

## *Chapter 3*

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# *Possessive and Ergative Marking*

This chapter examines a striking phenomenon which exists in Tzeltal and other Mayan languages: ergative agreement markers on transitive verbs are identical to possessor cross-reference markers on nouns. This is a rather curious phenomenon: generally, in linguistic theory, verbs and nouns are taken to be very different lexical categories. For example, Chomsky 1970 postulates that two categorial features,  $\pm$ NOUN and  $\pm$ VERB can derive the majority of English lexical categories. The noun/verb distinction is taken (by most linguists) to exist in all languages. Closer to the topic of this thesis, nouns and verbs can be shown to be distinct in Petalcingo Tzeltal using a variety of criteria explored in Chapter 1. If nouns and verbs are different entities, then how is it possible for verbs and nouns to feature an identical set of inflectional markers? Presumably, if they are identical, we would want to treat them as instances of one and the same entity. However, this would seem to force us to give up the noun/verb distinction in Tzeltal. This is the paradox which this chapter attempts to explore.

Since the stance I adopt in this chapter, as in the rest of the thesis, is a form-oriented one, in the first section of this chapter I attempt to determine what the morphological nature of the Set A (ergative/possessive) markers is. Here I argue that these markers, rather than being affixes, as previously considered, are instead clitics. The argument for their clitic status comes mainly from distributional evidence. In the second part of this chapter, I take a broader view of the identity of ergative and possessive marking, and examine it from typological, functional, and syntactic perspectives. While no firm conclusions are reached in the latter part of this chapter, I hope that by focusing attention on this issue as a cross-linguistic phenomenon the present work can serve as a precursor for future research.

### **Set A Person Markers are Clitics**

In this section, I consider the nature of person cross-reference markers in Tzeltal. While the bulk of the evidence will come from Petalcingo Tzeltal, the Bachajon and Ocosingo dialects will be considered as well. Much of the material here is from Shklovsky 2004 and Shklovsky and Coon 2005.

The term “Set A,” it will be recalled, is used in Mayan linguistics to refer to the paradigm of markers that cross-reference both the ergative argument of a transitive verb and the possessor of a possessed noun. The “Set A” paradigm is reproduced below:

	Person	Plural
<b>1st</b>	k- / j-	✖
<b>inclusive</b>	✖	-tik
<b>exclusive</b>	✖	-(r)yotik
<b>2nd</b>	a- / aw-	-(t)ik
<b>3rd</b>	s- / y-	-(t)ik

**Table 10: Set A markers (reproduced from page 35)**

Usually the term “Set A” applies to both the markers that cross-reference person and appear at the left edge of the noun or verb, as well as those that cross-reference number and appear at the right edge. However, here, I will only consider the cross-reference markers that indicate the person agreement and only appear at the left edge of the word (the markers that appear in the “person” column of Table 10). The separation of person and number marking in Set A markers is not entirely unmotivated (as discussed in “Grammatical Relations, Ergativity, and Possessor Marking” on page 33 in Chapter 1): besides the purely formal fact that they appear at the opposite edges of the constituent in question, and that the phi-features (person, number, etc) they cross-reference are different, the left- and right-attaching Set A markers also exhibit different distributional properties: while the person cross-reference is usually obligatory, the number cross-reference is generally optional. Thus, while the rest of this chapter will be concerned only with the left-edge Set A markers, I will be generally referring to these simply as “Set A markers” for the sake of brevity.

Traditionally all ergative/possessive person cross-reference markers in Tzeltal (as well as other Mayan languages like Tzotzil and Chol) have been considered prefixes (Kaufman 1971, Slocum, Gerdel, and Cruz Aguilar 1999, Sánchez Gómez et al 2003, Polian 2003b, Haviland 1981, Aissen 1987, Coon 2004). In this chapter I argue that the left-edge Set A markers are actually clitics.

The bulk of the evidence for my claim is morphological rather than phonological in nature. However, Kaufman (p.c.) reports that the personal cross-reference markers can never bear stress, even in the environments where they would be expected to do so.<sup>63</sup> This may offer phonological evidence for the clitic status of these markers.

In the sections that follow, I will deal first with nominal Set A person markers (possessor cross-reference) and then with the verbal Set A person markers (ergative cross-reference).

## Nominal Set A Markers

In Petalcingo Tzeltal, noun phrases with adjectival modifiers feature Set A markers on the left edge of the phrase, and not on the head noun, as shown in the following examples:

- (1) [Petalcingo Tzeltal]  
 a. k-tsontson bal-tik  
     A:1-hairy cousin-PL  
     ‘our hairy cousin’

<sup>63</sup> This claim is based on an assumption that stress in Tzeltal is word-initial, which is not uncontroversial. See “Syllabification and Stress” on page 15 in Chapter 1 for more information.

- b. k-sak-il            na  
 A:1-white-MOD    house  
 ‘my white house’
- c. \* sak-il            k-na  
      white-MOD A:1-house  
      ‘my white house’

This is also true of the Bachajon and Ocosingo dialects of Tzeltal:

- (2) [Bachajon Tzeltal]  
 j-sak-il            mut  
 A:1-white-MOD    chicken  
 ‘my white chicken’
- (3) [Ocosingo Tzeltal]  
 te    j-muk<sup>^</sup>-ul            mut  
 DET A:3-large-MOD    chicken  
 ‘my white chicken’

The possessive marker, which semantically applies to the whole noun phrase, appears only on the modifier: in (1b) it is not the “white” that is possessed, but rather the “house.”

It is not possible to analyze these constructions as instances of secondary predication (something like “my white thing, which is a house”) because adjectival stems in Petalcingo Tzeltal (such as *sakil*,—“white” in (1b), above) are formed from nominal roots with attributive-forming *-Vl* suffixes, and the resulting adjectival stems may not be predicates or arguments—only nominal stems may:

- (4) a. ka-ts<sup>^</sup>ak-Ø    me sak-e  
      ICMP.A:2-grab DET white-CL  
      ‘Grab the white one!’
- b. \* ka-ts<sup>^</sup>ak-Ø    me sak-il-e  
      ICMP.A:2-grab DET white-MOD-CL  
      ‘Grab the white one!’

So while it may be possible to analyze “house” in (1b) as a secondary predicate (c.f. example (67) in “Syntax and Clause Structure” on page 30 in Chapter 1), the modificational stem (such as *sakil*) may not serve as an argument. This suggests that the secondary predicate analysis is not appropriate.

Moreover, multiple attributives may appear between the Set A marker and the head noun, with the Set A marker appearing at the left edge of the entire NP, as is shown in (5):

- (5) [Petalcingo Tzeltal]  
 k-naht-il            sak-il            winik  
 A:1-tall-MOD    white-MOD    man  
 ‘my tall white man’

The Bachajon and Ocosingo dialects of Tzeltal seem to exhibit the same features as well, as shown in example (6):

- (6) [Bachajon, Ocosingo Tzeltal]  
 j-muk<sup>^</sup>-ul            sak-il            mut  
 A:1-large-MOD    white-MOD    chicken  
 ‘my large, white chicken’

If this was something like secondary predication, we would expect both attributives to bear the person cross-reference.

Another non-clitic analysis might take the forms in (1) to be instances of lexical compounding. If *sakil* and *na* formed a compound, then the Set A morpheme on the left edge of the complex could still be treated as a prefix, since *na* and *sakil* would be a word formed in the lexicon.

There are several arguments against this approach. First, if this is an instance of N-N compounding, it is not clear what the role of the attributive stem forming *-Vl* suffix would be: there are many instances of N-N compounding in Tzeltal and none use this morpheme:

- (7) [Petalcingo Tzeltal and Oxchuk Tzeltal (Polian 2003b)]  
 a. tultux            tak<sup>^</sup>in  
    dragonfly    metal  
    ‘helicopter’  
 b. tumin    chij  
    cotton    deer  
    ‘sheep’

On the other hand, while instances of A-N compounding may exist, these are not very common—I am not aware of any. One might (briefly) entertain the idea that the modifier-forming *-Vl* suffix is a nominalizer, forming an adjectival noun stem, and then allowing the formation of an N-N compound. However, as is argued in “Are There Adjectives in Tzeltal?” on page 17 in Chapter 1, the modifier stems are already formed from nominal roots, and besides, if the *-Vl* modifier stems were nouns, they would be able to serve as arguments to predicates. This was shown not to be the case above.

Overall, with respect to any compounding analysis, it would seem rather unusual if the primary way of expressing attributive relations in a language were through compounding.

Finally, lexical compounds would be expected to exhibit non-compositional meaning or semantic drift. None of these phenomena are in evidence with attributive constructions like the ones shown in (1). For this reason, and the others listed above, the compounding analysis seems inappropriate.

What remains is the proposal that the Set A markers are in fact clitics, attaching to the left edge of an NP:

- (8) k-    [NP    tsonstson    bal            ] -tik  
 A:1-    hairy            cousin       -PL  
 ‘our hairy cousin’

This makes sense in light of the fact that in multiple attributive constructions the Set A marker still appears only on the left edge of the NP. The same thing also happens if the modifier is a perfect form of a verbal stem. Both of these phenomena are exemplified in (9):

- (9) [Petalingo Tzeltal]
- a. k-naht-il      sak-il      na  
 A:1-tall-MOD    white-MOD    house  
 ‘my tall, white house’
- b. k-mil-bil      ts^i7  
 A:1-kill-PERF    dog  
 ‘my killed dog’

However, the clitic analysis faces its own problems. While some (attributive) multi-word constituents may appear between the Set A marker and the head noun, it seems that in some cases the Set A marker may not appear on a word that forms a part of the attributive multi-word constituents, as demonstrated in (10) and (11):

- (10) [Petalingo Tzeltal]
- a. laj k-chon-Ø    k-ala    ihk^    ta    sak-il    pixjol  
 PFV A:1-sell-B:3 A:1-DIM black PREP white-MOD hat  
 ‘I sold my black and white hat’
- b. \* laj k-chon-Ø    k-ihk^    ta    sak-il    pixjol  
 PFV A:1-sell-B:3 A:1-black PREP white-MOD hat  
 ‘I sold my black and white hat’
- (11) [Petalingo Tzeltal]
- a. alku      ihk^-al      pixhol  
 something black-MOD hat  
 ‘almost black hat’
- b. \* laj k-chon-Ø    k-alku      ihk^al      pixjol  
 PFV A:1-sell-B:3 A:1-something black-DEM hat  
 ‘I sold my almost black hat’

Thus while in (10a) the possessor cross-reference marker *k-* is placed at the left edge of what appears to be a coordinated modificational modifier (*ihk^ ta saki*), it seems that the presence of a diminutive *ala* is required as is shown in (10b). The example (11) shows that the Set A person marker may not attach to *alku* (“something”).<sup>64</sup>

Other cases of attachment to multi-word constituents seem quite fine, as is demonstrated in (12), though the nature of the constituent seems to be different:

- (12) [Petalingo Tzeltal]
- laj k-chon      k-wen      sak-il      pixjol  
 PFV A:1-sell-B:3 A:1-very white-MOD hat  
 ‘I sold my very white hat’

<sup>64</sup> It is not the case, that the problem with (11b) is that the Set A marker appears on a loanword: in Petalingo Tzeltal Spanish loanwords appear frequently with various Tzeltal affixes and clitics.

The ungrammaticality of (10b) and (11b) may be a problem for the clitic theory of the Set A markers, though there may be independent syntactic reasons for ruling out these examples.

## Verbal Set A Markers

Moving on to verbal Set A markers, we find that just as in the case of nominal Set A markers, various lexical items may intervene between the Set A marker and the verbal stem, as is shown in (13):<sup>65</sup>

- (13) [Petalingo Tzeltal]
- a. och laj s-wen leh-Ø ta y-ahan s-wab  
start EVID A:1-very search-B:3 PREP A:3-under A:3-bed  
'He began to really search under his bed'
- b. wohe laj s-k^un we7-Ø wah  
yesterday PFV A:3-slowly eat-B:3 tortilla  
'Yesterday (She/he) ate tortilla(s) slowly'

Under the clitic theory, the ergative cross-reference appears at the left edge of some sort of a phrase, probably a VP, as shown in (14):

- (14) [Petalingo Tzeltal]
- wohe laj s-<sub>[VP]</sub>k^un we7-Ø wah ]  
yesterday PFV A:3- slowly eat-B:3 tortilla  
'Yesterday (She/he) ate tortilla(s) slowly'

The kinds of items that appear between the Set A marker and the verb are manner adverbials. This would be consistent with the cliticization to VP hypothesis, as these types of adverbials are usually taken to be generated inside the VP. More than one manner adverbial may appear between the Set A marker and the stem, but they must occur in a particular order:

- (15) [Petalingo Tzeltal]
- a. s-cha7 k^un we7-Ø wah  
A:3-again slow eat-B:3 tortilla  
'(He/she/it) eats the tortilla slowly again'
- b. \* s-k^un cha7 we7-Ø wah  
A:3-slow again eat-B:3 tortilla  
'(He/she/it) eats the tortilla slowly again'

This construction seems to exhibit similar properties in the Bachajon variant:

- (16) [Bachajon Tzeltal]
- a. \* la s-le-k^un-pas-Ø na  
PFV A:3-well-slow-make-B:3 house  
'He/she made my house slow and (but) well'

<sup>65</sup> According to Aissen (p.c.), in Tzotzil, *wen* + VERB may not be interrupted by a 2<sup>nd</sup>-position clitic. If this is true in Tzeltal, then the first example would clearly not be as compelling as the second.

- b. la s-k<sup>un</sup>-lek-pas-Ø na  
 PFV A:3-slow-well-make-B:3 house  
 ‘He/she made my house slow and (but) well’

One of the problems for the clitic analysis herein is to explain why not all manner adverbs may appear in this position as with the nominal modifiers multi-word adverbial constituents (such as *ta lek* (“well”)) cannot appear in this position as well:

- (17) [Petalcingo and Bachajon Tzeltal]  
 a. \* la(j) s-ta lek pas-Ø na  
 PFV A:3-PREP good make-B:3 house  
 ‘He built my house well’  
 b. \* la(j) s-ora pas-Ø na  
 PFV A:3-fast make-B:3 house  
 ‘He built my house quickly’

The ungrammaticality of *ora* (fast) appearing in this position is perhaps more troubling though it may be that *ora* seems to be a shortened *ta ora*, a PP which is still used to mean “fast”. One possible explanation could be that a regular transitive verb *tah* (“search”) may be blocking the ergative marker from appearing with the preposition *ta*. The ERG+PREP combination may result in an undesirable homophony with the transitive verb and therefore ERG+PREP combination is banned.

An alternative to the clitic proposal would be an analysis in terms of compounding, which is in fact what was proposed for Chol in Coon 2004. This is also what Boskovic 2001 assumes for Bulgarian mono-syllabic clitics appearing in similar positions. This approach would help explain the limited possibilities of more than one adverbial appearing in the post-Set A slot and the gaps evident in the system. Likewise, the impossibility of adverbs composed of multiple words appearing in the pre-verbal, post-ergative marker position would be easily accounted for, as lexical compounding cannot operate on syntactic constituents. On the other hand, there is some evidence in Petalcingo Tzeltal against the compounding analysis. If *k<sup>un</sup> we7* (“eat slowly”) (from example (14), above) were a verbal compound headed by *we7*, we would expect it to be able to take regular verb morphology, such as the participle-forming *-el* suffix (discussed in the previous chapter). It seems however, that adverbials may not appear in the *-el* constructions:

- (18) [Petalcingo Tzeltal]  
 a. yakal-at ta s-mil-el  
 PROG-B:2 PREP A:3-kill-PART  
 ‘You are killing it’  
 b. \*? yakal-at ta s-k<sup>un</sup> mil-el  
 PROG-B:2 PREP A:3-slow kill-PART  
 ‘You are killing it slowly’

Under the clitic theory, locutions such as (18b) would be ruled out because they do not involve a VP projection, and thus lack a structure for the adverb. Under the compounding account, it is not immediately clear why (18b) is ungrammatical.

Another non-clitic analysis might be adverbial incorporation. Adverbial incorporation is a phenomenon that has been proposed for Chukchee (Chokotko-Kamchatkan) in Spencer 1995 and Modern Greek in Alexiadou 1997 and Rivero 1992. In Modern Greek, Alexiadou

1997 shows, that only manner adverbs are able to incorporate, while sentential adverbs are unable to do so. This parallels the Tzeltal facts, where temporal adverbs, such as *wohe* (“yesterday”) and *pajel* (“tomorrow”) cannot appear between the ergative marker and the verbal stem. Likewise, a byproduct of Alexiadou’s analysis is that incorporation of constituent adverbs (such as modified adverbs) is ruled out, which happens to be the case in Modern Greek, and Petalcingo Tzeltal as well.

On the other hand, Modern Greek, features (at least by some analyses) noun incorporation in reciprocal and reflexive constructions, something that Tzeltal does not seem to have. In fact it is difficult to see how adverb incorporation would fit with the general morphological profile of this language. Nonetheless, adverb incorporation is a possibility that must be considered in this case.

It must be noted, however, that even if the incorporation or compounding account proves to be correct, this by itself would not be evidence against the clitic theory of verbal Set A markers. Rather some of the evidence for the clitic status of verbal Set A markers would disappear.

The final argument in favor of the clitic analysis is that there is very little other prefixation in Tzeltal, outside of the gender and agentive prefixes which may be diachronically related to each other. On the other hand, cliticization is a pervasive phenomenon in Petalcingo Tzeltal, as this language seems to feature clitics of all types.

## Conclusions

In this section I argued that Set A person-marking morphemes are actually clitics, both in the verbal and in the nominal paradigm. This analysis has several implications.

First, the nature of the Set A markers partly determines the kind of clause structure we may want to propose for Tzeltal. Clitics are generally taken to exhibit different syntactic properties from affixal agreement as the latter is generally taken to be syntactically inert. Presumably then, having the right analysis for the agreement structures in a language is a prerequisite for a tenable clause structure analysis.

Second, most researchers reconstruct affixes for Set A markers in Proto-Mayan. However, if these markers are clitics in Tzeltal, and if we assume the unidirectionality of grammaticalization hypothesis (Hopper and Traugott 1993), then Set A markers must have been clitics in the proto-language. This suggests that our conception of proto-Mayan person cross-reference must be reconsidered in light of the Tzeltal<sup>66</sup> evidence.

## Identical Ergative and Possessor Marking

In this section I examine the phenomenon in Tzeltal whereby the subject of a transitive verb is marked identically to the nominal possessor. This phenomenon is by no means unique to Tzeltal, or even other Mayan languages. Therefore this section will also consider languages outside Chiapas and the analyses proposed for these.

Here I will continue to make use of the terms S, A, and O, popularized by Dixon 1994, whereby S stands for the subject, or the only core argument of an intransitive clause, and A

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<sup>66</sup> The clitic-like nature of these markers can also be established for the closely-related Tzotzil, and the less-closely related Chol, as was argued in Shklovsky and Coon 2005.



and O stand for the most agent-like and the most patient-like core arguments of a transitive clause, respectively.

## Functional and Typological Considerations

This subsection considers the phenomenon of identical ergative and possessive marking from functional and typological perspectives, with the following sections being devoted to diachronic and synchronic syntactic analyses.

### Expected and Attested Types

*A priori*, if we consider possession as a way of marking grammatical relations within the noun phrase, it would not be surprising if languages employed some of the same mechanisms of marking grammatical relations in the sentence / verb phrase and in the noun phrase. One example of such a phenomenon in English is the “by” phrase, which can introduce agent arguments in (verbal) passive clauses, as well as in nominalizations:

- (19) a. The city was destroyed **by the barbarians**  
 b. The city’s destruction **by the barbarians** (shocked the residents)

Noun phrases and sentences are different entities, and presumably an identical marking of grammatical relations within NPs would not give rise to ambiguity with respect to grammatical relations within sentences and VPs. Let us call the underlying principle the “efficiency principle” which would hold that all things being equal a language generally deploys fewer morphosyntactic resources rather than more. This would mean that a morphosyntactic strategy utilized in one area of the grammar may be also used in another, subject to the “non-ambiguity principle” which would hold that languages do not tolerate ambiguity well. These principles have their corollaries in phonological theory, where it is often held that opposing forces of economy of gesture and preservation of phonological contrast are responsible for the nature of phonological systems we find in world’s languages.

The “efficiency principle” is often used to explain the typological rarity of tripartite systems of marking grammatical relations in the world’s languages (Dixon 1994, Payne 1997 and others). Tri-partite marking is a phenomenon where A, S, and O all exhibit different markings. The argument usually presented holds that since no clause can be both transitive and intransitive, the S argument could always be marked like the A or the O argument with no ambiguity as to the grammatical relations expressed.

It is clear that languages tolerate some amount of both ambiguity and computational redundancy, meaning that both principles are violated, as they necessarily must be due to their opposing nature. The most obvious examples of these violations are homophones, existence of tri-partite systems of marking grammatical relations, and divergent syntactic constructions that utilize identical phonological structures. An example of the latter might be the English *-(e)s* morpheme which a) marks agreement with 3<sup>rd</sup>-person A/S argument, b) marks plural feature on nouns, c) marks the possessor in a possessive construction, and d) in some syntactic environment is the reduced form of 3<sup>rd</sup>-person singular present tense of the verb *be* (-s). The English system is “efficient” but some ambiguity results, as when *elephants walk* can be ambiguous between “elephant’s walk” and “elephants walk” when pronounced.

As an explanatory principle, the “efficiency/non-ambiguity” approach is one of the cornerstones of modern linguistic theory, and is even formally built into some major theories, such as OT (Optimality Theory).

Now if we take it as basic that the same way of marking grammatical relations between the verb and its arguments could be utilized within a noun phrase, not all logically possible systems of marking such relations are unambiguous. Consider, for example, a hypothetical pure dependent-marking language (in the sense of Nichols 1986) that employs nominative/accusative case-marking for core grammatical relations. If the case system was the only way of marking grammatical relations in such a language,<sup>67</sup> and if such as language “recycled,” so to speak, one of the ways of marking grammatical relations between a verb and its arguments in the noun phrase, we obtain two possible systems of possessor marking:

- (20) a. woman(+S/A)-marking father  
           ‘woman’s father’  
       b. woman(+O-marking) father  
           ‘woman’s father’

If we add to this a common typological fact, captured by Greenberg 1963 universal 38,<sup>68</sup> namely that S/A (in accusative languages) or S/O (in ergative languages) case realization frequently is  $\emptyset$ -marked, one of the above systems, namely (a), becomes ambiguous. If (in this hypothetical accusative language) the S/A marking is zero marking, then the possessor would remain unmarked and the example in (20a) would give rise to two interpretations: “woman’s father” or “father’s woman” (remember, we are excluding word order for the purposes of disambiguation). Similar arguments hold for a system that uses S/O marking for (dependent-)marking possessive relations in an ergative language.

With head-marking languages the situation is slightly different, yet nonetheless leads to a similar conclusion. A pure dependent marking language would cross-reference some phi-features (person, number, grammatical gender, etc) of the arguments on the head of the phrase, such as verb or a noun. In many head-marking languages the arguments of the head can usually be elided (pro-drop), since the information they provide is often recoverable from the inflection on the head and thus redundant (another type of application of the “efficiency/non-ambiguity” principle). In these languages there is no case-marking that has a zero-marking (because there is no morphological case), however, in head-marking languages that cross-reference two arguments of the verb, it is common that the S/A (for accusative languages) or S/O (for ergative languages) cross-reference include a  $\emptyset$  allomorph, usually for a third-person (singular) argument. Examples of this are found in Mayan languages (like Tzeltal), Wiyot (Teeter 1964), Hungarian (Szabolcsi 1994), and others. This means that in a hypothetical accusative head-marking language with free word-order, an identical marking for S/A and possessor cross-reference might look something like the following:

- (21)       mother- $\emptyset$                                husband  
               mother-POSSESSOR:3sg   husband  
               ‘mother’s husband’

<sup>67</sup> This is admittedly a hypothetical example since word order is always obligatory, at least in the non-signed modality, and is usually significant in possessive constructions.

<sup>68</sup> “Where there is a case system, the only case which only has zero allomorphs is the one which includes among its meanings that of the subject of the intransitive verb.”

At the level of the surface form an ambiguity would result since, if the language had free word order, “mother’s husband” would be indistinguishable from “husband’s mother.”<sup>69</sup>

Thus, all things being equal (which they never are) we would expect to see fewer instances of (S/A)=POSS in accusative languages and (S/O)=POSS in ergative languages. This is exactly what Dixon 1994 implies: “while the unmarked cases—absolute and nominative—are almost always used only for basic syntactic relations, the marked case forms—ergative and accusative—often (but not always) have wider uses.”<sup>70</sup>

Limiting our field of view of these “wider uses” to specifically possession marking, the expected (and claimed) typological tendencies are not always borne out by the data. Within the accusative languages there seem to be at least some counterexamples to the expected generalization.

One of these is Koyra Chiini, a Songay language spoken in Timbuktu, Mali (all Koyra Chiini data is from Heath 1999). In this language the basic grammatical relations in a clause are marked via word order, but the pronominal system exhibits nominative/accusative dependent marking. The pronouns in Koyra Chiini are summarized in the following table:

	Subject (S/A)		Object (O)	
	Singular	Plural	Singular	Plural
1	ay	yer	ey	yer
2	ni	wor ~ war	ni	wor ~ war
3	a	i	ga	gi ~ ji
3F <sup>71</sup>	ŋga ~ ŋa	ŋgi-yo	ŋga ~ ŋa	ŋgi-yo

**Table 24: Personal Pronouns in Koyra Chiini<sup>72</sup>**

As can be seen from the table above, in 1<sup>st</sup>- and 3<sup>rd</sup>- person singular forms, as well as 3<sup>rd</sup>-person plural, the O pronouns differ from the S/A pronouns. This is illustrated in the following example:

- (22) a jisi ga  
 3SgS put-down 3SgO  
 ‘He put him down’

The possessive construction in Koyra Chiini is marked via a linker *wane*, which is omissible. The word order in possessive constructions is POSSESSOR-*wane*-HEAD, and when the possessor is pronominalized, the S/A pronominal set is used:

- (23) a. a wane gaabi di  
 3sg POSS strength DEF  
 ‘its power’

<sup>69</sup> It must be noted, though, that many head-marking languages frequently do use word-order to disambiguate A/O grammatical relations when cross-reference marking results in true ambiguity.

<sup>70</sup> Dixon seems to consider genitive a non-core case relation.

<sup>71</sup> F means “Full” in this context. For more information the reader is referred to Heath 1999.

<sup>72</sup> The logophoric and reflexive pronoun forms have been omitted from this table.

- b. ay ñaa  
 1sg mother  
 ‘my mother’

Another famous case of S/A=POSS is Hungarian. The details of Hungarian noun phrase syntax are analyzed extensively in Szabolcsi 1994. Hungarian is a nominative/accusative language with double-marking in its basic grammatical relations: the verb cross-references subject and (definite) object agreement, and overt nominals are case-marked. The verb agreement paradigm is rather complex, as the agreement morphemes are not always easily segmentable into subject and object agreement. In general the constituent order is relatively free.

Possessive constructions in Hungarian come in two flavors. In the first type (the one generally taken to be basic), possessor is nominative (unmarked) and pre-nominal, and can be pro-dropped under same conditions as the subject of a sentence. Possessive inflection is almost identical to verbal object inflection:

- (24) a. a te-Ø kalap-ja-i-d  
 the you-NOM hat-POSS-PL-2SG  
 ‘your hats’  
 b. (a) Mari-Ø kalap-ja-i-Ø  
 the Mari-NOM hat-POSS-PL-3SG  
 ‘Mary’s hats’

Unstressed possessors are dropped:

- (25) a. a MI-Ø kalap-unk  
 the we-NOM hat-POSS.1PL  
 ‘OUR hats’  
 b. a kalap-unk  
 the hat-POSS.1PL  
 ‘our hats’

There is also a dative possessor, which appears before the determiner:

- (26) Mari-nak a kalap-ja-i-Ø-Ø  
 Mari-DAT the hat-POSS-PL-3SG-NOM  
 ‘Mary’s hats’

Personal pronoun possessors are not acceptable in the dative possessor construction, but the nominal possessor can be moved away from the noun phrase:

- (27) Mari-nak fekete volt a kalap-ja-Ø-Ø  
 Mari-DAT black was the hat-POSS-3SG-NOM  
 ‘Mari’s hat was black’

Thus, even though the “unmarked” possessive construction in Hungarian is of the (S/A)=POSS type, the construction dative possessor construction exhibits free word order (like regular Hungarian main clauses) and the head noun features O-type agreement, rather than S/A type. If the word-order and agreement facts of the dative possessor construction can be taken to mean that the syntax of this possessive construction is more in parallel with

the clausal syntax of Hungarian, then this language may not pose as much of a problem for the typological expectation outlined above.

With respect to the “unexpected” possessor marking in ergative languages (that is, where S/O=POSS), there is very little evidence to suggest that such languages do exist. Part of the problem may be the relative scarcity of such languages with respect to the more common nominative/accusative type, and/or the lack of reference materials. To my knowledge only one ergative language has been claimed to exhibit S/O=POSS, and that is Kolana (Wersing), a language in the Trans-New Guinea family (Mark Donohue, p.c.). However it is possible that this language may not be well-researched enough yet to be certain.

## Accusative versus Ergative

There is little typological information available on the relative commonality of identical marking of possessive constructions and verbal grammatical relations with respect to ergative versus accusative languages; however, the signs here point to the idea that it is more common in ergative languages than accusative ones. Thus Dixon 1994 (the above-quoted passage notwithstanding) cites examples of only two accusative languages where O=POSS (Pengo and Assyrian), and even in these languages the phenomenon does not seem particularly robust. In Pengo, for example, the O marking is used sometimes “in genitive function with nouns denoting persons” (Burrow and Bhattacharya 1970), while in Assyrian only non-singular genitive case-marking is identical to the accusative.<sup>73</sup> On the other hand Dixon’s examples of ergative languages where A=POSS are easily double that number (Eskimo, Lak, Ladakhi, Burushaski, and “certain Iranian Languages”, though in the latter two O/POSS marking also marks other grammatical relations). This is particularly significant given the fact that among the world’s languages accusative languages far outnumber ergative ones.<sup>74</sup> Likewise, Bittner and Hale 1996a write “many languages which employ the ergative case use it both for the subject of a transitive VP and the subject of a possessed NP, i.e. the possessor. This holds not only for classical ergative languages, like Inuit, but also for languages with three-way or split Case systems, exemplified by Nez Perce and Malagasy, respectively.”<sup>75</sup> Trask 1979 makes the identity of ergative and possessive marking one of the cornerstones of his (diachronic) theory of the genesis of ergativity. Klimov 1973 in arguing against the possessive genesis of ergativity makes reference to the “facts of identity of personal affixes of the verb-predicate and possessive form.”<sup>76</sup>

To be sure, there are counterexamples to the generalization that it is more common for ergative (rather than accusative) languages to “re-use” the verbal grammatical relation marking in the nominal possessor marking. Hungarian is one of these. Another one is Russian, where a well-known case is the so called “genitive of negation.” Normally objects of

<sup>73</sup> Dixon sites other accusative languages where certain “peripheral” genitive functions, that is, not specifically possession, which feature O-marking, such as dative function (Konda), or target of motion (Latin). I do not consider these functions “genitive enough” to regard them as O=POSS marking.

<sup>74</sup> I am obliged to Matt Pearson for pointing this out.

<sup>75</sup> Arguments could be, and have been, made against the ergativity of “Philippine-type” languages. This debate is especially active with respect to Tagalog.

<sup>76</sup> My translation from “Факты тождества личных аффиксов глагола-сказуемого с притяжательными формами...”

transitive verbs (O) in Russian bear accusative case (28c), however, in negated transitive sentence the O-argument bears genitive case (28b), just like in possessive constructions (28a). This presents a restricted O=POSS pattern:

- (28) a. Cvet-a ruč-ek  
color-PL NEG pen-GEN.PL  
'the colors of the pens...'
- b. Ja ne vid-el tvoih ruč-ek  
I.NOM NEG see-PST.MASC your-GEN pen-GEN.PL  
'I did not see your pens'
- c. Ja ukr-al tvoi ruč-ki  
I.NOM steal-PST.MASC your pen-ACC.PL  
'I stole your pens'

From the standpoint of grammatical relations within a clause, a core argument may be marked with accusative or genitive case. Therefore, Russian features O=POSS at some level of grammar. However, what distinguishes the genitively-marked arguments from accusative ones is specifically the fact that these do not receive an unmarked interpretation. Possessive case (as opposed to accusative) is used to mark objects that are not affected in the usual way, that is, objects that are less patient-like.

Many other examples can be adduced, but the point here is that while there are instances of overlap between possessor marking and object marking in accusative languages, these are often characterized precisely by the fact that the objects marked by genitive case in these languages are marked differently from prototypical objects. Another way of putting this is that genitive object marking in such languages is a marked way of expressing the object grammatical relation. Likewise, in many of the O=POSS marking languages cited by Dixon 1994 (such as Assyrian and Pengo) the expression of the possessor relation via canonical object marking is marginal or restricted within the possessive paradigm, as discussed above.

On the other hand, in ergative, or split-ergative languages A=POSS marking is quite robust, even if ergativity is limited to a certain part of grammar. In order to proceed, a distinction must be made between two types of "split-ergativity" found in the literature. On the one hand, there are the grammatical systems that feature ergative alignment of A, S, and O only in the past tense or perfective aspect. Such is the case in Chol (Mayan), Georgian (South-Caucasian) and many others. I will continue calling these languages "split-ergative". Some researchers (such as Payne 1997), however, also use this moniker to describe direct-inverse languages such as those in the Algonquian family. While perhaps conceptually similar to the languages (such as Yidin<sup>3</sup>) that feature ergativity split based on the semantic nature of the NPs (described by Silverstein 1976 and Dixon 1994), it is not clear that the grammars of the Algonquian-type languages are even amenable to an accusative/ergative type of analysis. While some efforts have been made in recent years to assimilate direct-inverse language grammars to the accusative paradigm within the P&P framework (one example of such work is Brittain 2001), these attempts have so far not been completely accepted in the field. Therefore, I will remain agnostic on this issue, but continue to call Algonquian-type languages direct-inverse rather than split-ergative.

Some examples of languages that feature split-ergativity but have robust A=POSS marking might be Chol (Coon 2004) and Pashto (Taylor Roberts, p.c.). It seems that ergativity and

A=POSS phenomenon are a common occurrence in the world's languages, while O=POSS in accusative languages is not nearly as common. This observation is again amplified by the fact that ergative languages are a decided minority in the world's language stock. However, in all fairness, it must be said that the typological study undertaken in this work cannot be considered anything but preliminary. However, if this idea is on the right track, it then becomes interesting to consider the languages that do not fit neatly in the ergative or accusative schema and see whether the identical marking of grammatical relations in the verb phrase and noun phrase is common in these languages.

### Direct-Inverse Languages

Many north American languages, such as those in the Algonquian, Penutian, Muskogean, Dakota and other language families feature direct-inverse marking of grammatical relations as well as S/A/O=POSS patterns. The majority of these languages also exhibit proximate/obviate noun phrase marking ("obviation"): among the discourse-available third-person referents, one is designated as "proximate" while all others are "obviative." This grammatical device is used to disambiguate between third-person referents in connected discourse. The proximate/obviative status of any particular noun phrase may shift, as the speaker is (generally) free to designate a particular noun as proximate, though some constructions, such as possessive, require that a particular NP, such as the possessed noun, be obviative.

The languages under discussion feature possessive marking on the head noun that is identical to the morphemes that cross-reference core arguments on the verbal word. In Plains Cree (Dahlstrom 1986), for example, transitive verb inflection is divided into local ("you and me") forms, and third-person forms. In the local forms (limited to speech act participants, that is, 1<sup>st</sup>- or 2<sup>nd</sup>-person), if the A is 2<sup>nd</sup>-person (thus making O 1<sup>st</sup>-person), a "direct" form of the verb is used, otherwise the verb is marked with an "inverse" form:

- (29) a. ki-wa:pam-i-n  
2-see-DIR-SG  
'You see me'  
b. ki-wa:pam-iti-n  
2-see-INV-SG  
'I see you (sg)'

In non-local forms, that is, when one of the arguments is 3<sup>rd</sup>-person, if a speech act participant A acts on a third-person O or a 3<sup>rd</sup>-person proximate A acts on a 3<sup>rd</sup>-person obviative O, the verb is marked with a direct form; otherwise an "inverse form" is employed:

- (30) a. ni-wa:pam-a:-w  
1-see-DIR-3  
'I see him'  
b. ni-wa:pam-ekw-w  
1-see-INV-3  
'He sees me'

On the basis of these cross-referencing patterns a person hierarchy of the form  $2 > 1 > 3\text{PROX} > 3\text{OBV}$  has been postulated for Algonquian languages. If the highest (leftmost) ranked argument is A (that is, if A outranks O on the person hierarchy), then the

verb appears in the direct form. On the other hand, the inverse form is employed if the O argument outranks the A argument.

With transitive verbs, the person prefix on the verb word cross-references the highest-ranked argument available. The same prefixes are used to cross-reference the person feature of the only argument of an intransitive verb (S):

- (31) a. ni-pimipahta:-n  
1-run-SG  
'I run'
- b. ki-pimipahta:-n  
2-run-SG  
'You run'

These prefixes are also employed to cross-reference the possessor in a possessive construction:

- (32) a. ni-maskisin  
1-shoe  
'my shoe'
- b. ki-maskisin  
2-shoe  
'your shoe'

I have avoided the gory details of Cree nominal and especially verbal inflection in a bow to simplicity, however, what I hope to have shown is that with a direct-inverse language such as this, we would not speak of accusativity or ergativity in the verbal paradigm, at least until a convincing proof is offered. What is interesting, however, is that these languages seem to feature precisely the kind of phenomenon ("re-use" of verbal grammatical relations marking in the possessive construction) that I suggested might be more common in ergative languages. This idea receives some support from the fact that the "recycling" of grammatical marking seems to be fairly robust across the Algonquian language family, and extends to other North American language families. This analysis then, if on the right track, would suggest that if the analysis of the grammar of direct/inverse languages should be assimilated to that of the typologically more common languages, (nominative/accusative or ergative/absolute), then it is the ergative languages that may be a better candidate.<sup>77</sup>

### Philippine-Type Languages

The Philippine-type languages (such as Tagalog, Malagasy, Cebuano, and others), present yet another way of marking core grammatical relations in a clause. In these languages, in transitive sentences, one of the arguments is in a syntactically prominent position traditionally called "topic." In Tagalog (all Tagalog examples are from Schachter and Otnes 1975) the topic marking particle is *ang*. With intransitive clauses, the topic particle usually marks the single core argument:

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<sup>77</sup> The relationship between Algonquian languages and ergativity was in fact suggested in Hewson 1987.



- (33) gumising ang bata  
 awoke TOPIC child  
 ‘The child awoke’

The verb is inflected to cross-reference the theta-role of the topic. In transitive clauses with two core arguments and no obliques, one of the core arguments is designated as “topic,” and the verb marking reflects the theta-role of the topic NP. Thus, in Tagalog, a simple monotransitive clause can be in one of the following forms:

- (34) a. bumabasa ng diyaryo ang titser  
 read.AT<sup>78</sup> ng newspaper TOPIC teacher  
 ‘The teacher is reading a newspaper’  
 b. bumabasa ng titser ang diyaryo  
 read.TT<sup>79</sup> ng teacher TOPIC newspaper  
 ‘The teacher is reading a newspaper’

When a proper name appears in the *ng* + NOUN position, instead of *ng* it follows the participle *ni*. Pronouns in this position take the *ng* form.<sup>80</sup>

- (35) a. ginawa ng modista ang baro  
 make-TT ng dressmaker TOPIC dress  
 ‘The dressmaker made the dress’  
 b. ginawa ni Maria ang baro  
 make-TT ng Maria TOPIC dress  
 ‘Maria made the dress’  
 c. ginawa ko ang baro  
 make-TT ng.1sg TOPIC dress  
 ‘I made the dress’

Then *ng* pronoun forms are listed in the following table:

Person	Singular	Plural
1 <sup>st</sup>	ko	×
inclusive	×	nita
exclusive	×	namin
2 <sup>nd</sup>	mo	ninyo
3 <sup>rd</sup>	niya	nila

**Table 25: The *ng* Forms of Personal Pronouns in Tagalog**

The instrumental and locative arguments (and others) can also be made topics, resulting in different topic-marking affixes on the verb. The exact inventory of topic-marking affixes differs from language to language.

There is currently a controversy in the field with respect to the status of Philippine-type languages: some researchers propose assimilating (at least some of) these languages to the

<sup>78</sup> Agent-topic

<sup>79</sup> Theme-topic

<sup>80</sup> Matt Pearson points out that in Malagasy the linguistic facts make it more difficult to propose the same analysis.

ergative type. They argue that *ang* should be analyzed as an absolutive marker and *ng* as both ergative and oblique case-marker. The agent-topic marking on the verb would then simply be anti-passive morphology.

Tagalog features four possessive constructions. Two of these are best analyzed as relative clauses, and as such will not be considered here. Of the remaining two, one is much more common, and will be considered here as basic. In this type of possessive construction the pronominalized possessor appears in its *ng* form (the form the personal pronouns take when they replace an *ng*-marked noun in transitive construction):

- (36)        lapis    ko  
               pensil ng.1sg  
               ‘my pencil’

It is interesting to note that on the ergative analysis of Tagalog, the possessive construction would be characterized as ERG=POSS, as we would expect.

### Conclusion

If it can be shown that identity or near-identity between nominal and verbal grammatical relations marking is a correlate of ergativity, then the fact that direct-inverse and Philippine-type languages also seem to frequently exhibit this phenomenon is a telling one. This may suggest, as was mentioned above, that if the grammars of these languages are to be assimilated either to that of accusative or ergative languages, it is the ergative languages that may provide a more appropriate model.

### Head- versus Dependent- Marking

It appears that the common pattern of robust ERG=POSS marking is not sensitive to whether the language is head- or dependent-marking. While Mayan and Eskimo are ergative languages which feature this phenomenon and are head-marking, others are dependent-marking. For example, Ladakhi (Koshal 1979), a Sino-Tibetan language spoken in India and China, is thoroughly dependent marking in its clause-level grammar: the verb bears no cross-reference marking, while there is a rich system of nominal case marking. This language likewise marks genitive and ergative case identically (a fact which seems to be almost unnoticed in an otherwise excellent grammar of Koshal 1979, perhaps owing to the fact that in parts of the pronominal system the genitive case marking differs slightly from the ergative). The case endings vary depending on the ending of the stem, but are identical for genitive and ergative case:

Stem Ends in ...	Genitive / Ergative Suffix ...
C	-C <sub>i</sub>
/ə/, /o/	-e (stem-final /ə/ may be deleted)
any other V	-yi

**Table 26: Ergative/Genitive Marking in Ladakhi**

Thus we have the following examples:

- (37) a.    ə-mi-yi        šɪŋ-Ø        čədduk  
               that-man-ERG wood-ABS cut  
               ‘That man cuts the wood’

- b. khi-yi sɣəməriŋmo duk  
 dog-GEN tail.long be  
 ‘Dog’s tail is long’
- (38) a. kho-e lčəŋme-Ø čədduk  
 PRO:2-ERG tree-ABS cut  
 ‘He cuts the tree’
- b. ŋəže əčo-e žiŋ-čhen-mo yot  
 our elder brother-ERG field.big be  
 ‘Our elder brother’s field is big’

## Diachronic Considerations

One way of accounting for the typological commonality suggested above (whereby ergative languages are frequently found to exhibit  $ERG=POSS$ ) is via historical analysis. Many researchers believe that accusative languages can become ergative over time with ergativity developing from passive (c.f. Dixon 1994). In fact, this is the standard analysis of ergative languages such as Indo-Aryan. This particular diachronic analysis, however, provides little explanation as to why ergative case is often identical to genitive. One theory that does offer such an explanation is proposed in Trask 1979. Trask divides ergative languages into two types: Type A and Type B. Trask’s Type A ergative languages are more fully ergative, i.e. they do not exhibit a tense/aspect split, they feature verb agreement with direct objects in person as well as number, and are more commonly head-marking. All of the syntactically ergative languages are in the Type A category. Type B languages are argued to be “less ergative,” meaning they feature tense/aspect splits, and no direct object agreement in person. Trask then proposes that Type A ergative language arises from a reanalysis of passive as active (as in Indo-Aryan), while type B arises from a reanalysis of perfective, specifically “incorporation into the inflectional paradigm of a nominalized deverbal form with stative force.” Herein is the connection with genitive, according to Trask, where, with respect to the nominalized deverbal form “it quite often happens that the agent phrase is attached by means of a possessive construction.”

Trask’s theory is an interesting one, especially in the idea of seeking to identify different types of ergativity. Trask’s hypothesis has the advantage that it makes some clear-cut predictions. Unfortunately many of these simply are not borne out by the data. For example, Trask stipulates that no language combines verbal cross-reference morphology (a type A characteristic) with a tense/aspect ergativity split, and a corollary prediction that no language combines a tense/aspect split with the absence of case-marking. Mayan languages (such as Chol) offer numerous counterexamples to this prediction. Likewise the theory predicts that  $ERG=POSS$  languages are type B languages, however, other Mayan languages (like Tzotzil and Tzeltal), which are clearly of Trask’s type A, meaning fully ergative, are counterexamples. Finally Trask’s methodological approach to North American languages must be revised in light of the recent work on direct/inverse in these languages. Trask assumes that the inverse marking in direct/inverse languages is in fact a passive, an analysis that we owe to the original investigators of the Algonquian-type (direct/inverse) languages. However works like Dahlstrom 1986 and Blain 1998 show conclusively that the Algonquian-type inverse is not a passive construction. One especially convincing piece of evidence is the fact that many of the languages in question feature what appears to be a “true” passive construction. This

construction, in contrast with the inverse marking, exhibits the expected characteristics of passives, such as optionality of the A argument.

Even if Trask's proposal were on the right track, we would still need to find a synchronic explanation for the stability of the ERG=POSS homology. For example, tripartite and identical S/A/O markings have been postulated as a transitional types, however, these seem to not be very common synchronically. So while languages go through stages of tripartite or identical marking, few seem to retain this schema of marking grammatical relations. ERG=POSS, on the other hand, appears to be a stable component of many grammars of ergative or partially ergative languages. Therefore synchronic treatments of this phenomenon are analyzed in the next section.

## Synchronic Considerations

Having addressed some existing diachronic explanations of the phenomenon, I now turn to synchronic accounts. Ergative languages only fairly recently have started to receive attention from linguists working in the formal P&P (Principles and Parameters) frameworks. The majority of this work concentrates specifically on how to account for the ergativity phenomenon in general, rather than the ERG=POSS phenomenon in particular.

Within the P&P-style accounts of ergativity, several different types of approaches have been proposed. Some early works on ergativity postulate that ergative and accusative languages differ at D-structure, whereby the A and O arguments are inserted in different positions, contra the Uniformity of Theta Assignment Hypothesis (UTAH) of Baker 1985, 1988. By this hypothesis, the agent argument in ergative languages is projected closer to the verb than the theme argument, whereas in accusative languages it is by now a standard assumption that the theme is projected closer to the verb than the agent. This kind of difference at D-structure, however, is not a comfortable assumption for modern P&P-style analysis. It is now taken as a basic principle within P&P frameworks that all languages look essentially the same at D-structure, with various grammatical principles governing the alternations exhibited by languages at surface structure.<sup>81</sup> Baker 1997 provides a set of arguments showing that even in syntactically ergative languages, while some syntactic configurations (such as relativization and inter-clausal coordination) exhibit patterns opposite from accusative languages, others (such as compounding and incorporation) pattern identically with that in accusative languages.<sup>82</sup>

Thus the majority of later proposals assume that ergative languages look like accusative languages at D-structure, and that some principle of grammar can account for the fact that the case (or agreement) of ergative languages is assigned differently than in accusative languages. There are two major types of proposals in this vein: some researchers equate absolutive case in ergative languages with nominative case in accusative languages, while others argue that ergative case of ergative languages is parallel to nominative case in accusative languages.

Both proposals have their advantages. The ERG=NOM proposal has the conceptual attractiveness that the transitive clauses in both types of languages can be treated identically:

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<sup>81</sup> For an overview of analyses of ergative languages see Baker 1997 and Nash 1996.

<sup>82</sup> Dixon 1994 also provides a set of constructions cross-linguistically sensitive to the notion "subject" (S/A), such as deletion in imperatives.

the sole difference between the two language types is found in intransitive clause grammatical relation marking. Conversely with the ABS=NOM treatment of ergativity, the difference between the two language types lies in transitive clauses, while the intransitive constructions can be treated identically. This latter proposal also has one *a priori* conceptual advantage: since nominative and absolutive (but not accusative or ergative) cases are the ones that tend to be unmarked in the world's languages, the ABS=NOM treatment captures a markedness phenomenon that is difficult to explain under the ERG=NOM proposal.

The ERG=NOM treatment is proposed in passing in Chomsky 1996. Chomsky assumes that subjects and objects in transitive clauses raise to specifiers of (functional) agreement projections Agr<sub>S</sub> and Agr<sub>O</sub> to check case features. In an intransitive clause, there is only one argument that requires structural case, and whether it raises to Agr<sub>S</sub> or Agr<sub>O</sub> will determine whether the language features nominative/accusative case (or agreement) or ergative/absolutive. Thus, Chomsky states, “the distinction between the two language types reduces to a trivial question of morphology, as we expect” (page 9). Bobaljik 1993 also proposes the ERG=NOM analysis, in a similar spirit: in ergative languages, it is the accusative case that must be checked in intransitive clauses, and not nominative, thereby giving rise to the S/O (rather than S/A) pattern. Many other proposals in this spirit have been made before and since (see Nash 1996, Bobaljik 1993, and works cited therein). One problem many ERG=NOM analyses face is how to properly account for syntactically ergative languages (see “Syntactic Ergativity” on page 38 in Chapter 1). Contrary to Chomsky's off-handed remark, the syntactically ergative languages (i.e. those that feature S/O rather than S/A pivot) show us that at least some types of ergativity cannot be reduced to a trivial question of morphology.

There have been several types of ABS=NOM-style analyses in the literature. Bittner and Hale 1996a, 1996b, for example, propose a structural account of case assignment whereby assignment of marked (accusative or ergative) case depends on the presence of a co-argument, capturing the empirical fact that marked case generally only appears in the presence of unmarked case (nominative or absolutive). In their theory, the difference between ergative and accusative languages is attributed to the presence (in accusative languages) of an “extra” null D head adjoined to the V head, which allows assignment of marked structural case to the VP-internal argument, namely the accusative object.<sup>83</sup> On the other hand, Nash 1996 argues that ergative is not a structural case, but rather is a lexical case, a term usually reserved for case-marking idiosyncratically assigned by a particular verb.<sup>84</sup> The proposal here is that in ergative languages the functional category where the A arguments are considered to be projected, namely the vP, is absent in ergative languages. Though formally, this means that ergative languages differ in some sense from accusative languages at D-structure, the differences in initial projection of arguments are not as “dramatic” as in the analyses outlined above. In fact, the lack of vP, or a presence of “defective” vP has become

<sup>83</sup> Whatever the empirical and theoretic consequences of their analysis, the style of inquiry is rather welcome in that unlike many modern syntactic proposals, in Bittner and Hale's treatment of ergativity it is ergative (largely non-Indo-European) languages that look more “standard”, and accusative languages (the native languages of an overwhelming majority of academic linguists) appear more odd. Unfortunately though this instinct is generally to be applauded, in this particular case it seems rather curious, since typologically-speaking, accusative languages far outnumber ergative ones.

<sup>84</sup> An example of verbs assigning “lexical” case in Indo-European languages are the dative-assigning verbs such as *helfen* in German or *gustar* in Spanish.

one of the standard accounts of ergativity in P&P-style frameworks (c.f. Alexiadou 2001, Johns 1992).<sup>85</sup> Nash's proposal, though interesting, seems to be less able to deal with the ergativity of languages such as Tzeltal, where ergative marking is present throughout the grammatical structure. The lexical (idiosyncratic) assignment of ergative case simply does not reflect linguistic facts where every transitive verb shows ergative case marking (or agreement). Moreover the presence of regular transitivizers, which form verbs that also invariably assign ergative seems to be a problem for Nash's account.

Since the ergative languages in general are not (yet) particularly well-researched from a modern syntactic standpoint, there is not an overabundance of syntactic accounts of specifically ERG=POSS phenomena in the literature. There are however, some proposals in the current literature, and these will be examined below.

### Similar Structural Case Assignment

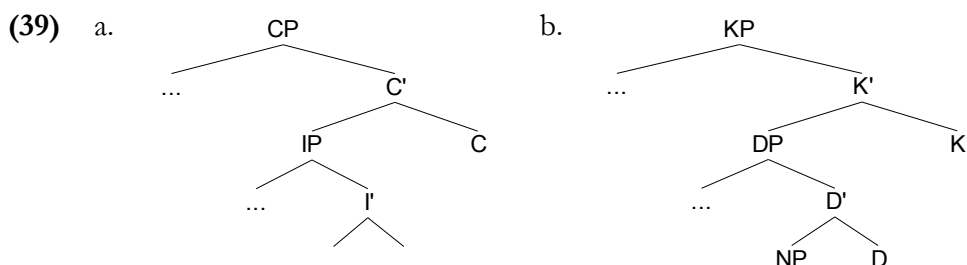
This type of account is proposed in Bittner and Hale 1996a, 1996b. For these authors the identity of ergative and possessive marking lies in the identity of the mechanism of the case assignment. Some of the aspects of their treatment of ergativity were already reviewed above. The authors proposed a functional head, K, as the locus of case assignment. Marked structural case (accusative or ergative) is assigned in a configuration where two co-arguments are "visible" to the case-assigning head. This proposal is designed to account for both syntactically ergative and morphologically (only) ergative languages: in morphologically ergative languages the VP (verb phrase) is transparent for government by the C head, therefore the absolutive argument can be licensed *in situ*. In syntactically ergative languages, the VP is opaque to government, and as a result the absolutive argument (S/O) must raise at least as high as [Spec, IP] to get case. This results in the absolutive argument being "more prominent" to syntactic phenomena such as coordination, relativization, etc. Accusative languages feature a D head incorporated into the verb, which functions as a co-argument for the purposes of case-assignment by V (verb), thereby allowing the V head to assign accusative case to the object.

The authors hold that agreement is independent from structural case. In particular this allows them to account for those Australian languages where while case-marking follows ergative/absolutive pattern, the agreement is nominative/accusative.

With respect to the ERG=POSS phenomenon, Bittner and Hale explicitly reject "the special kinship between the lexical categories of noun and verb." Rather they propose that parallel functional heads in extended nominal and verbal projections are responsible for the ERG=POSS phenomenon. Bittner and Hale's CP/DP parallelism is as follows:

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<sup>85</sup> The "defective" vP approach has a major advantage over the "missing" vP analysis in that the structural configuration of ergative and accusative languages (or D-structure in GB terms) can be identical. The only difference is now in the features of the functional category v, which projects a "regular" vP in accusative languages and "defective" vP in ergative languages.



We can now evaluate the applicability of this proposal to the Tzeltal data. The details of Bittner and Hale's account imply that languages that feature ergative agreement (such as Mayan languages) must be syntactically ergative. Unfortunately, at this point, I do not have any evidence either for or against ergativity of Tzeltal, though while some Mayan (Mam, Jakaltec) are argued to be syntactically ergative, the more closely related Tzotzil has been argued to be syntactically accusative (see “Syntactic Ergativity” on page 38 in Chapter 1).

Another prediction the Bittner and Hale make with respect to ergative languages is that the ergative agreement would be expected to be closer to the verb than absolutive agreement. Though more work needs to be done on Petalcingo Tzeltal number agreement (see “Grammatical Relations, Ergativity, and Possessor Marking” on page 33 in Chapter 1), the preliminary indications are that this prediction is not borne out:

- (40) s-maj-on-ik  
 ERG:3-beat-ABS:1-ERG:PL  
 ‘They beat me’

Furthermore, if ergative (person) agreement markers are clitics, and assuming that absolutive agreement markers are not (not an innocuous assumption), this would also cause problems for Bittner and Hale's theory of ergativity as applied to Tzeltal. However, at this point the status of Set B (absolutive) agreement is not at all clear.

Finally Tzeltal may provide a counterexample to the parallel functional projection hypothesis detailed in (39). Since in Petalcingo Tzeltal the two determiners are homophonous with complementizers, it suggests that in this language, if we assume CP/DP parallelism, it is the CP that is parallel to the DP, and not the IP.

Therefore, while the account in Bittner and Hale 1996a is an intriguing one (and one of the most comprehensive to date), so far it seems that the Tzeltal data does not allow it to be immediately applied to this language.

## Nominality and A=POSS

In ergative languages that feature identical marking of ergative (A) and possessor arguments, it is tempting to analyze transitive verbs as a kind of nominalization. This allows a straightaway non-disjunctive treatment of identical nominal and verbal morphology: (transitive) verbs and nouns feature the same inflectional markings because (transitive) verbs and nouns are the same. Along with the passive analysis of ergative languages, the nominal analysis of ergative verbs has a long history in accounts of ERG=POSS languages. A relatively modern such treatment that has received some attention in the field is Johns' 1992 analysis of Inuktitut (Eskimo-Aleut).

Inuktitut is an ergative language which features both case marking on nouns and agreement on verbs. The predicate in a transitive construction agrees with both subject and object. The ergative case (traditionally termed “relative”) is used to mark both possessed nominals and A arguments (subjects) of transitive predicates:

- (41) a. angut-Ø anijuq  
man-ABS went out  
‘The man went out’
- b. arna-up angut-Ø kunigaa  
woman-ERG man-ABS kissed  
‘The woman kissed the man’
- c. Jaani-up nasaa  
John-ERG hat  
‘John’s hat’

Johns proposes that three potentially unrelated features of Inuktitut result in a formally ergative language:

- The verb is unable to project a VP
- The passive morpheme is a nominalizer
- The particularities of functional heads available in the grammar of the language

In nominative/accusative languages it is assumed that the verb projects a VP (verb phrase) where the transitive object is lexically inserted. Johns argues that unlike the verbs in nominative accusative languages, no transitive verb in Inuktitut is able to project a VP, and thus internal arguments (objects) are impossible in this language. The derivation of what looks like a transitive clause in Inuktitut, Johns argues, is a three step process.

In the first step, the transitive verbal stem is nominalized. The morpheme *ga*, which seems to be required to form verbal stems in declarative clauses in “participial” mood (both active and passive), Johns argues, is a nominalizer. The attachment of this nominalizer is the first step in the derivation, whereby the internal theta-role of the transitive root is linked to the referential index of the resulting noun:

- (42) kapi-jaq  
stab-NOM  
‘the stabbed one’

Johns provides some evidence that locutions such as in (42) can function as direct arguments in Inuktitut. The second step in the derivation involves adding a possessor to the deverbal noun from step one:

- (43) anguti-up kapi-ja-a  
man-ERG/GEN stab-NOM-3s  
‘the man’s stabbed one’

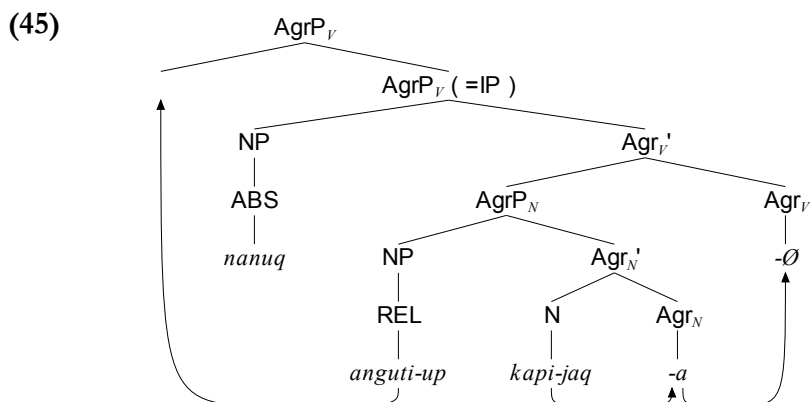
As with the previous example, constructions such as (43) occur in Inuktitut independently (or as a relative clause). The projection that heads the above phrase is argued to be  $\text{Agr}_N$ , basically the equivalent of an NP (or a DP).



In the third step, the  $Agr_V$  (roughly equivalent to Infl) is projected, taking  $AgrP_N$  as a complement, and the O argument as its specifier. The result then looks like an ergative construction:

- (44)      *anguti-up*          *nanuq-Ø* *kapi-ja-a-Ø*  
             man-ERG/GEN bear-ABS stab-NOM-3s-3s  
             ‘The bear is the man’s stabbed one; the man stabbed the bear’

The “actor” argument (in the above case *anguti-up*, “the man”), moves to adjoin the  $Agr_V P$  to continue to receive case from the moved  $Agr_N P$ . The resulting derivation of (44) can be expressed in the following tree (adopted from Johns’ examples 4 and 29):



Another set of mood markers in Inuktitut, specifically those making the “indicative” mood, do not overtly exhibit in all three stages of the derivation; that is, that no nominal or possessed nominal forms appear. This fact is explained by the idea that the indicative mood markers require attachment to  $Agr_V P$ , perhaps due to some feature borne by these markers that requires them to scope over the entire clause.

This proposal is similar in spirit to some of the avenues for handling transitive verbs in Tzeltal that were explored in Chapter 2. The nominality of transitive verbs analysis, it will be recalled, was rejected (at least for the moment) due to the fact that significant problems (such as word order, and seeming lack of transitive verbs appearing as complements of other transitive verbs) cannot be accounted for under this type of analysis. The proposal in Johns 1992 differs significantly from Tzeltal data since there is no evidence to postulate a morphological nominalizer derivational affix with all Petalcingo Tzeltal transitive verbs.

On the other hand, once of the crucial factors responsible for Inuktitut ergativity, according to Johns, is the verb’s inability to project a VP. In light of the fact that Johns suggests that “the claim that the Inuktitut verb does not project a VP might be restricted to transitive constructions, depending on how one analyzes the antipassive” (page 60ff) her claim might be updated to make reference to vP rather than VP. In that case, the nominality of (at least some) unergative verbs in Tzeltal seems to point in the same direction, as unergative verbs are generally taken to project a vP in accusative languages.

Johns account shares some similarities with Bittner and Hale’s work in that ergativity is taken to be a result of the failure of the verb to assign accusative case, which also would follow from the lack of (or a “defective”) vP. This parallels some of the theories for ergativity and nominality explored in Alexiadou 2001. However, despite this similarity between Bittner and Hale’s proposal and that of Johns, the details of the proposed arguments diverge

significantly. For Bittner and Hale, failure to assign accusative case results in ergative case marking, whereas for Johns failure to assign accusative case results in nominality, which then conditions the ergative pattern of case-marking.

Johns' analysis of the transitive construction in Inuktitut is in the spirit of a VP-shell theory: rather than having subject and object agreement, this analysis argues for agreement with the possessor and agreement with subject. This raises a potential problem for this theory: Johns implies that the correspondence between possessor agreement and transitive A agreement is not perfect ("the agreement found on the possessed noun in a possessive construction is very similar to the agreement that refers to the actor argument in the transitive construction. This is especially clear in examples involving third person patient" (page 68)). If the A agreement *is* the possessor agreement, it is not clear why they should not be perfectly identical.

Another problem for this analysis is tense. Johns hypothesizes that Agr<sub>v</sub> only takes deverbal nominal complements because it requires a tense feature in its complement. However, the majority of present-day P&P-style theories disallow tense with nominal projections. Alexiadou 2001, for example, argues that even in the few languages that seem to exhibit tense morphology on nouns, the tense's syntax and semantics are rather different from verbal tense. She concludes that "T, even if present inside nominals, does not function like verbal T" (page 65). Therefore while it would be unsurprising for a transitive verb to project a tense category or bear a tense feature, it is not clear how this feature (or category) would survive the nominalization, if it is indeed a verbal tense.

Finally, if verbal transitive roots always appear as nominalized, it is not immediately clear how the acquisition problems are to be solved. Children acquiring Inuktitut would never see the transitive roots outside of a nominalization, and it is not obvious on what grounds they would classify such roots as transitive verbs. Perhaps UG expects transitive stems to exist, and therefore requires a child to look for these type of roots, even though they never show up in the language in the non-nominalized form.

As was mentioned above, this analysis is not readily translatable into Petalcingo Tzeltal as it would require postulating non-overt (null) nominalizers on every transitive root. However, the idea that transitive verbs do not project a VP in the same way that transitive verbs do in accusative languages is intriguing, and has some attractive consequences for Tzeltal, as discussed in Chapter 2.

## Conclusions

The first part of this two-part chapter examined the nature of ergative/possessive person agreement markers. A clitic analysis was proposed, based on the fact that adverbials and adjectival modifiers can (and with possessive constructions must) appear between the agreement morpheme and the head of the phrase. This analysis has implications for both Mayan historical linguistics, as well as the kind of syntactic analysis that could be proposed for extended verbal and nominal projections in Tzeltal.

The second part of the chapter is an examination of the identity of the nominal possessive and verbal ergative markers in Tzeltal. To this end the patterns of "recycling" of verbal grammatical relations marking in the nominal paradigm were studied in the context of the world's languages. It appears that the commonality of ERG=POSS phenomenon among the world's languages is in accord with the principle of "efficiency/non-ambiguity" which may

account for this feature's diachronic stability (in contrast with that of tri-partite marking of grammatical relations, for example). However, if it is true that the use of identical linguistic resources for marking grammatical relations in extended verb and noun phrases is more common in ergative languages, this generalization requires more explanation than heretofore has been offered. At the end of the present chapter several specific proposals within the current P&P-style frameworks for dealing with the ERG=POSS phenomenon were examined. Though each offer certain conceptual advantages, none were found to be able to immediately account for the Petalcingo Tzeltal linguistic facts.

