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Structural Case and the Typology of Possessive Constructions¹

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1. Introduction

This paper shows that, in the nominal domain, a strong correlation exists between three syntactic properties of possessor DPs: (i) the triggering of agreement, (ii) the availability of pro-drop and (iii) the possibility to extract them. I suggest that this distribution derives from a condition on structural case assignment to possessors.

First in Section 2 I discuss the two coexisting patterns of morphosyntactic realization of possessor-possessed relations found in a wide number of languages, identifying a descriptive generalization that had not been noticed previously in the literature. In Section 3 I develop an account in terms of a condition on structural case assignment, and finally in Section 4 I give empirical evidence that strengthens the claim that some but not all possessors are assigned structural case.

2. Two Strategies for Possession and the Syntax of Possessors

In many languages, possessive constructions of the type ‘Mary’s house’ surface with an agreement morpheme attached to the ‘head noun’, which agrees in person and number with the possessor DP. I will refer to this type of morphological realization of possession as **Pattern A(greement)**. The general schema can be represented as in (1) (word order is irrelevant), and is illustrated with Tzotzil (2):²

(1) **Pattern A(greement):** NP^{possessum} -AGR DP_φ^{possessor}

(2) s-tot li Xun-e Tzotzil
 3-father ART Xun-CL (Aissen 1987:4)
 ‘Xun’s father’

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² Abbreviations: NOM: nominative, GEN: genitive; ACC: accusative, INTER: interrogative, L: linker, ART: article, LOC: locative, INFL: inflection, FUT: future, NMLZ: nominalizer, CL: clitic.

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2.1. Generalization on Pattern A Possessors

Interestingly, if we consider the behavior of possessors in this structure, a strong correlation emerges, that had not been noticed before in the literature. In languages such as Abaza, Hungarian, Nahuatl, Southern Quechua, a number of Mayan languages (Jacalteco, Itzaj, Tzotzil, Tzutujil), and some Austronesian languages (Boumaa Fijian, Chamorro), a possessor DP that triggers agreement can consistently be dropped and *wh*-extracted from the DP in which it appears (see Duguine 2007).³ This is illustrated in (3) with Tzotzil:

- (3) a. *j-moch pro* Tzotzil
 1-basket (Aissen 1987:4)
 ‘my basket’
- b. *Buch’u av-il-be [s-tot t]?* Tzotzil
 who 2-see-io 3-father (Aissen 1987:14)
 ‘Whose father did you see?’

I propose to spell out this correlation as the following generalization:

(4) Generalization on Pattern A possessors:

In the languages in which the possessum agrees in ϕ -features with its possessor DP, the possessor can be dropped and extracted.

But what happens when there is no agreement? In the following two sections, I will study some of the languages cited above which, alongside Pattern A, have a second strategy for the morphosyntactic realization of possessor-possessed relations, in which no agreement surfaces. By so doing, we will be able to compare different structures on the basis of minimal pairs, avoiding the interferences with independent, language-specific factors.

2.2. Dialectal Variation in Quechua

Quechua displays an interesting dialectal variation with regards to DP-internal agreement. In most dialects, possessive constructions follow what I have called the Pattern A. This is the case of Southern Quechua (SQ), as illustrated in (5) (cf. 2.1). However, Imbabura Quechua (IQ) constitutes an exception: as shown in (6), no agreement affix attaches to nouns in this dialect.

- (5) *Maria-q wasi-n* Southern Quechua
 Maria-GEN house-3SG (Sánchez 1996)
 ‘Maria’s house’

³ In Hungarian some possessors external to the DP do not seem to be extracted, but rather base-generated there (Den Dikken 1999). There are also languages, such as Finnish, Palauan or Mohawk, that appear at first sight to constitute counterevidence to the generalization (4); in Duguine (2007) I argue that they can be accounted for independently.

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- (11) a. a liga-na a gone.yalewa yai Boumaa Fijian **Pattern A**
 ART hand-3SG ART young girl this
 ‘the hand of this young girl’
 (Dixon 1988:121)
- b. a liga-i gone.yalewa yai Boumaa Fijian **Pattern L**
 ART hand-L young girl this
 ‘the hand of this young girl’
 (Dixon 1988:123)
- (12) a. a ’ole’es-el a Marta Palauan **Pattern A**
 ART pencil-3SG ART Martha
 ‘Martha’s pencil’
 (Georgopoulos 1991:53)
- b. a buk er a ’ekabi Palauan **Pattern L**
 ART book L ART girl
 ‘the girl’s book’
 (Georgopoulos 1991:31)

The presence of agreement correlates with the possibility to drop and extract the possessor, but what happens when there is no agreement, i.e. in Pattern L? Let us first analyze the facts regarding possessor dropping. Chung (1998:49) notes that in Chamorro “when the possessor is null ... then the possessed noun must exhibit possessor-noun agreement”; i.e. the possessor cannot be null in Pattern L. Likewise, Dixon (1988:36) notes that in Boumaa Fijian the linker “is suffixed to the possessed noun and is followed by the possessor”; i.e. the possessor must be overt. Finally, the same generalization is observed by Georgopoulos (1991:31) for Palauan: “a pronoun possessor is ... overt when it is object of the [linker]”. That is, in all three languages the possessor cannot be dropped in Pattern L, contrary to what happens with Pattern A possessors, as seen in 2.1 and illustrated in (13):

- (13) a. Agupa’ i kumpliaños-ña *pro* Chamorro **Pattern A**
 tomorrow ART birthday-3SG
 ‘Tomorrow is his birthday.’
 (Chung 1998:31)
- b. a liga-na *pro* Boumaa Fijian **Pattern A**
 ART hand-3SG
 ‘his/her hand’
 (Dixon 1988:121)
- c. a ’ole’es-em *pro* Palauan **Pattern A**
 ART pencil-2SG
 ‘your pencil’
 (Georgopoulos 1991:53)

Likewise, we find the same correlation between the absence of agreement and the impossibility of extraction: Pattern L possessors cannot be extracted, while, as was shown in 2.1, Pattern A possessors can. The Chamorro data in (14a-b) illustrate this correlation very clearly: *hayi* ‘who’ cannot be extracted when it is introduced by a linker but it can when the possessed noun agrees with it.

- (14) a. *Hayi un-yulang [muñika-n *t*]? Chamorro **Pattern L**
 who INFL-break doll-L
 ‘Whose doll did you break?’
 (Sandra Chung p.c.)

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- b. Hayi ti man-mäguf [famagon-ña t]? Chamorro **Pattern A**
 who not INFL-happy children-3SG (Chung 1991:109)
 ‘Whose children are unhappy?’

The same correlation is found in Boumaa Fijian: while Pattern L possessors must remain to the right of the linker (15a), Pattern A possessors can be extracted (15b). (Given that Palauan is a *wh-in-situ* language (Georgopoulos 1991), it cannot be tested for extraction.)

- (15) a. A +i-sele yai [a we-i cei]? Boumaa Fijian **Pattern L**
 ART knife this ART belonging-L who (Dixon 1988:171)
 ‘This knife, it is whose?’
 b. O cei a o-na +i-sele yai? Boumaa Fijian **Pattern A**
 ART who ART belonging-3SG knife this (Dixon 1988:171)
 ‘Whose is this knife?’

Summarizing, in the Austronesian languages Boumaa Fijian, Chamorro and Palauan, depending on the whether the possession relation is realized by means of agreement or not, it will be possible to drop or extract the possessor. Interestingly, this is the same opposition that was introduced in 2.2 between SQ and IQ. These conclusions are summarized in the table in (16).

(16)

		Poss. drop	Poss. extraction
Agreement (Pattern A)		✓	✓
No agreement	Imbabura Quechua	×	×
	Autronesian Pattern L	×	×

The resulting picture is that Pattern A possessors can be dropped and extracted, whereas other types of possessors cannot. What does this distribution follow from? The strong correlation between agreement and pro-drop is not very surprising, as the intuition that the pro-drop and the (rich) agreement phenomena are related is quite well supported empirically. What is more surprising, in fact, is the correlation between agreement and extraction (cf. however Rizzi 1990). It could be argued, for instance, that the extraction facts are not the result of genuine extraction but are cases of resumption by a little *pro*. This hypothesis has the advantage of explaining the correlation between the possibility of (apparent) extraction and pro-drop, and thus, it can transitively account for the correlation between agreement and extraction. However, the data from Chamorro show that these structures do not involve pro-drop but rather genuine extraction. First, if *wh*-possessors were doubled by a *pro* and did not involve movement, we would expect no island effects, contrary to facts (17).

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- (17) *Hayi pära un-hanao [pära guma'-ña t]? Chamorro
 who FUT INFL-go to house-3SG (Chung 1991:115)
 'Whose house will you go to?'

A second piece of evidence against a resumption analysis comes from a specific fact about Chamorro: as illustrated in (18), possessor-extraction is possible unless the DP from which it is extracted is headed by an overt article (cf. Chung 1991, 1998). This cannot be explained under a resumption analysis, specially knowing that possessors can be dropped in the same configuration (see (13a) above).⁴

- (18) *Hayi ti man-mäguf [i famagon-ña t]? Chamorro
 who not INFL-happy ARTchildren-3SG (Chung 1991:109)
 'Whose children are unhappy?'

Given the facts presented above, I propose the following generalization, which is more precise than the generalization on Pattern A previously given in (4):

- (19) **Generalization on languages with Pattern A:** In the languages in which the possessum can agree in ϕ -features with its possessor DP, the possessor can only be dropped or extracted in agreement configurations.

Note also that the fact that the two patterns can coexist in the same language shows that the properties of possessor DPs with regard to extraction and pro-drop cannot be said to derive from language-particular factors but are to be related to the morphosyntactic properties of the construction in which they appear.

In section 3, I propose that (19) derives from a condition on structural case.

3. Case Condition on Possessor Drop and Extraction

What is there behind the correlation between agreement and the possibility to drop and extract a possessor? First of all, the DP-internal agreement facts in Pattern A suggest that in a parallel fashion to what happens in the clause, there are agree operations in the nominal domain (cf. Szabolcsi 1994, Baker 1996, Sánchez 1996, Chung 1998, Gavruseva 2000 a.o.). This implies that, in terms of the operation AGREE (cf. Chomsky 2000, 2001), in these structures a head H^o with uninterpretable ϕ -features values them against the possessor DP. Inversely, the absence of agreement in the same language can be taken to reflect the complete absence of ϕ -AGREE. If this is correct, the generalization (19) can be reinterpreted as follows: extraction and dropping of a possessor take place in configurations

⁴ The account cannot either be based simply on the availability of an 'escape hatch' in the left periphery of the DP, given that there are languages, such as English or German, in which whereas extraction from DPs is possible, showing that there actually is an escape hatch (cf. (i)), extraction of possessor DPs is barred (cf. (ii)) (but see Gavruseva (2000) for a mixed account):

- (i) Who did you see [a picture of]?
 (ii) *Whose did you see [picture]?

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overt article (29) (cf. Dixon 1988:114-116). As shown in (30)-(31), while Pattern A possessors also are (30), Pattern L possessors are not (cf. (31), and also (11)).

- | | | |
|------|---|--|
| (29) | era la'o a gone
3PL go ART child
'The youth is going' | Boumaa Fijian Subject
(Dixon 1988:33) |
| (30) | a liga-na a gone.yalewa yai
ART hand-3SG ART young girl this
'the hands of this young girl' | Boumaa Fijian Pattern A
(Dixon 1988:121) |
| (31) | a liga-i gone.yalewa yai
ART hand-L young girl this
'the hands of this young girl' | Boumaa Fijian Pattern L
(Dixon 1988:123) |

In consequence, whatever the condition on subjects is that requires them to be headed by an overt article in Boumaa Fijian, Pattern A possessors are subject to it while Pattern L possessors are not. Hence, again, Pattern A possessors behave as clausal structural case-marked DPs do, whereas Pattern L possessors do not.

The last piece of evidence in support of the hypothesis that Pattern A possessors are assigned structural case while Pattern L possessors are not comes from Palauan. Palauan has two different morphosyntactic means to mark (definite) complements, depending on the aspect of the verb. In perfective constructions, the verb agrees with the object (32). In imperfective constructions, in contrast, the object is introduced by the linker *er* (33) (Georgopoulos 1991:29).

- | | | |
|------|---|-----------------------------------|
| (32) | ak-uldenges-terir [a resensei er ngak].
1SG-PERF.honor-3PL ART teachers L me
'I respected my teachers.' | Palauan
(Georgopoulos 1991:29) |
| (33) | ak-uleldanges [er a resensei er ngak].
1SG-IM.honor L ART teachers L me
'I respected my teachers.' | |

It is remarkable to see that the alternation between object-agreement and introducing the object by means of a linker is completely parallel to the one found in possession structures: in this regard, we could say that (32) illustrates Pattern A at the clausal level, while (33) illustrates Pattern L. But what is more relevant for our discussion is that *er* also precedes oblique phrases:

- | | | |
|------|--|-----------------------------------|
| (34) | Ke-mle er tia er oingerang?
R.2SG-come L here L when
'When did you come here?' | Palauan
(Georgopoulos 1991:27) |
|------|--|-----------------------------------|

That is, in Palauan, Pattern L possessors, together with the object DPs of imperfective verbs, are to be grouped with oblique phrases, contrary to Pattern A possessors, which, as subjects and objects of perfective verbs, are not introduced

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by a linker. This illustrates how, in fact, the distinction between Pattern A and Pattern L possessors parallels the distinction between DP arguments (with structural case) and DP/PP adjuncts (with no structural case).

The different pieces of data presented in this section all converge in one direction: in all the languages under analysis, some possessors but not all behave like clausal structural case-marked arguments, showing a distinction between Pattern A and other types of pattern (Pattern L in the Austronesian languages and the Imbabura Quechua DP). This result, in turn, provides evidence in favor of the case condition on pro-drop and extraction of possessors (20) as way to account for the crosslinguistic correlation between agreement, extraction and dropping of possessors found in the generalization that I proposed in (19).

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