni

‘Paulo thinks that you love Ecabigo.’

(neither subject nor object 3rd person)

35. \* Paulo yo:wo ee me aqa:mi Gadema:ni  
 Paulo 3SUBJ-think 1PRONOUN COMP 2PRONOUN 2OBJ-love-pl

36. Paulo yo:wo me ee aqa:mi Gadema:ni

37. Paulo yo:wo aqa:mi me ee Gadema:ni

‘Paulo thinks that I love you’.

The facts concerning the positions of subjects in embedded clauses is further evidence for the claim that third person external arguments and a 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 (\*).

38. Ecabigo (X) yema: (\*) Ekode  
 Ecabigo 3SUBJ-love Ekode

39. Ecabigo (X) aqa:mi (X) Gadema:ni  
 Ecabigo 2PRONOUN 2OBJ-inverse-love-pl

Some examples follow:

40. Ecabigo ja yema: Ekode

41. \*Ecabigo yema: jeG Ekode

42. Ecabigo jaG aqa:mi Gadema:ni  
43. Ecabigo aqa:mi jaG adema:ni

The data shows 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 shows 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 preverbal 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 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 languages 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 phrases that is different from the one proposed by Chomsky (2001). They state (2003:8):

“Chomsky proposes that phrases 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 phrase. In this approach, phrases 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) to the specifier of AspP to get out of the nuclear scope defined by VP in better known languages. In Kadiwéu a presupposed internal argument moves overtly. In other words, I believe that the inverse morpheme is a morphological realization of Asp°.

#### 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:

44. 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>vii</sup>

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

45. Ecabigo a            yema: Ekode  
 Ecabigo NEG 3SUBJ-love/want  
 Ecabigo doesn't love Ecode.
46. \* Ecabigo Ekode a            yema:  
 Ecabigo Ekode NEG 3SUBJ-love/want  
 Ecabigo doesn't love Ecode
47. Ecabigo aG Ekode yema:  
 Ecabigo NOT Ekode 3SUBJ-love/want  
 Ecabigo doesn't love Ecode

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.

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 pre-verbal pronoun and a focused third person:

17. aqa:mi        libole 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:

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

## Notes

\* This research is funded by the *SOAS/Endangered Languages Documentation Program*, FAPESP, and CNPq. I thank Norvin Richards the opportunity to share a course during the EVELIN workshop and for important suggestions regarding the analysis of Kadiwéu presented here. Obviously the usual disclaimer applies.

i 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 Griffiths & Griffiths (1976), Braggio (1981), and Griffiths (1973, 1987, 1991). A grammar and dictionary of Kadiweu are in Sandalo (1995, 1997).

ii 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.

iii Typologically similar morphemes have been called *relational* in the literature of Brazilian Indian languages. I label *d:- inverse*, rather than relational, because it resembles the inverse of North American languages. It is unknown, however, whether the morphemes of other Brazilian languages that are labeled *relational* are indeed similar to the kadiweu *inverse* in its grammatical properties.

- 
- <sup>iv</sup> Ergative 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 Ergative verbs are analyzed as lexically transitive by Hale & Kayser (1993).
- <sup>v</sup> See Sandalo (1997) for a complete list of the adpositions that can appear incorporated to the verb.
- <sup>vi</sup> 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.
- <sup>vii</sup> Kadiweu negative marker is aG, recall that there is a phonological rule that deletes /G/ before a consonant.

## References

- AISSSEN, J. 1999. Markedness and subject choice in optimality theory. *In Natural Language and Linguistic Theory* 17, 673-711.
- \_\_\_\_\_. 2000. *Differential Object Marking: iconicity vs. economy*. Ms.
- BITTNER, M. & K. HALE. 1996. The structural determination of case and agreement. *Linguistic Inquiry* 27, 1-68.
- BRAGGIO, Silvia. 1981. *Aspectos fonológicos e morfológicos do kadiwéu*. Universidade Estadual de Campinas master paper, Brazil
- CERIA, V. & F. SANDALO. 1995. A Preliminary Reconstruction of Proto-Waikurúan with Special Reference to Pronominals and Demonstratives. *Anthropological Linguistics* 37.169-91.
- CARNIE, A. 2002. *Phase Geometric Hierarchies*. Ms.
- \_\_\_\_\_. 2001. Derivation by phase. MIT ms.
- DIESING, M. 1992. *Indefinites*. Cambridge, MA: MIT Press.
- DIXON, R. M. W. 1994. *Ergativity*. Cambridge: Cambridge University Press.
- GRIFFITHS, Glyn. 1973. Numerals and demonstratives *In Kadiwéu*. *Arquivos de Anatomia e Antropologia* I. 63-67. Rio de Janeiro, Instituto de Antropologia Prof. Souza Marques.
- \_\_\_\_\_. 1987. *Relative Clause Formation and other Word Parameters in Kadiwéu*. Reading University master paper, England.
- \_\_\_\_\_. 1991. *Wh-movement in Kadiwéu*. Reading University Ph.D. dissertation, England.
- GRIFFITHS Glyn & Cynthia GRIFFITHS. 1976. *Aspectos da língua Kadiwéu*. Brasília: Série Lingüística 6, Summer Institute of Linguistics.

- 
- ISAAK, A. 2000. *Split Case Marking and Prominence Relations*. University of Massachusetts Ph.D. dissertation.
- JELINEK, E. 1993. Ergative 'Splits' and Argument Type. *In MIT Working Papers in Linguistics* 18: 15-42.
- \_\_\_\_\_. 2000. Datives and Argument Hierarchies. *In Papers in Honor of Ken Hale. Working Papers in Endangered and less familiar languages I*, 51-70.
- JELINEK, E. & A. Carnie. 2003. *Argument Hierarchies and the Mapping Principle*. Ms.
- NASH, Léa. 1995. *Portée argumentale et marquage casuel dans les langues SOV et dans les langues ergatives: l'exemple du géorgien*. Thèse de Doctorat, Université Paris-8.
- SANCHEZ LABRADOR, José S. I. 1760. *Gramática Eyiguayegi-Mbayá*. Según el manuscrito del siglo XVIII. In B. Susnik. 1971. Familia Guaycuru. 1-166. Asunción, Paraguay: Museo Etnográfico "Andrés Barbero". (Lenguas Chaqueñas 1.)
- SANDALO, Filomena. 1995. *A Grammar of Kadiwéu*. University of Pittsburgh Ph.D. dissertation.
- \_\_\_\_\_.1997. A Grammar of Kadiwéu with Special Reference to the Polysynthesis Parameter. *MIT Occasional Papers in Linguistics* 11.