

Proceedings of the 1995
Annual Conference of the
Canadian Linguistic Association

editor/édacteur
Päivi Koskinen

Actes du
Congrès annuel de
l'Association canadienne de linguistique
1995

Toronto Working Papers in Linguistics
Linguistic Graduate Course Union
Department of Linguistics
University of Toronto
M5S 1A1
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The A/B Parameter:
A Typology of Unergatives, Passives and Antipassives*

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1. Ergativity

According to current typological and theoretical literature, the crucial test for ergativity is that the object of a transitive clause—rather than the subject of a transitive clause—behaves like the subject of an intransitive clause in some respect (case, agreement, accessibility to relativization, etc.). Languages in which subjects of transitives and intransitives behave alike to the exclusion of the object are considered nominative/accusative. For example, we see that English is a nominative/accusative language based on the pattern of pronominal case seen in (1–3).

- (1) I love him.
- (2) He loves me.
- (3) I walk to work.

The same pronominal form (*I* in (1) and (3)) is used for subjects regardless of transitivity, and a different form (*me* in (2)) is used for objects. In contrast, Ilokano (Gerdts 1987) is an ergative language. For example, the same pronominal form, the absolutive *ak*, is used for first person singular subjects of intransitives (6) and objects (5), while a different form, the genitive *ko*, is used for first person singular subjects of transitives (4):

- (4) T-in-ippog ko dagiti botelya.
pst-knock.over Igen det bottle
'I knocked over the bottle.'
- (5) In-uray n-ak ni nanang.
pst-wait 3gen-1abs det mother
'Mother waited for me.'
- (6) N-ag-taray ak.
pst-intr-run 1abs
'I ran.'

*My research on Mapping Theory has been supported by a SSHRC grant. Thanks to Charles Ulrich for editing.

Previously, two approaches have been taken to ergativity. First, ergative languages have been claimed to be syntactically different from nominative/accusative ones in some crucial respect. For example, they could be different at D-structure, as posited under a deep ergative hypothesis (Dixon 1972, Marantz 1984). Or they could be different at S-structure due to some rule such as passive (Manning 1995) or nested-path movement (Murasugi 1992). Second, the clause structure could be exactly the same in ergative and nominative/accusative languages. However, to accommodate rules that refer to ergativity, ergative and absolutive are defined as secondary terms, as for example in Relational Grammar:

- (7) *Primitives: 1, 2, stratum*
Transitive stratum: a stratum with both a 1 and a 2.
Intransitive stratum: a stratum that is not transitive.
Ergative: the 1 in a transitive stratum
Absolutive: a 2, or the 1 in an intransitive stratum.

In Gerdts (1993a), I propose a third viewpoint. Transitive clauses are identical in nominative/accusative and ergative languages. How these types of languages are distinct is in the structure of their intransitive clauses.¹ This claim can be made precise within Mapping Theory (Gerdts 1992, 1993b). Only the briefest of introductions to Mapping Theory is possible in this paper. Basically, one only needs to understand that there is a level of grammatical relations (corresponding to the concept of initial grammatical relations in Relational Grammar) that are linked to a level of morphosyntactic argument structure. This latter level is comprised of an ordered series of morphosyntactic argument positions (MAPs) labelled A, B, C, D.² Transitive clauses in both nominative/accusative and ergative languages are represented as follows:

- (8) thematic relations: agent theme
 grammatical relations: 1 1 2
 MAPs: A B

Intransitive clauses differ, however. In nominative/accusative languages, the sole MAP is an A since the subjects in the transitive and intransitive clauses correspond:

¹A similar point of view has been developed by Bobaljik (1993).

²The languages treated here are all 2-MAP languages (Gerdts 1992), therefore the C and D MAPs are irrelevant.

- (9) Nominative/Accusative:
 1
 1
 A

But in intransitives in ergative languages, the sole MAP is a B, since the subject of an intransitive corresponds to the object in a transitive:

- (10) Ergative:
 1
 1
 B

The claim that languages differ in their MAP specifications has rather wide-ranging consequences for Mapping Theory. Not only do basic unergative clauses differ in nominative/accusative versus ergative languages, but other intransitive clauses differ as well. For example, passives and antipassives cannot be given the same treatment in both types of languages. Thus, at first glance, the above claim seems to hopelessly complicate the valence rules of the grammar. However, I demonstrate that the differences between nominative/accusative and ergative languages follows from a single parameter—the A/B Parameter. This parameter stipulates that a sole MAP in a nominative/accusative language must be an A MAP, while the sole MAP in an ergative language must be a B MAP. The A/B Parameter allows for a universal characterization of passive and antipassive, as section 2 demonstrates. In section 3, I turn to a discussion of the 'K'iche' antipassive, which Davies and Sam-Colop (1990) claim gives evidence for a three-level analysis of antipassive. I show, however, that the analysis of antipassive derived from the A/B Parameter also accounts for the 'K'iche' facts.

2. Passives and Antipassives

Above it has been posited that basic intransitive clauses differ due to the A/B Parameter: the sole argument is an A in nominative/accusative languages and a B in ergative languages.³ Other intransitive clauses, for example passives and antipassives, will also differ in these two types of languages.

The Mapping Theory rule for passive is given in (11):

- (11) Passive: do not link the first GR; cancel one or more MAPs.

Given that English is a nominative/accusative language, this rule for passive and the A/B Parameter derives the analysis in (12b) for the English passive in (12a).

³I am only considering unergative clauses here. In Gerdts (1993a) I also discuss unaccusative clauses and develop an analysis of Stative/Active languages.

(12) a. I am being helped by the girls.



One MAP is cancelled in the passive, and it must necessarily be the B MAP since an A MAP is required in a nominative/accusative language. On the other hand, passive takes a different form in an ergative language. For example, in the Ilokano (Gerdts 1987) passive in (13), we see that the sole argument determines appears in the absolutive, the morphology associated with a B MAP.

(13) Na-tippog ak (ka-dagiti ubing).
pst+inact-knock over labs obl-det woman
'I was knocked over (by the woman).

Therefore, the MAP that is cancelled in the passive of an ergative language is the A MAP, and the 2 links to the B MAP.



We see then that the universal characterization of passive is that the 1 is not linked and a MAP is cancelled. Which MAP is cancelled follows from the A/B Parameter. In nominative/accusative languages, the A MAP is necessary, the B MAP is cancelled, and a diagonal linking results. In ergative languages, the B MAP is necessary, the A MAP is cancelled, and a vertical linking results. A comparable situation pertains with antipassive. In Mapping Theory, antipassive is characterized as follows:

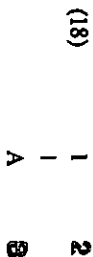
(15) Antipassive: do not link the second GR; cancel a MAP

We can illustrate antipassive in a nominative/accusative language with the Blackfoot (Frantz 1979) example in (17): the sole argument in the antipassive determines subject agreement, like the subject of a transitive (16):

(16) nit-oxpomma-a-w om-a ponokaomita-a-wa.
1-buy-direct-3s that-3s horse-3s
'I bought that horse.'

(17) nit-oxpommaa (ponokaomita-a-i).
1-buy[intrans] horse-non=partic
'I made a (horse-)purchase.'

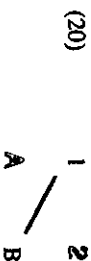
The Mapping Theory analysis for (17) is given in (18): the 2 is not linked, the B MAP (not the A MAP) is cancelled, and the 1 links to the A MAP.



However, in the antipassive of an ergative language, the sole argument is assigned the B MAP. For example, in the Ilokano (Gerdts 1987) antipassive in (19), the agent of the antipassive determines absolutive agreement, i.e. the morphology associated with a B MAP.

(19) N-ag-tippog ak ka-dagiti botel'ya.
pst+intr-knock.over labs obl-det bottle
'I knocked over the bottles.'

The antipassive in (19) is given the following representation: the 2 is not linked, the A MAP (not the B MAP) is cancelled, and the 1 links to the B MAP.



The universal characterization of antipassive is that the 2 is not linked and a MAP is cancelled. As with passive, the A/B parameter determines which MAP is cancelled. In nominative/accusative languages, the A MAP is necessary, the B MAP is cancelled, and a vertical linking results. In ergative languages, the B MAP is necessary, the A MAP is cancelled, and a diagonal linking results.

By way of summary, I compare the Mapping Theory analyses given above with their Relational Grammar counterparts:

(21) Relational Grammar
*final 1-Law*Mapping Theory
The A/B Parameter:

final A: Nom/Acc languages
final B: Ergative languages

universal passive:
advancement

non-linking of first GR
final A languages cancel B MAP
final B languages cancel A MAP

universal antipassive:
retreat, readvancement

non-linking of second GR
final A languages cancel B MAP
final B languages cancel A MAP

In Relational Grammar all languages are subject to the Final-1 Law, passive is universally claimed to involve advancement, and antipassive is universally claimed to involve retreat and subsequent advancement. In Mapping Theory, the A/B Parameter allows two types of final clauses: those with a sole A and those with a sole B. There are two types of passives and two types of antipassives, one each for nominative/accusative and ergative languages. Since all else follows from the A/B Parameter, this is really the only cost to the grammar. Relational Grammar, however, complicates the grammar elsewhere. Ergativity still needs to be defined (see (7)) and referred to. Therefore, the Mapping Theory grammar is actually no more complicated than Relational Grammar with respect to this set of phenomena.

Moreover, there is one way in which Relational Grammar is more complicated than Mapping Theory. This is in the structure assigned to antipassives. In RG, a three level structure is assigned, while a two-level structure suffices in Mapping Theory. I turn my attention to this issue in the next section

3. The K'iche' Antipassive

Antipassive in the Mayan language K'iche' has been given a Relational Grammar treatment in Sam-Colop (1988) and Davies and Sam-Colop (1990). Their analysis presents a special challenge to Mapping Theory because they claim that three levels of syntactic structure are needed to adequately account for agreement facts in K'iche'. Mapping Theory is designed with only two syntactic levels: a level of grammatical relations linked to a level of MAPs. Therefore, analyses making reference to an 'intermediate' level of structure are not possible. I show, however, that the analysis of antipassive given above plus the notion of feature passing previously developed in Mapping Theory adequately account for the K'iche' data.

K'iche' is a typical ergative language. As seen by observing the agreement morphology in (22)-(24), one form references the subject of an intransitive as

well as the object of a transitive, and a separate form references the subject of a transitive.

- (22) X-at-r-il le achi.
ASP-2ABS-3ERG-see the man
'The man saw you.'

- (23) X-at-atin-ik.
ASP-2ABS-bathe-IN.SUF
'You took a bath.'

- (24) X-Ø-aw-il le achi.
ASP-3ABS-2ERG-see the man
'You saw the man.'

Examples of the antipassive in K'iche' are given in (25)-(28).⁴

- (25) In x-in-il-o-w le achi.
I ASP-1ABS-see-THV-AP the man
'I saw the man.'

- (26) Le achi x-in-il-o-w in.
the man ASP-1ABS-see-THV-AP me
'The man saw me.'

- (27) La at x-at-kuna-n le ajkun?
Q you ASP-2ABS-cure-AP the doctor
'Was it you who cured the doctor?'

- (28) La are' le ajkun x-at-kuna-n-ik?
Q FOC the doctor ASP-2ABS-cure-AP-IN.SUF
'Was it the doctor who cured you?'

Davies and Sam-Colop note several properties for such antipassives. First, a special morpheme *-w/-n* is suffixed to the verb. Second, the theme nominal appears as an unmarked NP, that is, exactly like an object in a transitive. Third, the verb agrees with only one NP. As they point out, however, sometimes agreement is determined by the agent nominal, as in (25) and (27), and sometimes by the theme, as in (26) and (28).

They account for the agreement facts with a three-level antipassive analysis and feature passing. Recall that antipassive is given the following representation

⁴This is the focus antipassive. In the presented version of this paper, I also discussed the absolutive antipassive. I do not give this discussion here due to lack of space.

in Relational Grammar: the initial 1 (the agent), retreats to 2, placing the initial 2 (the theme) en chômage, and then, in order to satisfy the Final-1 Law, the agent readvances to 1.

(29)	agent	theme
	1	2
	2	cho
	1	cho

Under this analysis, a special relation is set up between the agent and the theme. The 2-arc headed by the agent has "overrun" the 2-arc headed by the theme. Aissen (1987) has noted that in some languages, agreement features can be passed from the overrun nominal onto the overrunning nominal. For example, we see this in the *there* construction in English:

(30) There seem to be three mermaids in the swimming pool.

The ability to determine verb agreement is a property of the final subject *there*, but the agreement features are determined by the *three mermaids*, that is the nominal overrun by the insertion of *there*.

Davies and Sam-Colop apply this view of feature passing to the K'iche' antipassive. The theme can pass its agreement features to the agent since the agent has overrun the theme. This device alone would imply that the verb in antipassives would always agree with the theme, but this is not the case, as (26) and (28) show. Davies and Sam-Colop propose the following hierarchy to accommodate the variability in agreement:

(31) When the head of an agreement controller arc has both inherent and acquired features, the highest-ranking set of features on the hierarchy non-3rd > 3rd plural > 3rd singular is referenced on the verb.

In (25) and (27) the agent outranks the theme, and thus its features are referenced on the verb. But in (26) and (28), the theme outranks the agent, so it is actually the features of the overrun nominal that appear on the verb. Davies and Sam-Colop conclude that the K'iche' antipassive provides evidence for a three-level antipassive, like that posited in Relational Grammar, since the environment for feature-passing would not pertain unless the agent had overrun the theme.

Turning now to Mapping Theory, I present the K'iche' antipassive as follows, since K'iche' is an ergative language and thus has a B setting on the A/B Parameter.



As discussed above, in an antipassive the 1 links to the B MAP. In previous work (Gerdts 1993c), I have shown that the notion of overrun can be easily captured within Mapping Theory:

(33) Overrun: GRa overruns GRb if *a* links to the MAP that *b* would otherwise have linked to.

Furthermore, we see that overrun pertains in (32). The agent has overrun the theme since the theme otherwise would have linked to the B MAP. Thus, the insight of the Davies and Sam-Colop analysis—that the features of the overrun nominal can appear on the verb—can be captured just as easily under the Mapping Theory analysis. The two analyses thus are exactly alike in positing a "retreat" phenomenon. Where they differ is that the RG account, since it must conform to the Final-1 Law, posits an extra level of structure where the agent readvances to 1, but this additional move is unnecessary in the Mapping Theory account. We expect, since K'iche' is an ergative language, that the sole nominal will link to a B MAP. Nothing further needs to be said.

5. Conclusion

This paper has developed the position that nominative/accusative languages and ergative languages differ in one crucial respect: The A/B Parameter. In nominative/accusative languages, the sole NP is assigned an A MAP, while in ergative languages, the sole NP is assigned a B MAP. Transitive clauses are identical in both types of languages, consisting of an A and a B MAP.

The A/B Parameter has important implications for valence rules such as passive and antipassive. Linking in passives and antipassives is determined by the A/B Parameter. The generalization concerning passive is that the agent (or more precisely the GR) is not linked. In antipassive, the generalization is that the theme (or more precisely the second GR) is not linked. These generalizations, together with the A/B Parameter, yield two different linking rules for passives and antipassives. I summarize the basic clause structures for nominative/accusative languages in (34) and for ergative languages in (35).

(34) Nom/Acc: Final A

1	2	1	1	2	1	2
1	1	1	1	1	1	1
A	B	A	A	B	A	B
transitive	intransitive	passive	passive	antipassive	antipassive	antipassive

(35) Ergative: Final B

1	2	1	1	2	1	2
1	1	1	1	1	1	1
A	B	B	A	B	A	B
transitive	intransitive	passive	passive	antipassive	antipassive	antipassive

In Mapping Theory, all valence rules such as passive and antipassive must be 'bistratal'. Thus, the K'iche' antipassive, which Davies and Sam-Colop (1990) claim must be given a three-level analysis, provides a special challenge to the Mapping Theory view of antipassive. However, we find that the K'iche' evidence rests on the concept of 'overrun' which is easily translated into Mapping Theory (Gerdts 1993c). Put another way, the K'iche' data provides evidence that the agent has usurped the theme's inflectional position. This is exactly what the Mapping Theory analysis of antipassive in an ergative language posits (see (35)). Furthermore, since the agent should link to the final B in an antipassive in an ergative language, and not the final 1 (as is claimed in Relational Grammar), no readvancement of the agent is required. Thus, the Mapping Theory account of antipassive in ergative languages is much less complicated than the Relational Grammar analysis.

I conclude then that the A/B Parameter not only adequately accommodates facts in simple transitives and intransitives, but also allows for a straightforward account of passives and antipassives in the world's languages.

References

Aissen, Judith L. (1987) *Tzotzil Clause Structure*. Reidel, Dordrecht.
 Bobaljik, Jonathan. (1993) 'Ergativity and Ergative Unergatives,' in C. Phillips, ed., *Papers on Case and Agreement II*, MIT Working Papers in Linguistics, 19, 45-88.
 Davies, William D., and Luis Enrique Sam-Colop. (1990) 'K'iche' and the Structure of Antipassive,' *Language* 66, 522-549.
 Dixon, R.M.W. (1972) *The Dyrhval Language of North Queensland*. Cambridge: Cambridge University Press.

Frantz, Donald G. (1979) *Grammatical Relations in Universal Grammar*. SIL Work Papers 23, University of North Dakota.
 Gerdts, Donna B. (1987) 'Antipassives and Causatives in Ilokano: Evidence for an Ergative Analysis of Philippine Languages,' in R. McGinn (ed.), *Studies in Austronesian Linguistics*, Ohio University Press, Athens, Ohio, 295-321.
 Gerdts, Donna B. (1992) 'Morphologically-mediated Relational Profiles,' in *BLS 18*, 322-337.
 Gerdts, Donna B. (1993a) 'Mapping Ergativity: The A/B Parameter,' paper presented at University of Victoria.
 Gerdts, Donna B. (1993b) 'Mapping Halkomelem Grammatical Relations,' *Linguistics* 31, 591-622.
 Gerdts, Donna B. (1993c) 'Mapping Korean Grammatical Relations,' in *The Fifth (1993) Harvard Symposium on Korean Linguistics*, 1993, 299-318.
 Manning, Christopher D. (1995) 'Ergativity: Argument Structure and Grammatical Relations,' paper presented at LSA, New Orleans.
 Marantz, Alec. (1984) *On the Nature of Grammatical Relations*. MIT Press, Cambridge, Mass.
 Murasugi, Kumiko. (1992) *Crossing & Nested Paths: NP-movement in Accusative and Ergative Languages*. Ph.D. Thesis, MIT.
 Sam-Colop, Luis Enrique (1988) 'Antipassive and 2-3 retreat in K'iche'.' M.A. Thesis, University of Iowa.