

Differential subject marking triggered by information structure

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Abstract

This paper examines the relation between differential case marking (DCM) and information structure based primarily on data from Kashibo-Kakataibo (Panoan). DCM is a phenomenon by which a set of core NPs receive case whereas other core NPs do not. The phenomenon of DCM has been shown to be caused by the semantics of the NP, the semantics of the verb or TAM. Here it will be argued that information structure categories such as focus or topic can also trigger DCM. Data from genetically unrelated languages such as Tariana and Catalan also support this claim.

1. Introduction

Differential case marking (DCM) refers to the fact that core NPs are marked by case in certain environments but not in others (Bossong 1983, Comrie 1989, Aissen 2003, Haspelmath 2005, Malchukov 2007, Woolford 2009, Dalrymple and Nikolaeva 2011). DCM can affect either the subject or the object which leads to differential subject marking (DSM) or differential object marking (DOM), respectively. The semantic properties of the NP and variations in TAM are the most common causes for DCM. In addition, the semantics of the verb, the type of clause (main or subordinate) or phonological constraints may also trigger DCM (Dixon 1979, 1994; Hopper and Thompson 1980, Cristofaro 2003, Woolford 2009). While information structure categories such as focus and topic have been claimed as causes for DCM in grammatical descriptions of particular languages, especially in recent years (Frank 1990, Kwon and Zribi-Hertz 2008, Aikhenvald 2010, Iemmolo 2010), it has not received much attention in the typological literature, with some exceptions (Malchukov 2007, Dalrymple and Nikolaeva 2011). This paper explores the relation between information structure (IS), particularly focus, and DCM based on data in the San Alejandro dialect of Kashibo-Kakataibo² (Pano). Data from other geographically and typologically unrelated languages will be used to show that DCM is cross-linguistically caused by IS.

This paper is organized as follows: in Section 2 the most common causes of DCM are reviewed. Section 3 presents the data on Kakataibo, showing that DCM is not caused by factors such as the semantics of the NP or TAM, and provides evidence that the crucial factor triggering DCM is focus. Evidence from other languages of the interplay between DCM and IS is shown in Section 4. The conclusions and further research are given in Section 5.

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² I will refer to the San Alejandro dialect of Kashibo-Kakataibo simply as Kashibo-Kakataibo in this paper for simplicity's sake.

2. Causes for DCM

The semantics of the NP, the first acknowledged cause of DCM (Bossong 1983), is the most frequent factor causing this phenomenon. The semantics of the NP is usually divided into two distinct categories: animacy and definiteness. Nouns are divided by animacy into human, animate and inanimate whereas the parameter of definiteness divides nouns into pronouns, proper nouns, definite, specific and non-specific nouns. The semantics of NPs can be represented by a scale of animacy and a scale of definiteness, as in Figure 1. Cross-linguistically, object nouns are more likely to show case when the noun that instantiates them is to the left of the hierarchies in Figure 1. In contrast, the more the noun pertains to the right of the hierarchy, the more likely it is for that noun to lack case (Silverstein 1976; Dixon 1979, 1994; Bossong 1983; Comrie 1989 ; Aissen 2003; Haspelmath 2005; Malchukov 2007; Woolford 2009 among others). For subjects, the inverse applies, that is, nouns to the right of the hierarchy are more likely to show case whereas those to the left of the hierarchy are less likely to have case. However, this is only a tendency and exceptions have been found to the predictions of the animacy/definiteness scale.

Figure 1. Animacy and definiteness scale

Animacy scale: human > animate > inanimate
Definiteness scale: pronoun > proper noun > definite > specific > non-specific

Spanish is an example of a language which shows DOM caused by animacy (Bossong 1991, Leonetti 2004, von Heusinger and Kaiser 2010, among others). In Spanish, human direct objects get the accusative preposition *a* while marking inanimate nouns with this preposition is generally ungrammatical. In example (1) the preposition *a* is obligatory because the object is human. In contrast, the preposition *a* is not licensed in (2) because the object is inanimate.

(1) Conozco *(a) este actor.
 know-1.SG DO this actor
 ‘I know this actor.’

(2) Conozco (*a) esta película.
 know-1.SG this film
 ‘I know this film.’

(von Heusinger and Kaiser 2010:12)

Other less frequent factors causing DCM include distinctions in TAM, the semantics of the verb or the type of clause in which a noun occurs. Chácobo (Valenzuela 2009), a Panoan language, shows DSM caused by aspect. Subject NPs in clauses in completive aspect³ show case whereas they do not show case in clauses in the incompletive aspect, as shown in (3) and (4), respectively.

(3) joni yoxa tihi ka-bá bimi pi-ke.
 man:ABS woman:ABS all REL-PL:ERG fruit:ABS eat-CMPL
 ‘The man and the woman ate fruits’

³ The subject NP in completive aspect must be preverbal as well to show case.

(4) joni tsi xo boe pi-haina.
 man:ABS TOP COP yaturana:ABS eat-PART:INC
 “The man is eating *yaturana* (k. of fish)” (Valenzuela 2009: 3-4)

The other causes of DCM are less frequent. In Spanish, for instance, the semantics of the verb affects the assignment of case in psychological verbs. While most transitive verbs assign accusative case, psychological verbs assign dative case. The distinction between main and subordinate clause also affects the marking of case. In the case of Turkish (Cristofaro 2003), NPs in subordinate clauses do not get case whereas NPs in main clauses are case marked.

3. Kashibo-Kakataibo

Kashibo-Kakataibo⁴ is a Panoan language spoken by approximately 1500 people in the Peruvian central western Amazon (Frank 1994). Kashibo-Kakataibo is an agglutinative, head-final language and shows relatively free word order. The data for this paper comes from my own fieldwork conducted in the San Alejandro river native community of Sinchi Roca in 2008-2011.

3.1. *Alignment in Kashibo-Kakataibo*

Kashibo-Kakataibo shows a split alignment caused by animacy in which pronouns follow an accusative alignment and nouns show an ergative alignment (Valle 2009). Subject pronouns are marked by {-n} while objects are zero case-marked. Nouns functioning as subjects of transitive verbs are marked by {-n}⁵ and subjects of intransitive verbs and objects are zero case-marked. Table 1 summarizes the split alignment in Kakataibo. This kind of DSM is predicted by the animacy/definiteness hierarchy (Silverstein 1976, Dixon 1979, 1994, Comrie 1989).

Table 1. *Kakataibo (Sinchi Roca) split case alignment*

	Pronouns	Nouns
A	{-n}	{-n}
S	{-n}	{ Ø }
O	{ Ø }	{ Ø }

Case marking of subject pronouns is shown in sentences (5-6). In (5), the first person singular subject pronoun of a transitive verb shows nominative case marked by {-n} while the third person object pronoun⁶ shows no marking. The subject pronoun of an intransitive verb in (6) also shows the case marker {-n}. Sentences (7-8) show instances of case marking in nouns. The noun subject of a transitive verb in (7) is marked by {-n}⁷ while the object is zero-marked. In contrast, the subject noun of an intransitive verb in (8) is zero-marked.

⁴ Kashibo-Kakataibo is more commonly known in the literature as Cashibo-Cacataibo. I use the term Kashibo-Kakataibo following the current alphabet of the language.

⁵ The case marker {-n} shows phonologically conditioned allomorphs.

⁶ Number distinctions are not grammaticalized for the second or third person pronouns. Number is distinguished for first person pronoun: i ‘first person singular’ and nu ‘first person plural’.

⁷ Notice that the same morpheme {-n} receives two different labels, ‘nominative’ or ‘ergative’, depending on whether it attaches to a pronoun or noun, respectively. The term ‘marked’ could also be used to refer to those NPs

(5) i-n=ka-na a-Ø dzidza-nu-a mira-pun-i
 1-NOM=cl-1 3-ABS creek-LOC-S show.up-earlier.same.day-NPST.LS
 “I found him earlier today in the creek”

(6) i-n=ka ma.ri-nu raka-a
 1-NOM=cl-1 soil-LOC lay.down-PST.LS
 “I lay down on the ground”

(7) tʃaru-n=ka sasa-Ø bi-a
 crab-ERG=cl.3 fish-ABS pick.up-NPST.NLS
 “The crab caught fish”

(8) a uni a-ki-dzu-Ø=ka ni-nu-a niti-puni-a
 3 man do-PART-ADJVZ?-ABS=cl.3 forest-LOC-S disappear-earlier.same.day-PST.LS
 “That child got lost in the forest”

3.2. *Factors that do not cause DCM in Kashibo-Kakataibo*

In the previous section it was shown that DSM in Kashibo-Kakataibo is motivated by the semantics of the NP (e.g. animacy). In this section I will show that other factors which cross-linguistically trigger DCM do not motivate such a split in Kashibo-Kakataibo.

While the contrast between pronouns and nouns triggers DSM, other semantic contrasts in nouns such as human/non-human or animate/inanimate do not cause DSM in Kashibo-Kakataibo. Sentence (9) shows that both the animate noun *uni* ‘man’ and the inanimate noun *uina* ‘rain’ show the marker {-n} when occurring as subjects of transitive verbs. The contrast between human and non-human nouns does not trigger DCM as evidenced in example (10). Here the nouns *uni* ‘man’ and *ino* ‘jaguar’ receive the case marker {-n} since they are functioning as subjects of a transitive verb.

(9) uni-n / ui-nan=ka motor-Ø tʃabo-dza
 man-ERG / rain-ERG=cl.3 motor.ABS get.wet-PST.NLS
 “The rain broke down the engine”

(10) uni-n / ino-n=ka tʃadzu-Ø pi-adza
 man-ERG / jaguar-ERG=cl.3 deer-ABS eat-PST.NLS
 “The man / jaguar ate the deer”

Distinctions of TAM do not cause DSM in Kashibo-Kakataibo either. The contrast between past and non-past is the most pervasive distinction of TAM in the language. Sentence (11) shows that case marking in the subject NP *norua* is kept when tense is changed between present and non-present. The subject case marker does not drop when the sentence is interrogative, in contrast to indicative mood. Nor does it drop when the sentence is negative, in

showing the {-n} marker and the term ‘unmarked’ for the NPs not showing the case marker. However, the terms ‘ergative’ and ‘nominative’ are used here because they highlight the DSM caused by animacy.

contrast to affirmative, or irrealis mood in contrast to realis. Sentence (12) shows an irrealis sentence in which the subject case marker is not dropped, as in realis sentences.

(11) norua-n=ka-ra uni a-ku-ma-ki-Ø roni-a / -adza
 norua-**ERG**=cl.3-INT man do-?-NEG-PART-NEG-ABS heal-NPST.NLS / PST.NLS
 “Norua heals / healed the sick man”

(12) i-n o-n=ka o paranta-Ø pi-kas-iki-a
 1-POSS parrot-**ERG**=cl.3 banana.ABS eat-DES-?-NPST.NLS
 “My parrot wants to eat banana”

The presence of case is also conditioned by verb type. Subjects of prototypical transitive verbs tend to preserve their case markers more often than subjects of non-prototypical transitive verbs. Prototypical transitive verbs show a cluster of features such as kinesis, affectedness, and punctuality (Hooper and Thompson 1980). Prototypical transitive verbs include “kill”, “eat”, “break”, etc. while non-prototypical transitive verbs include “like”, “have”, “know, etc. Example (13) shows the non-prototypical verb *manani-ti*⁸, “to accuse”, as the main predicate of the sentence which does not alter the marking of the subject by {-n}.

(13) pedro-nan=ka mi-Ø manani-a
 Pedro-**ERG**=cl.3 2.ABS accuse-NPST.NLS
 “Pedro accuses you”

The last factor causing DCM that will be considered here is the type of sentence, in which main sentences are distinguished from subordinate sentences. Case markers are usually retained in main sentences while they drop more frequently in subordinate sentences (Dixon 1979, 1994). In Kashibo-Kakataibo, verbs of main sentences obligatorily show person agreement and tense encoded by a set of portmanteau suffixes. Local (first and second) persons are distinguished from non-local (third) person in the person paradigm while past and non-past are distinguished in the tense paradigm. In contrast, verbs of subordinate sentences do not inflect for person and tense in this way. Rather, verbs of subordinate sentences show portmanteau switch reference suffixes which distinguish three dimensions: (i) relative time with respect to the main verb, whether the event in the subordinate sentence occurs simultaneously or prior to the event of the main sentence, (ii) identity of the subject of the subordinate sentence with the subject of the main sentence or not, and (iii) whether the main verb is transitive or intransitive (Valle 2009, Zariquiey 2011). Subjects of subordinate transitive sentences receive case in the same manner as the subjects of main transitive sentences. Example (14) shows the subject of the transitive subordinate sentence bearing case.

(14) norua-n nomputʃa-Ø apa-kibi=ka-na tso-a
 norua-**ERG** papaya-ABS plant-DSSSES=cl.1 sit.down-PST.LS
 “While Norua was planting papaya, I sat down”

3.3. *DSM caused by focus in Kashibo-Kakataibo*

⁸ The morpheme {-ti} is the infinitive marker in the language.

The split alignment of Kashibo-Kakataibo caused by the animacy/definiteness hierarchy was presented in Section 3.1 and factors which do not cause DCM in this language were presented in Section 3.2. In this section, I will show that the information structure category of focus causes DSM in Kashibo-Kakataibo. First, I will introduce some basic definitions of focus and related concepts which are necessary for the following discussion. Then, the features of constituent focus will be shown. Finally, the interactions of focus and case will be offered.

In order to show that focus triggers DSM in Kashibo-Kakataibo, some definitions are in order to avoid terminological issues. The definition of focus adopted here is that of Lambrecht (1994) given in (15).

(15) *Focus*

“The semantic component of a pragmatically structured proposition whereby the assertion differs from the presupposition” (Lambrecht 1994:213)

According to (15), focus can be interpreted as the remainder of subtracting the presupposition from a given assertion. This interpretation can be schematically represented as: *focus = proposition - presupposition*. A different way of interpreting the definition of focus given in (15) is that an open proposition which contains an *x*, unknown information unit, which is filled in by the focus. However, the definition of focus given in (15) presupposes two other concepts: presupposition and assertion. Lambrecht’s (1994) definitions of these terms are given in (16) and (17).

(16) *Pragmatic presupposition*

“The set of propositions lexicographically evoked in an utterance which the speaker assumes the hearer already knows or believes or is ready to take for granted at the time of speech” (Lambrecht 1994:52).

(17) *Assertion*

“The proposition expressed by a sentence which the hearer is expected to know or take for granted as a result of hearing the sentence uttered” (Lambrecht 1994:52).

Different types of focus are identified according to which syntactic constituent is focused. This association of focus and syntactic constituent is known as foci type (Lambrecht 1994, Van Valin 2005). In this paper, I will only concentrate in narrow, or constituent focus, type⁹ in which a single constituent is in focus.

A common way to identify the focus of a sentence is to ask a question. The constituent in the answer corresponding to the wh-word in the question is the focus of the sentence, as it adds the information missing in the presupposition posited by the question. Consider the mini-dialogue given in (18-19). The question in (18) introduces the presupposition that an unknown *x* won the prize. The answer sentence *My brother won the prize* introduces the assertion *My*

⁹ Foci types are distinguished between broad and narrow focus (Lambrecht 1994, Van Valin 2005). Broad focus is a focus type in which more than one constituent is in focus. Broad focus is divided into sentence (IP) and predicate (VP) focus.

brother won the prize. By subtracting the presupposition from the assertion, the focus of the sentence, *my brother*, is obtained.

(18) Q. Who won the prize?

(19) Sentence: My brother won the prize.
Presupposition: x won the prize.
Assertion: My brother won the prize.
Focus: “x = my brother”

This same procedure to identify the focus will be applied next to Kashibo-Kakataibo sentences. First, let us identify the characteristics of narrow focus sentence type. Consider the mini-dialogue in (20) in which the subject of the sentence is questioned. In example (20a) the question introduces the presupposition that *x planted cacao* but the identity of the subject of the sentence remains unknown. Sentence (20b) fills in the information missing in (20a) by adding to the presupposition the subject NP *Solis*. After subtracting the presupposition posited in (20a) from the assertion in (20b), the subject NP *Solis* remains as the focus of the sentence. The schematic analysis of sentence (20b) is given in (21).

(20) a. uina-n=ka-ra nuká-Ø apa-dza (subject focus)
who-ERG=cl.3-INT cacao-ABS plant-PST-NLS
“Who planted cacao?”

b. solis-nan=ka nuká-Ø apa-dza
Solis-ERG=cl.3 cacao-ABS plant-PST-NLS
“SOLIS¹⁰ planted cacao”

(21) Sentence: Solis planted cacao.
Presupposition: x planted cacao.
Assertion: Solis planted cacao.
Focus: x = Solis

Narrow or constituent focus type can also have the patient object, the beneficiary object¹¹ or adjunct, as the focused constituent. Sentence (22a) introduces the presupposition that *the young man carried x* but the identity of what is carried is unidentified. The proposition of the answer in (22b) fills in the information missing from the presupposition in (22a). The NP *the woman* is the focus of (22b) since that is what remains after subtracting the presupposition from that sentence. The mini-dialogue in (24) is an instance of adjunct focus and its corresponding schematic analysis is given in (25).

¹⁰ Small caps are used to indicate the focused constituent.

¹¹ Morpho-syntactic tests do not distinguish between the patient object and the beneficiary object of a ditransitive verb (Valle 2009, Zariquiey 2011). For this reason, the labels direct object and indirect object are not adequate to characterize the objects of a ditransitive verbs in Kashibo-Kakataibo. The labels patient object and beneficiary object are used instead to refer to the syntactic categories of direct and indirect object.

(22) a. uina=ka-ra uni wini-Ø papi-a? (object focus)
 who=cl.3 man young-ABS carry-NPST.NLS
 “Whom does the young man carry?”

b. dzanu=ka uni wini-Ø papi-a
 woman=cl.3. man young-ABS carry-NPST.NLS
 “The young man carries the WOMAN”

(23) Sentence: The young man carried the woman.
 Presupposition: The young man carried x.
 Assertion: The young man carried the woman.
 Focus: x = the woman

(24) a. uira-nu=ka-ra jefe-Ø ku-adza (temporal adjunct)
 what-thing=cl.3-INT chief-ABS go-PST.NLS
 “When did the chief go away?”

b. wirama=ka jefe-Ø ku-odzi
 other.time=cl.NLS chief-ABS go-other.day.NLS
 “YESTERDAY, the chief went away”

(25) Sentence: Yesterday, the chief went away.
 Presupposition: The chief went away x.
 Assertion: The chief went away yesterday.
 Focus: x = yesterday

The examples of narrow focus type with subject, object and adjunct as the focused constituents given in (20), (22) and (24) above show similar morpho-syntactic patterns which are characteristic of narrow focus constructions in Kashibo-Kakataibo. These prototypical characteristics of narrow focus type sentences are given below in (26).

- (26) (i) the focused constituent occurs in sentence initial position, before the clitic {=ka} (when the clitic is present)¹².
 (ii) the non-focused constituents remain in situ; they do not occur in sentence initial position.
 (iii) there is no focus marker¹³.
 (iv) when the subject is in focus, it occurs overtly and shows case.

¹² Cf. Zariquiey (2011:713) in which it is argued that the post-verbal position is the focus position.

¹³ Notice that the clitic {=ka} is not a focus marker because it can occur before topical constituents as the first sentence of a tail-head sentence, as in example a. below. Further, the clitic {=ka} is present in predicate focus sentences. In this type of sentence, the clitic {=ka} occurs before the focused VP and not after it.

a. ai=ka-na i-n kuan-i... i kuan-ki uan-i motosierra-Ø gasolina-Ø
 then=cl-LS 1-NOM go-NPST.LS...1 go-? take-NPST.LS chainsaw-ABS gasoline-ABS
 aceite-Ø i lima-Ø cadena-Ø kama-bi uan-i kuan-i
 oil-ABS 1 lime-ABS chain-ABS all-EMPH take-NPST.LS

“Then, I go...I go to pick up my chainsaw, gasoline, oil, lime, chain, everything [I] go carrying [them].”

Sentences diverging in one or more characteristics in (26) may be grammatical but infelicitous in a communicative context in which a subject focus sentence is required. This is so because a pragmatic clash takes place due to the fact that a presupposed information unit is dispatched when a focused information unit is required. Sentence (27) was uttered when a subject focus sentence was expected. Since the subject is not in sentence initial position before the clitic {=ka}, sentence (27) does not correspond to the subject focus sentence type. Thus, a pragmatic clash, indicated by the #, occurs because sentence (27) does not encode a subject focus when such a pragmatic category was expected.

(27) # ka solis-nan nuká-Ø apa-dza
 cl.3 Solis-**ERG**=cl.3 cacao-ABS plant-PST-NLS
 “Solis PLANTED CACAO”

Now that the characteristics of narrow focus sentences have been described, the split triggered by focus may be examined. Consider sentence (28) which was uttered in a context in which the planting of crops by Solis was discussed. In this sentence, the subject NP does not show the case marker {-n}. According to the description of the alignment of Kashibo-Kakataibo given in Section 3.1, the subject NP in (28) should have a case marker because it is the subject of a transitive verb. However, the case marker is not present. I argue that the dropping of the subject case marker {-n} takes place because the subject is not in focus. There is a crucial piece of evidence which suggests that the subject of (28) is not focused according to the characteristics of narrow focus given in (26). The subject *Solis* in (28) does not occur in sentence initial position, before the clitic {=ka}, but rather it occurs after the clitic. This suggests that the subject is topical rather than being focused. Given that the subject is not in focus, the case marker is dropped. This, in turn, is evidence that the subject is not focused because it goes against the characteristic (iv) given in (26) of focused subjects which typically preserve their case marker. Further, since the planting of Solis had been discussed previously, the referent of the subject was already presupposed and thus topical.

(28) nuká=ka solis-Ø apa-dza (object focus /subject non-focused)
 cacao=cl.3 Solis-**ABS** plant-PST-NLS
 “Solis planted CACAO”

In contrast to sentence (28), the subject of the transitive verb of sentence (29) does show a case marker. This sentence was uttered in the context in which the planting of cacao was being discussed and not the identity of the agent of that action. Thus, the referent of the subject was not presupposed when (29) was uttered. The subject in this sentence occurs in sentence initial position before the clitic {=ka} which suggests that the subject is in focus. Further, the subject preserves its case, which is typical of focused subjects.

(29) solis-nan=ka nuká-Ø apa-dza (subject focus)
 Solis-**ERG**=cl.3 cacao-ABS plant-PST-NLS
 “SOLIS planted cacao”

Until now, all the examples of focus in Kashibo-Kakataibo have been of information focus, in which the focus fills in the information missing from the open proposition of the presupposition. Another type of focus is the identificational (Kiss 1998) or contrastive focus in which the focus does not fill in information missing from an open proposition but rather changes the presupposed information¹⁴. Identificational, or contrastive, focus can be encoded in the same way as information focus in Kashibo-Kakataibo following the characteristics of narrow focus given in (26). DSM also occurs in contrastive focused constituents in this language. Consider the mini-dialogue in (30). The subject in (30a) is presupposed, not focused, because it does not occur in sentence initial position and it does not show case. The predicate is in focus in (30a); the subject is part of the presupposition. In contrast, the subject of (30b) is an instance of contrastive focus because the semantic content of the presupposed subject is changed to *wisi uni* “other man”. Since the subject is in focus it occurs in sentence initial position and shows case.

- (30) a. S1. ka uni-Ø mi-Ø ina-dza (predicate focus/ subject non-focused)
 cl.3 man-ABS 2-ABS give-PST.NLS
 “The man GAVE [it] TO YOU”
- b. S2. wisi uni-n=ka i-Ø ina-dza (subject focus)
 other man-ERG=cl.3 1.ABS give-PST.NLS
 “OTHER MAN gave [it] to me”

Although non-focused subjects tend to lose case, there are examples in my dataset which show that they can bear case, as in (31). Sentence (31) was uttered when discussing about Solis’ daily activities making the subject being presupposed. The subject of (31) is not focused because it does not occur in sentence initial position but even so it shows case. The factors motivating the retention of case in non-focused subject have not yet been identified.

- (31) ka solis-nan nuká-Ø apa-dza
 cl.3 Solis-ERG=cl.NLS cacao-ABS plant-PST-NLS
 “Solis PLANTED CACAO”

In this section, it has been shown that the information structure category of focus triggers DSM in Kashibo-Kakataibo. Focused subjects obligatorily show the case marker {-n} while non-focused subjects optionally drop their case marker. The split conditioned by the focused status of the NP affects both nouns and pronouns superimposing the split triggered by the contrast between those categories. The interactions of DSM caused by animacy/definiteness and focus are summarized in Table 2. Other factors such as TAM, the type of sentence or the semantics of the verb do not trigger DCM in Kashibo-Kakataibo.

Table 2. DSM caused by animacy/definiteness and focus in Kashibo-Kakataibo

	Focused		Non focused	
	Pronouns	Nouns	Pronouns	Nouns
A	{-n}	{-n}	{-n}/{Ø}	{-n}/{Ø}
S	{-n}	{Ø}	{-n}/{Ø}	{Ø}

¹⁴ See Zimmermann (2008) for a different approach for contrastive focus.

O	{Ø}	{Ø}	{Ø}	{Ø}
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4. DCM triggered by focus or topic in other languages

Languages encode both propositional and pragmatic information using the same prosodic and grammatical tools (Givón 1984). Languages use prosody, case and clitics and word order to encode topic and focus in addition to encode grammatical information (Van Valin 1999, Büring 2009). In this context, it is likely that morpho-syntactic and pragmatic interactions produce instances of DCM as the one seen for Kashibo-Kakataibo here. In fact, DCM triggered by topic or focus has been reported for other geographically and genetically unrelated languages such as Ika (Frank 1990), Tariana (Aikhenvald 2003, 2010), Catalán, Northern Italian (Iemmolo 2010) and Korean (Kwon and Zribi-Hertz 2008). Let us briefly review the cases of DCM in Tariana and Catalán.

Tariana is an Arawak language spoken in the Vaupés River Basin by approximately 100 people (Aikhenvald 2010). Case alignment is nominative-accusative in Tariana. However, the information structure categories of focus and topic trigger both DSM and DOM in both noun and pronouns but in different ways. The subject noun gets the clitic {=ne, =nhe} when it is focused but it receives zero marking when it is topic. In a similar fashion, object nouns get the clitic {=naku, =nuku} when being topical but zero case when being non-topical. Pronouns follow a slightly different pattern but their case marking is also driven by information structure. Non-focused subject pronouns get the emphatic suffix {-ha} whereas focused subject pronouns get the clitic {=ne, nhe}. Non-subject non-topical object pronouns get the accusative suffix {-na} while the non-subject topical object gets the clitic {=naku, =nuku}. A contrast between a focused subject noun (having the clitic =ne) and a non-focused subject noun having zero case is shown in (32). It is also argued that pragmatics plays a role in differential object marking in East Tucanoan (Tucano, Aikhenvald 2010:26).

(32) a. hema-ne hinipu-naku di-hña-pidana (focused subject)
 tapir-**FOC**.A/S garden-TOP.NOM.A/S 3sgnf-eat-REMP.REP¹⁵
 “A/the tapir (not anyone else) (reportedly) ate (the fruits of) a garden (we are talking about)”

b. hema-Ø hinipuka di-hña-pidana (non-focused subject)
 tapir garden 3sgnf-eat-REMP.REP
 “A tapir (reportedly) ate (fruits of) a garden” (Aikhenvald 2010:20-21)

Iemmolo (2010) argues that topical objects in Catalán get accusative marking with the preposition *a* when they are topical, syntactically indicated by left dislocation, but they do not receive case when they are not topical. Thus, the pragmatic function of topic drives DOM in Catalán. Sentence (33a) shows an instance of a topical object left-dislocated and thus marked by the preposition *a*. In contrast, (33b) shows a non-topical object since it is not left-dislocated. In this sentence, the object cannot get the prepositional accusative marker.

(33) a. A ta mare, la vaig vore ahir

¹⁵ Some abbreviations have been modified from the original to keep coherence with the abbreviations given here.

ACC your mother, cl.3SG AUX.1sg see.INF yesterday¹⁶

b. Vaig vore *a ta mare
AUX.1SG see.INF ACC cl.3SG know.PRS.1sg
“Your mother, I saw her yesterday”

Data from other Panoan languages such as Amahuaca (Sparing-Chávez 1998) and Chácobo (Valenzuela 2009) suggests that DSM triggered by focus may occur in those languages. However, more data is needed before arriving to such a conclusion.

In this section I have shown that DCM triggered by the information structure categories of focus and topic occur in languages geographically and genetically unrelated to Kashibo-Kakataibo. Further, it is possible that other Panoan languages may show DSM caused by focus as in Kashibo-Kakataibo.

Conclusions

This paper showed that the information structure categories of focus and topic can cause DCM in the same way that other more studied triggering factors (i.e. the semantics of the NP, TAM, the type of sentence or the semantics of the verb) do. The evidence for this claim came mainly from Kashibo-Kakataibo in which DSM caused by focus takes place. In this language, the focused transitive subject obligatorily shows case whereas the non-focused transitive subject optionally takes case. Data from geographically and genetically unrelated languages such as Catalán and Tariana also support the claim that information structure may trigger DCM. My objective in this study was to add to the typological literature on DCM by bringing attention to a cause of this phenomenon which has not received the deserved attention.

The fact that case is dropped depending on the pragmatic status of a given NP (e.g. subject NP) needs explanation beyond the disambiguating function of case or the likelihood of participants to act as agent or patient. Although few languages have been reported to show DCM triggered by information structure so far, certain patterns may suggest a possible explanation to this phenomenon. It seems that DSM is triggered by the pragmatic function of focus while DOM is caused by the pragmatic function of topic. This pattern can be explained in terms of markedness theory. As subjects tend to be topics, they are marked when they occur in an unexpected (pragmatic) function of focus (as in Kashibo-Kakataibo and Tariana). By the same token, objects, tending to be focused, are left unmarked when in focus; however, they tend to be marked when occurring in the pragmatic function of topic (as in Catalan). Still, this hypothesis needs to be contrasted with a larger set of languages showing DCM triggered by information structure.

Further research involves the study of the different focus sentence types (e.g. sentence focus, predicate focus) to further explore the interactions of case and information structure. Also, a statistical analysis of information structure categories in texts will help identify other patterns of the interaction of case and information structure. Finally, further research on the interplay of

¹⁶ Some abbreviations have been modified from the original to keep coherence with the abbreviations given here.

DCM and pragmatics involves the possibility of this phenomenon to be inherited, as suggested by data on Panoan and Romance languages.

Abbreviations

1	first person
2	second person
3	third person
A	subject of a transitive verb
ABS	absolutive
ACC	accusative
AUX	auxiliary
cl	clitic
CMPL	completive
COP	copula
DES	desiderative
DO	direct object
DSSSES	different subject, simultaneous event, S
EMPH	emphatic
ERG	ergative
FOC	focus
INC	incompletive
INF	infinitive
INT	interrogative
LOC	locative
LS	local subject
NEG	negation
NLS	non-local subject
NOM	nominative
NPST	non-past
O	object of a transitive verb
PART	participial
PL	plural
POSS	possessive
PRS	present
PST	past
REL	relative
REMP	remote past
REP	reportative
S	subject of an intransitive verb
SG	singular
TOP	topic

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