Split case-marking patterns in verb-types and tense/aspect/mood*

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Abstract

We suggest that verb-split (conditioned by semantics of verbs, e.g. action versus state) and TAM-split (conditioned by tense/aspect/mood, e.g. past versus nonpast) are fundamentally no different from each other, involving common semantics and case-marking mechanisms: (a) effectiveness condition (EF-CON), concerning effectiveness/conclusiveness of verb; (b) verb-type hierarchy, expressing degree of effectiveness of verbs; (c) unmarked-case constraint, and (d) universal case-hierarchy:

marked case > unmarked case > oblique cases
ERG, ACC ABS, NOM DAT, LOC, INST, etc.

When EF-CON is met (e.g. 'hit' vis-à-vis 'like' in verb-split; past vis-à-vis nonpast in TAM-split), we have the transitive frame (ERG-ABS or NOM-ACC). But, when EF-CON fails, one or both of the two NPs can be demoted on the case-hierarchy, and we will have non-transitive frame(s) in addition to, or in place of, the transitive frame. This paper shows that (a) a split is not a conflict of two (or more) patterns, but operates as one integrated scheme; and (b) each type of split occurs in a non-random fashion, both cross-linguistically and intralinguistically. Our observations apply to both ergative and accusative languages.

1. Introduction[2]

1.1. *Morphosyntactic types*

I use the labels A, S, and O (taken from Dixon (1972; 1979)) to refer to certain NPs. (This is largely in order to avoid the issue of grammatical relations.) In this paper, I use these labels in a fairly loose, semantic

Linguistics 19 (1981), 389–438. 0024–3949/81/0019–0389 $2.00

(rather than a rigid, morphosyntactic) sense. Roughly, A NP refers to agent, experiencer, possessor etc., and O NP refers to patient, object, possession, etc. While A NP and O NP are involved in a two-place predication, S NP is the sole NP in a one-place predication

There are various types of morphosyntactic patterning as regards how A, S, and O are treated by grammatical rules in relation to one another. These patterns include (cf. Comrie, 1978: 332):

$A=S\neq O$	(nominative-)accusative pattern
$A\neq S=O$	(absolutive-)ergative pattern
$A=S=O$	neutral pattern
$A\neq S\neq O$	tripartite pattern

As for case-marking, in the accusative pattern, A and S are presented by the nominative case (NOM), and O by the accusative (ACC). In the ergative pattern, A is indicated by the ergative (ERG); and S and O by the absolutive (ABS).[3]

1.2. Split case-marking

It appears that in no language are the grammatical rules entirely in the accusative pattern, entirely in the ergative pattern, or entirely in some other pattern; every language seems to be mixed — Comrie, 1976b; 1978; 1979a; Moravcsik, 1978a; Dixon, 1979. In case-marking, this creates 'split case-marking'. Coexistence, within a given language, of the ergative pattern with some other pattern(s) is called 'split ergativity' (Silverstein, 1976). The present paper is mainly concerned with split case-marking in ergative languages, but it points out parallel phenomena in accusative languages.

In general, various factors can influence case-marking. (See Moravcsik (1978b), for instance.) Instances of split case-marking can be classified according to the conditioning factors. In ergative languages (and, in fact, in accusative languages as well), the types of split that occur include (see Dixon, 1979):

a. NP-split, conditioned by the semantic nature of NPs;
b. verb-split, conditioned by the semantic nature of the verb;
c. TAM-split, conditioned by the tense/aspect/mood of the sentence.[4]

In NP-split, roughly, nouns have an ergative declension while pronouns (and sometimes human or agentive nouns as well) have an accusative declension. In verb-split, certain types of verbs (typically, verbs of action) occur in the ergative construction (A-ERG O-ABS; or ERG-ABS), while other types of verbs take some other case frames.[5] In TAM-split, the

ergative pattern occurs in past, perfective, realis etc., and elsewhere (i.e. present/future, imperfective, irrealis etc.) we have some other, non-ergative pattern, e.g. accusative, neutral (cf. Silverstein, 1976: 113; Dixon, 1979: 95). It is important to stress here that a given ergative language can, and in fact often does, have splits of all of these three types.

At first glance, it looks as if a given split-ergative case-marking presents a conflict between the ergative pattern and the accusative or some other non-ergative pattern. However, the coexisting patterns are not in conflict, but operate as one single, integrated scheme within a given language (i.e. intralinguistically). Crosslinguistically as well, a particular type of split is realized systematically, not just in a random fashion. Silverstein (1976) demonstrated these two principles for NP-split (see 2, below). As for TAM-split, Dixon (1979: 93–96) gives various examples, and attempts to provide a principled semantic explanation about them (though it is not convincing in my view). As regards verb-split, there appears to have been no systematic and extensive account, dealing with semantics and case-marking of various verb-types (see Note 35).

1.3. Aim of the paper

This paper attempts to:

a. show that verb-split is one single, integrated scheme intralinguistically, and occurs systematically crosslinguistically;
b. show the same two principles for TAM-split;
c. show that verb-split and TAM-split are fundamentally no different from each other, their semantics and case-marking mechanisms involving common principles;[6]
d. point out the relevance of (a), (b), and (c) to accusative languages, and the parallelisms between ergative and accusative languages, and[7]
e. conveniently assemble the data and references on this topic — which are otherwise scattered in the literature — in a somewhat similar way as Comrie (1978) and Dixon (1979) did on ergativity in general.

We will briefly discuss Silverstein's theory on NP-split before we turn to verb-split and TAM-split.

2. Silverstein's theory on NP-split

Roughly, Silverstein (1976) explains NP-split in terms of a person/animacy/agentivity hierarchy, as shown in Table 1, that shows the semantic naturalness of NPs functioning as agents and inversely as

Table 1. *Silverstein's hierarchy*

	Pronouns: 1st, 2nd	3rd	Nouns: kinship, proper	human	animate	inanimate
A	unmarked	nominative			ergative	marked
S	unmarked				absolutive	unmarked
O	marked	accusative				unmarked
	A=S≠O					A≠S=O
	accusative marking →					← ergative marking

patients. NPs are distinctly case-marked when they are in an unusual/marked function, i.e. A function for inanimate nouns and O function for 1st and 2nd person pronouns. NPs can just be left unmarked in other functions. We thus have the ergative pattern with nouns, at the right end; and the accusative pattern with pronouns, at the left end, with the ergative marking extending from the right end and the accusative marking from the left end. Silverstein thus provides a principled semantic explanation on NP-split.[8] This paper attempts to provide for verb-split and TAM-split a principled account of their semantics and case-marking mechanisms, in a similar way to Silverstein's for NP-split.

In the following, when we discuss an ergative language, we are mainly concerned with those nouns/pronouns which have an ergative declension. And, when we examine an accusative language, we chiefly deal with those nouns/pronouns which have an accusative declension.

3. Verb-split and TAM-split: their common principles

At first glance, it may appear that verb-split and TAM-split are different in nature. However, we suggest that fundamentally they are no different from each other, both involving common semantics and case-marking mechanisms concerning A and O. We will also show that the same is true of accusative languages. The following observations apply to both.

3.1. *Effectiveness condition*

A careful study of numerous instances of verb-split and TAM-split in diverse languages suggests that a certain semantic condition operates in both types of split. The condition, which I call the effectiveness condition (EF-CON), concerns the effectiveness/conclusiveness/definitiveness/actualness/etc. of two-place activities/situations, consisting of A and O. When EF-CON is met, ERG-ABS will occur in any ergative language, whether verb-split or TAM-split is involved. But when EF-CON is not met, ERG-ABS may (though not always) fail to occur, and we will have some other case frame(s).

EF-CON consists of a number of semantic parameters that are closely related to, though not exactly identical with, one another.

Effectiveness condition

	is met: (ERG-ABS)	is not met: (some other frame(s))
(A)	action	state
(B)	impingement on O	non-impingement on O
(C)	O attained	O not attained
(D)	O totally affected	O partially affected
(E)	completed	uncompleted, or in progress
(F)	punctual	durative
(G)	telic	atelic
(H)	resultative	non-resultative
(I)	specific or single activity/situation	customary/general/habitual activity/situation
(J)	O definite/specific/referential	O indefinite/non-specific/non-referential
(K)	actual/realized	potential/unrealized
(L)	realis	irrealis
(M)	affirmative	negative

The discussion of these parameters draws on Vendler (1967); Binnick (1974); Blake (1976b: 422; 1979: 338–339); Comrie (1976a); Hujii (1976); Kindaichi (1976b); Lyons (1977); Moravcsik (1978b); Dowty (1979); and particularly, Hopper and Thompson (1980). Our 'effectiveness' parameters overlap Hopper and Thompson's 'transitivity' parameters. I will discuss only those parameters that are not listed by them or that need some comment.[9]

(B) Impingement versus non-impingement on O. Some of the actions, e.g. *hit*, can impinge on O, but other actions, states etc., cannot, e.g. *search, like, possess*. Also, hitting impinges on O in *He hit me* (past), but not in *He will hit me* (future).

(C) O attained versus not attained. The O is attained in *find*, but not in *search* or *try to find*. For more examples, see (B), (D), and (K).

(D) Completed versus uncompleted or in progress. E.g. *He hit me* versus *He will hit me* or *He was hitting me*.

(H) Resultative versus non-resultative. For example, *kill* is resultative, creating a change of state in O, but *hit* is not necessarily so. (Telicity (G) is similar to resultativeness, but by definition does not necessarily involve any change of state in O; it merely involves the terminal point.)

(I) Specific or single versus generic/general or customary/habitual/repeated activity/situation. E.g. *I ate an apple yesterday* versus *I used to eat rice*. Vendler, in effect, points out the semantic parallelism between the action-versus-state and specific-versus-generic oppositions, and says that 'Habits (in a broader sense including occupations, dispositions, abilities, and so forth) are also states' (Vendler, 1967: 108).

(J) O definite/specific/referential versus indefinite/non-specific/non-referential. E.g. *I saw the* (or, *a*) *dog yesterday* versus *I did not see any dog*. (I) above gives another pair of examples.

(K) Actual/realized versus potential/unrealized. E.g. *see*, *find* (actual/realized) versus *search*, *try to find* (potential/unrealized). As another set of examples: *I shot him* versus *I shot at him*, *I did not shoot him*. For more examples, see (B), (C), (D), and (J) above.

Fulfilment or failure of EF-CON is not necessarily in absolute terms, but is often in relative terms. See *3.2.*, *5.1.*, *5.4.*, and *5.10.*

When EF-CON is met, both A and O are closely/fully involved in the activity, but this is not necessarily the case when EF-CON fails. And, activities/situations in which EF-CON is met are more effective/conclusive, more definitively/actually realized, etc. than those in which EF-CON fails. For example, compare *John kissed Mary yesterday* (in which EF-CON is met in the parameters A, B, C, F, and I among others) and *John used to have three sisters* (in which EF-CON fails in every one of these five parameters). In the former, both *John* and *Mary* are closely involved in the action, but this is not true of the latter. And, we can actually see someone kissing someone else, but we cannot actually see someone having three sisters. And so on.

These parameters are all closely related to one another. For example, in Russian (Watanabe, private communication), perfective aspect presents concrete/specific or single situations, with O tending to be definite/specific/referential, while imperfective aspect expresses generic/customary or repeated situations, with O being more likely to be indefinite/non-specific/non-referential. Similarly for the examples given above.

3.2. *Verb-type hierarchy*

A scrutiny of various instances of verb-split suggests that they are governed by a certain verb-type hierarchy, as shown in Table 2, that

Table 2. *Verb-type hierarchy*

Type	1		2		3	4	5	6
Meaning	direct effect		perception		pursuit	knowledge	feeling	possession
Examples	kill, break, hit, shoot		see, look, hear, listen, smell		search, wait	know, understand, remember, forget	love, like, want, need	possess
Subtype	1a	1b	2a	2b				
Examples	kill, break	hit, shoot	see	look				

expresses the degree of effectiveness(/conclusiveness/etc.) of two-place situations.[10]

This verb-type hierarchy is related to (most, if not all of) the effectiveness parameters. Thus, predicators towards the left end describe actions, while those towards the right end express states. Those in type 1 ('direct effect on O'), e.g. *hit*, can impinge on O, and O will be attained. But those in other types, e.g. *like*, *possess*, cannot impinge on O, and O will never be attained. States are durative, atelic, and non-resultative, whereas actions can be either punctual or durative; either telic or atelic; and either resultative or non-resultative. And so on.

This hierarchy also expresses the degree of effectiveness/conclusiveness/actualness/etc. of two-place situations. For example, see *3.1.* for a comparison of *hit* (type 1) and *have* (type 6).

Some of the verb-types can be further divided (although Table 2 shows the subdivisions of types 1 and 2 only). Thus, in type 1 ('direct effect on O'), *kill* (resultative) is more effective/conclusive than *hit* (non-resultative) (cf. (H) in *3.1.*). In type 2 ('perception'), *see* is more conclusive than *look* (cf. Note 9). And so on. (See *4.6.*, *5.4.*, and *5.10.*)

This verb-type hierarchy is semantically-based, involving semantic parameters. In absolute terms, *hit* (type 1), for instance, is more effective than *see* (type 2). But, in actual grammars, realization of this hierarchy can be in relative (rather than absolute) terms. And the cut-off point between 'effective' and 'non-effective' is different depending on the semantic nature of the verbs concerned. For example, *hit* (subtype 1b) can be treated as non-effective *vis-à-vis kill* (subtype 1a); *see* (subtype 2a) can be treated as effective *vis-à-vis look* (subtype 2b); *see* or *look* (type 2) can be treated as effective *vis-à-vis search* (type 3); and so on. (I owe the observations in the last two paragraphs to Comrie (private communication).)

The A NPs of type-1 verbs are generally agents, while those of other verbs are generally experiencers, or, in type 6, possessors.

Generally, actions, typically of type 1, are described by verbs in a narrow sense. Both crosslinguistically and intralinguistically, however, as we go down the hierarchy (from actions to states), a given situation can be expressed by an adjective (or noun) as well as by a verb; and sometimes has to be presented by an adjective (or noun) rather than a verb. This is particularly the case in type 4 'knowledge' and type 5 'feeling'. (See Lyons, 1968: 323–325.) Possession, at the right end, is merely a 'relation' (Vendler, 1967: 109) between the possessor and the possession. (Benveniste (1971b: 171) explicitly says that *avoir* 'have' is a verb of state.) In many languages, possession can (or has to) be expressed by the possessor NP and the possession NP alone, without involving any

predicator, e.g. Djaru (*4.3.*) and Russian. Contrary to this, perhaps in no language at all can an action, e.g. hitting, be expressed just by the hitter NP and the victim NP, without using any predicator.

In terms of case-marking, the verb-type hierarchy shows the scale of transitivity: ergativity and accusativity, respectively. In type 1, e.g. *hit*, at the left end ERG (for A) and ACC (for O) occur, and we have the transitive frames: ERG-ABS and NOM-ACC, respectively. But, both crosslinguistically and intralinguistically, as we go down the hierarchy, ERG and ACC are less likely to occur; and in addition to or in place of the transitive frame, we have some nontransitive or intransitive frame(s): ABS-OBL(ique) and/or OBL-ABS; and NOM-OBL and/or OBL-NOM. Sometimes, a given situation has to be expressed not by the transitive frame, but by some nontransitive or intransitive frame, e.g. when the predicator is an adjective or noun, and when there is no predicator at all (as in some expressions of possession). Table 4 contains an additional verb-type: type 7 'ability', at the right end. Both in English and Japanese, type-7 predicators lack the transitive frame (NOM-ACC).

DAT-ABS and DAT-NOM — and also LOC-ABS and LOC-NOM, perhaps to a lesser extent — are common in type 4 'knowledge', type 5 'feeling', type 6 'possession', and type 7 'ability' among others; POSS or GEN sometimes occurs in place of DAT in type 6. DAT (GEN, PART(itive), or the like) often marks an unattained/unaffected O, both in TAM-split and verb-split, e.g. (unattained) goal of pursuit (type 3). See *5.10.* and Tables 3, 4, and 6.

Passive constructions occur with those verbs which take the respective transitive frame in a given verb-split; these verbs always include type-1 verbs. But, towards the right end, passives are less likely to occur. The same is true of antipassive constructions (ANTI).[11] Type 7 'ability', at the right end in Table 4, lacks passives in both English and Japanese[12] (Shibatani, Watanabe, and Yoshimura, private communication).

This verb-type hierarchy does not purport to be, as it stands, universally applicable or exhaustive. It is semantic, based on the semantic, effectiveness parameters. In case-marking, an area in grammar, this verb-classification is reflected fairly well in some languages, e.g. Avar, but not so well in some other languages, e.g. Basque, Eskimo (cf. Table 3). For Basque, Eskimo etc., this verb-classification is overdifferentiated. But, for some other languages, we may need to reclassify verb-types, or rearrange their relative order in the hierarchy.[13]

3.3. *Case-marking mechanisms*

3.3.1. Unmarked-case constraint. Dixon (1979: 71–79) gives a detailed discussion of markedness of case inflections, and shows 'that ergative is always the marked term in an absolutive/ergative system, and that accusative is usually the marked member in a nominative/accusative opposition'. Syntactically, they are used in such unmarked situations as citation, as S NP, and as the complement of a copula; phonologically, they often — and ABS generally — have zero realization (cf. also Catford, 1975: 5; Silverstein, 1976: 123).

In case-marking generally, irrespective of ergativity and accusativity, NPs seem to behave jointly; they do not behave independently of one another/each other. And the following constraint appears to operate in the majority of languages:

Unmarked-case constraint
In a non-elliptical sentence, at least one NP has to be in the unmarked case.[14]

This constraint is very strong in ergative languages, and there seem to be very few exceptions. I do not have much information on case-marking in accusative languages, but the constraint seems to be less rigid in them.[15]

3.3.2. Case-frames in verb-split and TAM-split. We classify and label cases as follows:[16]

unmarked cases (UNM) : ABS, NOM
marked cases (MRK) : ERG, ACC
oblique cases (OBL) : DAT, LOC, INST etc.

OBLs are common to the ergative and the accusative patterns.

Now, as stated above, when EF-CON is met, we have ERG-ABS. But when EF-CON fails, we may have some other frame(s) either in addition or instead. Thus, in ergative languages:

when EF-CON is met: A O		when EF-CON fails: A O	
ERG-ABS	(verb-split, TAM-split)	(ERG-ABS	(verb-split))
		ERG-OBL	(verb-split, TAM-split)
		ABS-OBL	(verb-split, TAM-split)[17]
		ABS-ABS	(verb-split, TAM-split)
		OBL-ABS	(verb-split)

(For details, see Tables 3 and 6.) Here, the unmarked-case constraint has

only two exceptions: ERG-DAT and ERG-PART (Note 15, (a)). There are no instances of case frames such as the following, which have no ABS NP: *LOC-DAT; *DAT-INST; *ERG-LOC; *INST-INST; *DAT-DAT etc.

Similarly in accusative languages:

when EF-CON is met: A O		when EF-CON fails: A O	
NOM-ACC	(verb-split, TAM-split)	(NOM-ACC	(verb-split))
		NOM-OBL	(verb-split, TAM-split)
		NOM-NOM	(verb-split)[18]
		OBL-NOM	(verb-split)

(For details, see Table 4 and *5.11.*) The unmarked-case constraint has no exception in verb-split and TAM-split. (But there are other kinds of exceptions, e.g. Note 15, (e), (f).)

Note that, both in ergative and accusative languages, OBL-UNM (i.e. OBL-ABS, OBL-NOM) occurs in verb-split only, and not in TAM-split. See *3.4.*, (h); and Note 27.

3.3.3. Universal case-hierarchy and demotion. We have presented case frames involved — i.e. facts — in verb-split and TAM-split of ergative and accusative languages. In the following, perhaps at a more speculative level, we attempt to suggest the mechanisms behind them.

Generally, including verb-split and TAM-split, participants of situations can be divided into two types:

CENTRAL PARTICIPANTS, who/which are MORE:
PERIPHERAL PARTICIPANTS, who/which are LESS:
(a) actually/closely/fully involved in the activities;
(b) essential/obligatory.

When there is only one central participant, we will have a one-place predication, involving S NP. When there are two, we will have a two-place predication, involving A NP and O NP.

As its description given above indicates, this division of participants is not necessarily absolute, but is often relative. The same participant can be regarded as central or peripheral depending on who/what (s)he/it is contrasted with.

Now, a careful study of case frame alternations involved in various instances of verb-split and in TAM-split suggests that they are governed by the universal case-hierarchy, as presented in Figure 1. (Note that we are concerned with surface cases, not grammatical relations.)

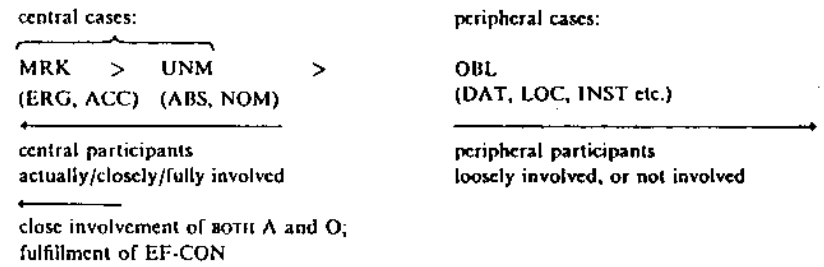

Figure 1. *Universal case-hierarchy*[19]

Specifically, we have the following two case-hierarchies:

Ergative case-hierarchy

A O(S)
| |
ERG > ABS > OBL

Accusative case-hierarchy

O A(S)
| |
ACC > NOM > OBL

First, Figure 1 proposes a division of cases into two groups: CENTRAL CASES, which (a) consist of UNM (ABS, NOM) and MRK (ERG, ACC); and (b) present central participants; and PERIPHERAL CASES, which (a) are OBLs; and (b) present peripheral participants.[20,21]

Then, in a one-place predication, S NP, which presents the sole central participant, will choose UNM (ABS or NOM) between the two central cases (ABS and ERG; or NOM and ACC) (cf. the unmarked-case constraint, *3.3.1.*).

In a two-place predication, when EF-CON is met (often in relative terms), the two participants (A and O) are BOTH actually/closely/fully involved in the activity (cf. *3.1.*). For example, concerning 'impingement on O', in verb-split: *kiss* (type 1) as opposed to *like* (type 5). And, in TAM-split: *kissed* (past) as opposed to *will kiss* (future); and *kissed* (affirmative) as opposed to *did not kiss* (negative).

In any two-place predication, whether or not EF-CON is met, at least one NP takes UNM (ABS or NOM) (cf. the unmarked-case constraint). As for the other NP, Figure 1 says that it has to take MRK (ERG or ACC) if EF-CON is met, i.e. if BOTH participants are actually/closely/fully involved in the activity. And we will have a case frame consisting of UNM and MRK (ERG-ABS or NOM-ACC).[22]

It is important to stress here that the MRK marking of one of the two NPs indicates fulfillment of EF-CON, i.e. actual/close/full involvement of BOTH A and O (neither A only nor O only). If this NP takes not MRK but UNM (resulting in ABS-ABS or NOM-NOM) or OBL (resulting in ABS-OBL or OBL-ABS; or NOM-OBL or OBL-NOM), then this merely indicates the existence of another participant, and does NOT indicate actual/close/full involvement of BOTH participants.[23]

It is, then, the ERG marking of A, plus O in ABS, in ergative languages, and the ACC marking of O, plus A in NOM, in accusative languages that indicate fulfilment of EF-CON, i.e. actual/close/full involvement of BOTH A and O (neither A only nor O only) in the activity.[24] That is, when EF-CON is met, a 'true' two-place predication will involve the two highest cases (ERG and ABS; and ACC and NOM) on the respective case-hierarchy — the two central cases. But, we do not have a 'true' two-place predication when EF-CON fails (often in relative terms), i.e. when NOT both of A and O are actually/closely/fully involved in the activity (e.g. *like* as opposed to *kiss*; *will kiss* as opposed to *kissed*; *did not kiss* as opposed to *kissed*). Then, the predication will not have the relevant case frame for a 'true' two-place predication (ERG-ABS or NOM-ACC). And, one or both of A and O will be demoted on their respective case-hierarchies, towards 'peripheral' OBLs, which present loosely involved (or uninvolved) participants. Even replacement of MRK by UNM (resulting in ABS-ABS or NOM-NOM) indicates (relative) failure of EF-CON.

There is massive crosslinguistic evidence to support the framework presented above, and many examples will be given in the discussions of verb-split and TAM-split. To give just one example, in Japanese, NOM-ACC (*vis-à-vis* NOM-NOM and DAT-NOM) primarily implies impingement on O, and typically occurs in type 1 'direct effect on O' (among other types). On the other hand, NOM-NOM occurs in type 5 'feeling' and DAT-NOM occurs in type 7 'ability', type 6 'possession' etc., but they never occur in type 1. (See Table 4.)

For ACC to be ranked higher than NOM may look unjustifiable (cf. Note 19). But, in terms of indication of fulfilment of EF-CON, i.e. degree of actual/close/full involvement, this particular ranking is indeed natural.

As for demotion, ergative languages and accusative languages each have three possibilities:

(a) NP is demoted from MRK to UNM:
1. A NP is demoted from ERG to ABS;
2. O NP is demoted from ACC to NOM;

(b) NP is demoted from MRK to OBL:
1. A NP is demoted from ERG to OBL (DAT is the commonest, but

LOC, POSS, etc. occur too);
2. O NP is demoted from ACC to OBL (e.g. DAT, PART, GEN);

(c) NP is demoted from UNM to OBL:
1. O NP is demoted from ABS to OBL (DAT is the commonest, but LOC, PART, INST, etc. occur too);
2. A NP is demoted from NOM to OBL (DAT is the commonest, but LOC, POSS, etc. occur too).[25]

As for the ergative hierarchy, if A alone is demoted, to ABS or OBL, we have ABS-ABS or OBL-ABS. If O alone is demoted to OBL, we have ERG-OBL. If both A and O are demoted, we have ABS-OBL and *OBL-OBL. The unmarked-case constraint blocks *OBL-OBL (e.g. *LOC-DAT, *LOC-LOC), but in two exceptions (for a reason I do not understand) it fails to work and allows ERG-OBL: ERG-DAT and ERG-PART. Similarly for the accusative hierarchy: NOM-NOM, NOM-OBL, *OBL-ACC, OBL-NOM, and *OBL-OBL.[26]

3.4. *Verb-split and TAM-split: similarities and differences*

We suggest in this paper that verb-split and TAM-split are fundamentally no different from each other. The reasons for this are as follows:

(a) Most importantly, verb-split and TAM-split involve common semantics (EF-CON) and common case-marking mechanisms (the unmarked-case constraint, the universal case-hierarchy, and demotion on it).

(b) As a consequence of (a), there is a close parallelism between verb-split and TAM-split, concerning semantics and case frames, e.g.:

	ERG-ABS	some other frame
	'impingement on O'	'non-impingement on O'
verb-split	to eat (type 1)	to like (type 5)
TAM-split	ate (past)	will eat (future)
	ate (affirmative)	did not eat (negative)
	'actual action'	'state'
verb-split	to eat (type 1)	to like (type 5)
TAM-split	ate (specific)	used to eat (generic)

(Recall that habits, occupations, abilities, etc. are 'states' — *3.1.*, (I).)

(c) At least some instances of TAM-split can be clearly related to the verb-type hierarchy. That is, the verb-type hierarchy, too, operates as a common principle. See *5.10.*; and the comment (c) on Russian in *5.11.*

(d) (This is related to (e), (f), and (g) below.) There are a fair number of instances that are intermediate between verb-split and TAM-split. (They are included in the discussions of TAM-split, but are indicated as such.) It is difficult and misleading to distinguish them from verb-split and TAM-split, or to assign them to either of them.

At the same time, there are a few differences between them:

(e) In a given verb-split, each verb takes only one case frame. (Its case frame is determined by its semantic nature.) But, in a given TAM-split, each verb takes two different case frames: ERG-ABS (or NOM-ACC) and another. (Tense/aspect/mood will decide which case frame the verb will take.) In other words, in a given verb-split, two (or more) verbs are treated relatively (concerning fulfilment or failure of EF-CON) and jointly show a case frame alternation. But, in a TAM-split, each verb is treated relatively within itself and shows a case frame alternation by itself.

(f) Verb-split often involves different word classes of predicators, i.e. verb, adjective, and sometimes noun, and even no predicator at all, e.g. expressions of possession. TAM-split employs verbs only, but it generally involves changes in the categories of verb morphology: tense, aspect, mood, transitivity/intransitivity, noun class, person, etc. And, it is not uncommon, in a given TAM-split, for ERG-ABS to show agreement with both A and O, but for non-ERG-ABS to show agreement with only one of them.

(g) TAM-split, in which a single verb shows the alternation of ERG-ABS and ABS-OBL (or ABS-ABS), has the function of intransitivizing (or de-ergativizing) the verb, by changing the A from ERG to ABS (a similar observation was made in Tsunoda, 1974c). The only exceptions are ERG-DAT and ERG-PART. It is relevant to mention that, in some instances, a given antipassive can (i) be involved in a TAM-split, (ii) use the intransitivizing function for coreferential deletion, etc. and (iii) have another intransitivizing function: reflexivization. See Note 11. On the other hand, verb-split, in which two (or more) verbs jointly show a case-frame alternation, lacks this intransitivizing function, and naturally is unable to use it for coreferential deletion, etc. (The observation in (g) appears to apply to ergative languages only; in accusative languages, A and S are identical in NOM.)

(h) When EF-CON fails, 'A-OBL O-UNM' (OBL-ABS, OBL-NOM) occurs in verb-split only, and not in TAM-split (see *3.3.2.*).[27]

Finally, if a given language has two (or more) splits (which many ergative languages do), where does ERG-ABS occur? For example, if a language has a verb-split (e.g. *kill* 'ERG-ABS' versus *like* 'non-ERG-ABS') and a TAM-split (e.g. past 'ERG-ABS' versus present 'non-ERG-ABS'), then ERG-ABS occurs where the splits intersect each other, e.g. past of *kill* (Okutsu and Shibatani, private communication).

4. Verb-split

In verb-split, as indicated above, ERG-ABS occurs at least in type 1 'direct effect on O'. But, as we go down the verb-type hierarchy, we tend to have some other frame(s) in addition, or instead. We will exemplify some representative verb-splits in ergative languages.

4.1. Avar, etc. (Caucasus), and Tibetan

In Avar, N.E. Caucasus (Catford, 1975; Černy, 1971; Guxman, 1972; Madieva, 1967: 266–267; Meščaninov, 1967: 48; Tchekhoff, 1978, 1979a, private communication), type-1 verbs (and the like) take ERG-ABS, e.g. *kill, break, plough, chop, open, use, give birth to, buy, cook, make, send*:

(1) ʧanaqan-as bats' ʧ'awana.
hunter-ERG wolf-ABS killed
'The hunter killed the wolf'.

According to Černy, all verbs of perception (i.e. type 2) take LOC-ABS, e.g. *see, hear, find*:

(2) inssu-da (žindargo) was wiχana.
father-LOC one's child-ABS saw
'The father saw the child' (of his own).

In type 3 'pursuit', the same verb can mean 'search' in ERG-ABS, like type-1 verbs, and 'wait' in ABS-APUDESSIF (in Georges Charachidze's terminology — Tchekhoff, private communication):

(3) či λimaq valáhula.
man-ABS child-APU waits
'A man waits for a child'. (Obtained by Tchekhoff from Charachidze.)

In type 4 'knowledge', at least *know, understand*, and *forget* take LOC-ABS, like type-2 verbs. Černy says that all verbs having the general meaning of feeling (i.e. type 5) take DAT-ABS, e.g. *love/wish, want*, and two verbs of *need*:

(4) di-ye y-as y-ol'-ula.
I-DAT FEMININE-girl-ABS FEM-love-GENERAL PRESENT
'I love the girl'.

Possession (type 6) is expressed by GEN-ABS, involving the copula:

(5) ebelaλ-ul v-ac v-ug-o.
mother-GEN HUMAN-brother-ABS HUM-be-PRESENT INDICATIVE
'The mother has a brother'.

According to Catford, 1975 (see pp. 11–12, particularly), the situation seems to be similar in other Caucasian languages. Particularly, DAT-ABS is very common, used with verbs of perception and/or those of feeling. This is often called 'affective construction' (Catford, 1975: 2; Comrie, 1976b: 254). Attested case frames in Georgian, S. Caucasus (Catford, 1975: 17, 28; Shimomiya, 1978, private communication) are listed in Table 3.

I have very little information on Tibetan (Nishida, 1979; Roerich and Tse-Trung Lopsang, 1957; Wagner, 1978: 41, 50, 66). But at least type-1 verbs and the like take ERG-ABS. *See* and *hear* (type 2) and *know* (type 4) take DAT-ABS, at least in Western Tibetan. But *love* (type 5) takes ERG-ABS, rather unexpectedly. Possession (type 6) can be expressed by LOC-ABS, with the copula. See also Notes 40 and 43.

4.2. Tongan and Samoan

In Tongan (Chung, 1978; Tchekhoff, 1973; 1974; 1979a; 1979b; private communication), type-1 verbs and the like take ERG-ABS:

(6) 'oku tamate'e he fefine 'a e tangatá.
PRESENT kill ERG the woman ABS the man
'The woman kills the man'.

Type 2 'perception': *ong'i* 'hear' and *'ilo* 'find' take ERG-ABS. But *sio* 'see' cannot take ERG-ABS; it takes ABS-DAT and ABS-LOC:[28]

(7) 'oku sio 'a Sione kiate Mele.
PRES see ABS John DAT(pronoun) Mary
'John sees Mary'.

(8) na'a ku sio kotoa 'i he fanga pato ...
PAST I-NOM see all LOC the plural duck
I saw all the ducks ...[29]

Type 3 'pursuit': *kuni* 'search' takes ERG-ABS, but *talitali* 'wait' takes ABS-DAT. In type 4 'knowledge', *'ilo* 'know' (same root as *find*) takes ERG-ABS, and *manatu* 'recall' takes ABS-DAT. However, with *ngalo* 'forget, disappear' and *mahino* 'understand; be clear', unlike in the preceding examples, A is neither ERG or ABS, but is OBL. *mahino* takes DAT-ABS and *ngalo* takes DAT-ABS and LOC-ABS. (Recall that a presentation of a case frame ignores the actual word order in the example: Note 5.)

(9) na'e ngalo 'ae lesoni 'i he tamasi'i.
PAST forget ABS-the lesson LOC the child
'The child forgot the lesson'.

(10) 'oku ngalo 'ae lesoni ki he tamasi'i.
PRES forget ABS-the lesson DAT the child
'The child forgets the lesson'.

In type 5 'feeling', the situation is as follows:
a. both ABS-DAT and ABS-LOC: *'ofa* 'love', *sai'ia* 'like';
b. ABS-LOC: *manako* 'like', *ilifia* 'afraid of', *mā* 'ashamed of';
c. ABS-DAT: *'ita* 'angry at'.
Possession (type 6) can be expressed by ABS-ABS, with the copula:

(11) 'oku i ai ē pēpē 'a Mele.
PRES be ABS-the baby ABS Mary
'Mary has a baby'.

On other Polynesian languages, I do not have so much information as I do on Tongan. But at least Samoan (Chung, 1978; Marsack, 1962; Milner, 1974) shows a similar tendency. Possession can be expressed with the copula *i ai*, using DAT-ABS, unlike in the Tongan sentence (11), which employs the same copula but a different case frame. The case frames attested in Samoan are listed in Table 3. Verb-split in Polynesian languages in general is briefly mentioned in 5.5.

4.3. *Djaru, Warrungu, etc. (Australia)*

In Djaru, W. Australia (my own data including Tsunoda, 1978; forthcoming), roughly speaking, nouns and free pronouns have an ergative declension, and bound pronouns have an accusative one. We will discuss the case frames of the former. (Bound pronouns are generally suffixed to the 'C(atalyst)' morpheme *nga*, which in itself does not have any meaning.) Type-1 verbs, (e.g. *kill/hit*, *spear*) and type-2 verbs 'perception' (e.g. *see/look*, *hear/listen*, *find*, *smell*) all take ERG-ABS:

(12) mawun-tu nga-0-0 jaji lan-an
(*or*, nyang-an).
man-ERG C-3SgNom-3SgAcc kangaroo-ABS spear-PRES
(see-PRES)
'A man spears (or, sees) a kangaroo'.

Type 3 'pursuit': the two verbs of *wait*, four verbs of *search*, and one verb of *stalk* take ERG-DAT:[30]

(13) mawun-tu nga-0-la jaji-wu jarra nyang-an
(*or*, muwu wung-an).
man-ERG C-3SgNom-3SgDat kangaroo-DAT wait-PRES
(search-PRES)
'A man waits for (or, looks for) a kangaroo'.

In addition, both 'wait' and 'search' can be expressed by ABS-DAT. Compare (13) with:

(14) mawun nga-0-la jaji-wu jarra nyinang-an.
man-ABS C-3SgNom-3SgDat kangaroo-DAT wait-PRES
'A man waits for a kangaroo'.[31]

Type 4 'knowledge': 'know, understand' can be expressed by the verb *ngarra man-*, with ERG-ABS; and by the noun *pinarri*, with ABS-DAT (a copula-like verb optionally co-occurs. But, verbless sentences are not uncommon in Djaru, e.g. (15).).[32] In type 5 'feeling', *marru wung-* 'love' takes ERG-ABS, while the three verbs 'jealous of', 'worried about', and *jirrk yan-* 'like' take ABS-DAT. But, the two verbs 'afraid of', 'angry with', and the noun *minyirri* 'shy/embarrassed/ashamed of' take ABS-LOC:

(15) ngali nga-li-nyanta minyirri ngumpirr-a.
1DuInc-ABS C-1DuIncNom-3SgLoc shy-ABS woman-LOC
'We (inclusive, dual) are shy of the woman'.

Type 6 'possession': *karrun-* 'hold, possess' takes ERG-ABS. A verbless expression, too, is possible: A NP (possessor) is ABS, and O NP (possession) is affixed with the noun-stem-forming suffix, 'having, with', followed by the ABS (i.e. zero) ending:

(16) ngaju nga-rna ngaringka-yaru.
1Sg-ABS C-1SgNom woman-HAVING-ABS
'I am with a woman', 'I have a woman', 'I am married', etc.

Djaru has a TAM-like split as well (5.6.).

Other Australian languages, e.g. Warrungu, show a similar tendency, except that ERG-DAT is very uncommon. Guugu Yimidhirr, north Queensland (Haviland, 1979), lacks a possession verb, and employs DAT-ABS and POSS-ABS. To these frames, a copula-like verb can be added.

4.4. *Basque and Eskimo*

In the verb-splits we have examined so far, failure of EF-CON is reflected in case-marking, to varying degrees from language to language. However,

in Basque (Heath, 1976; Shimomiya, 1979; private communication) and Eskimo (Mey, 1970; Miyaoka, 1978; private communication; Rischel, 1971; Kalmár, 1979), failure of EF-CON is ignored and not reflected in case-marking: the verbs of the six types (at least, those listed in Table 2) all take ERG-ABS.[33] Thus, in Basque:

(17) ni-k gizon-a hil (ikusten, *etc.*) d-u-t.
I-ERG man-the-ABS kill (see, etc.) 3SgAbs-AUX-1SgErg
'I killed (saw, etc.) the man'.

Basque and Eskimo have TAM-splits as well (*5.3.*, *5.7.*, and *5.9.*).

4.5. *Summary of verb-splits in ergative languages*

The verb-splits exemplified above are shown in Table 3.

In terms of the correlation between verb-types (i.e. fulfilment or failure of EF-CON) and case-marking, the verb-splits given in Table 3 can be classified as follows:

- Basque type
- non-Basque type
  - Avar type
  - Tongan type
  - Warrungu type

In Basque, all the six types of verbs take ERG-ABS, in spite of the verb-type/semantic differences; failure of EF-CON is ignored in case-marking. To this type belongs Eskimo.

In non-Basque type, failure of EF-CON is reflected in case-marking to varying degrees. Different verbs (or verb-types) take different case frames. This is most clearly seen in Avar. To use Catford's (1975) terms, ERG-ABS in non Basque-type splits is 'functional' (i.e. semantically significant — T.T.). But, ERG-ABS in Basque type splits is 'formal' (i.e. semantically insignificant — T.T.).

In Avar, apart from ERG-ABS, the dominant pattern is OBL-ABS (i.e. LOC-ABS, DAT-ABS, GEN-ABS) (the only instance of ABS-OBL is ABS-APU). To this type belong Georgian, many other Caucasian languages (cf. Catford, 1975), Tibetan, etc.

In Warrungu type, to which belong Djaru, Guugu Yimidhirr, and many other Australian languages, apart from ERG-ABS the dominant pattern is ABS-OBL, e.g. ABS-DAT (very common) and ABS-LOC. (There are few exceptions: ERG-OBL (i.e. ERG-DAT), OBL-ABS (i.e. DAT-ABS, POSS-ABS), etc.)

Tongan is intermediate between Avar and Warrungu. In addition to

Type	1	2	3	4	5	6
Meaning	effect	perception	pursuit	knowledge	feeling	possession
Examples	kill, hit, eat	see, hear, find, smell	search, wait	know, understand	love, like, want, need	possess
Avar	ERG-ABS	LOC-ABS	ERG-ABS ABS-APU	LOC-ABS	DAT-ABS	GEN-ABS
Georgian	ERG-ABS	ERG-ABS DAT-ABS			DAT-ABS	DAT-ABS
Tibetan	ERG-ABS	DAT-ABS		DAT-ABS	ERG-ABS	LOC-ABS
Tongan	ERG-ABS	ERG-ABS ABS-DAT ABS-LOC	ERG-ABS ABS-DAT	ERG-ABS ABS-DAT DAT-ABS LOC-ABS	ERG-ABS ABS-DAT ABS-LOC	ABS-ABS
Samoan	ERG-ABS	ERG-ABS ABS-DAT ABS-LOC	ERG-ABS	ERG-ABS ABS-DAT LOC-ABS	ERG-ABS ABS-DAT ABS-LOC	DAT-ABS
Djaru	ERG-ABS	ERG-ABS	ERG-DAT ABS-DAT	ERG-ABS ABS-DAT	ERG-ABS ABS-DAT ABS-LOC	ERG-ABS ABS-(WITH)
Warrungu	ERG-ABS	ERG-ABS	ERG-ABS ABS-DAT	ABS-DAT	ABS-DAT	ERG-ABS ABS-(WITH)
Guugu Yimidhirr	ERG-ABS	ERG-ABS	ERG-ABS	ABS-DAT	ABS-DAT	DAT-ABS POSS-ABS
Basque	ERG-ABS	ERG-ABS	ERG-ABS	ERG-ABS	ERG-ABS	ERG-ABS
Eskimo	ERG-ABS	ERG-ABS	ERG-ABS	ERG-ABS	ERG-ABS	ERG-ABS

ERG-ABS, Tongan has both OBL-ABS and ABS-OBL (DAT and LOC are equally common for the OBL slot). Similarly in Samoan.

We have already pointed out in *3.2.* the crosslinguistic tendency as to what verbs (or verb-types) take which case frame. It is noticeable that among the OBLs presenting O NP, in ERG-OBL and ABS-OBL, DAT is the commonest. This is particularly so in type 3 'pursuit', in which O NP expresses the (unattained/unaffected) goal of pursuit, e.g. (13), (14).

The observations made in *3.2.* and the examples given above (cf. Table 3 particularly) allow us to make an interesting (though not necessarily strong/exceptionless) prediction: if, in a given language, a certain verb takes ERG-ABS, then a verb higher on the verb-type hierarchy will also take this frame. (But it is by no means predicted that the reverse is true.) To give definite and unequivocal examples, if in a given language *see* (type 2) or *love* (type 5) takes ERG-ABS, then *kill* (type 1) will surely do so. In no language I know do *see* or *love* take ERG-ABS without *kill* doing the same.[34]

4.6. Relevance of the verb-type hierarchy to accusative languages

The verb-type hierarchy is relevant to accusative languages as well. And, they do have phenomena that are parallel to those in ergative languages discussed above. Many of them have already been pointed out in *3.2.*, *3.3.1.*, *3.3.2.*, and *3.3.3.* We will give and discuss just a few more examples.

As examples of verb-split in accusative languages, we give English and Japanese in Table 4. This table has an additional verb-type: type 7 'ability'. (In Japanese, NOM is marked by (a postposition-like particle) *ga*, ACC by *o*, and DAT by *ni*. In this table presentation of case frames follows the word order in actual examples. Cf. Note 5.)

English provides evidence for the subdivision of type 1 into subtype 1a (resultative) and subtype 1b (non-resultative) (cf. *3.1.*, (H), and *3.2.*). In subtype 1b, we can have pairs such as *shoot* and *shoot at*; *hit* and *hit at*; *punch* and *punch at*; *stab* and *stab at*; *catch* and *catch at*; and so on. (The addition of *at* indicates the uncompletedness/incompleteness/inconclusiveness/failure of the action or the unattainedness/unaffectedness of O, i.e. failure of EF-CON. See Anderson (1971: 391; 1976: 22–23; 1977: 350), Binnick (1974), and Moravcsik (1978b: 256). See also (48).) But, subtype 1a does not allow such an alternation: *kill* and **kill at*; *break* and **break at*; *bend* and **bend at*; etc. English also provides evidence for the subdivision of type 2 (this time lexical evidence): subtype 2a, e.g. *see*, *hear*, and subtype 2b, e.g. *look*, *listen*.

The verb-type hierarchy is also crucially relevant to aspect of Russian verbs. See *5.11.*[35]

5. Split conditioned by tense/aspect/mood of sentence

5.1. Preliminary remarks

Some representative instances of TAM-split are given in Table 6. The semantics involved in TAM-split has already been discussed in *3.1.* Note in particular that realization of (the semantic) EF-CON in case-marking (in grammar) is often in relative (rather than absolute) terms. For example, in a past-versus-nonpast opposition, an event in the past will be described by ERG-ABS, and an event in the present or future by some other frame. However, in a perfective-versus-imperfective, even an event in the past (which has already been completed in the external world) can be regarded as non-effective, e.g. non-completed/in progress *vis-à-vis* an event that is regarded as effective, e.g. completed. The latter will then take ERG-ABS, and the former some other frame. Similarly, in a realis-versus-irrealis opposition, even an event in the future (that has not been completed yet) will take ERG-ABS if it is regarded as effective (e.g. certain or likely to take place or to be completed) *vis-à-vis* an event in the future that is unlikely to occur. And so on.

5.2. Kurmanji (Iraq), Pashto (Afghanistan), etc.

In Kurmanji, one of the northern Kurdish dialects (data from Bedir Khan and Lescot, 1970; Bynon, 1979; Payne, 1979), the situation seems to be as follows: most nouns and pronouns, and all demonstratives have the ergative pattern (A≠S=O) in the past tenses (i.e. simple past, and tenses formed from the past stem — continuous past, perfect, and pluperfect), and the accusative pattern (A=S≠O) in the present tense. But masculine singular nouns and 3rd person plural pronouns have the neutral pattern (A=S=O) in all tenses. (Verb agreement, too, shows the ergative pattern in the past tenses, S and O being cross-referenced; and the accusative pattern in the present tense, A and S being cross-referenced.) Thus, examples involving 'I' (the ligature shows agreement):

(18) min hön dit-in.
I-ERG you(pl)-ABS (PAST-)see-you(pl)
'I saw you' (plural).

(19) we ez dit-im.
you(pl)-ERG I-ABS (PAST-)see-I
'You (plural) saw me'.

Table 4. *Verb-split in English and in Japanese*

Type	1		2		3
Meaning	direct effect on O		perception		pursuit
Examples	kill, break, hit, shoot		see, look, hear, listen, find		search, wait
Subtype	1a	1b	2a	2b	
Examples	kill, break	shoot, hit	see, hear	look, listen	
English	NOM kills ACC	NOM shoots ACC	NOM hears ACC sees		NOM awaits ACC seeks
		NOM shoots at O		NOM listens to O looks at	NOM searches for O looks for waits for
Japanese	NOM ACC korosu 'kills'		NOM AC kiku 'hears, listens' miru 'sees, looks'		NOM ACC sagasu 'searches' matsu 'waits'
			DAT NOM kikoeru 'hears' mieru 'sees'		

Type	4	5	6	7
Meaning	knowledge	feeling	possession	ability
Examples	know, understand	love, like, want, fear	possess, have	can do, be capable
Subtype				
Examples				
English	NOM understands ACC knows	NOM loves ACC likes wants fears	NOM possesses ACC has	
	NOM is aware of O	NOM is afraid of O is fond of		NOM is capable of O
Japanese	NOM ACC shitte iru 'knows'	NOM ACC osoreru 'fears' aisuru 'loves'	NOM ACC motte iru 'has, owns'	
		NOM NOM hoshii 'wants (adj)' kowai 'fears (adj)' suki 'likes (adj)'		
	DAT NOM wakaru 'understands'		DAT NOM aru 'is'	DAT NOM dekiru 'can do'

(20) cə̀ wẹ̀ di-bin-im.
I-ABS you(pl)-OBL PRES-see-I
'I see you' (plural).

(21) hṍn min di-bin-in.
you(pl)-ABS I-OBL PRES-see-you(pl)[36]
'You (plural) see me'.

(22) cə̀ ket-im (*or*, di-kev-im)
I-ABS (PAST-)fall-I (PRES-fall-I)
'I fell (or, fall)'.

Other Iranian languages that have a similar TAM-split include Pashto (Lorenz, 1979; Shafeev, 1964), and Jagnobi and Talyši (Payne, 1979). In Burushaski, 'a language isolate spoken in inaccessible mountain valleys of the Karakoram Range, on the border between Kashmir and Tibet' (Dixon, 1979: 95; cf. also Lorimer, 1925), an ergative declension occurs in past-based tenses, and a neutral declension (A, S, and O all being in ABS) in non-past tenses.

5.3. *Hindi, Punjabi etc., and Georgian, etc.*

In Hindi (Allen, 1951; 1964; Mathews, 1953; McGregor, 1972; Tchekhoff, 1978; Comrie, private communication), ERG-ABS occurs in perfective, but not in imperfective. Roughly, if O NP is human or definite, we have ERG-DAT in perfective, and ABS-DAT in imperfective. That is, human or definite O NP is always DAT irrespective of the aspect.[37] Otherwise, we have ERG-ABS in perfective, and ABS-ABS in imperfective. S NP is always ABS. Examples in perfective:

(23) ləʈke-ne bylli dekhi həy.
boy-ERG cat-ABS has seen
'The boy has seen a cat'.

(24) ləʈke-ne bylli-ko dekha həy.
boy-ERG cat-DAT has seen
'The boy has seen the cat'.

Examples in imperfective:

(25) ləʈka bylli (*or*, bylli-ko) dekhta həy.
boy-ABS cat-ABS (cat-DAT) sees
'The boy sees a cat (or, the cat)'.

Other Indian languages that have a similar TAM-split include Punjabi (Comrie, 1973; Shackle, 1972), Rājasthānī (Allen, 1960), and Marathi (Kachru and Pandharipande, 1978).

Georgian, S. Caucasus (Allen, 1964; Aronson, 1970; Catford, 1975; Comrie, 1973; Heath, 1976; Anderson, 1977; Shimomiya, 1978; private communication) has ERG-ABS in the so-called aorist series of tenses (i.e. perfective or punctual): aorist and optative. It has ABS-DAT in the so-called present series of tenses (i.e. imperfective, non-punctual, durative, progressive, or continuous): present, future, imperfective, conditional, present and future subjunctive.[38] Georgian also has a verb-split (*4.1.*). Catford (1975: 17) says that Svan, S. Caucasus, has a similar TAM-split.

In Basque (Shimomiya, 1979: 269, private communication), progressive — whether past, present, or future — takes ABS-ABS rather than ERG-ABS. ERG-ABS involves the *have*-type auxiliary, which cross-references both A and O, e.g. (17). But ABS-ABS employs the *be*-type auxiliary, which cross-references A NP, in ABS. Basque has another TAM-split (*5.9.*). In Tsakhur, N.E. Caucasus (Catford, 1975: 42–43), ABS-ABS rather than ERG-ABS is used for 'expressing durative action'.

5.4. *Adyghe, etc. (Caucasus)*

In Adyghe, N.W. Caucasus (Catford, 1975: 32–35; Anderson, 1976: 20–22), among such verbs as might take ERG-ABS in some other ergative languages, some of them take ERG-ABS, as expected. But some others take ABS-OBL, rather unexpectedly. This may sound strange, but in fact this split shows a certain semantic differentiation, e.g.:

ERG-ABS	ABS-OBL
kill	strike, beat, stab
write	read
see	look at[39,40]

(26) bojetsi-m qamemk'e piji-r iwik'iʁ.
warrior-ERG dagger-INST enemy-ABS killed
'The warrior killed the enemy with his dagger'.

(27) bojetsi-r qamemk'e piji-m jepidʒiʁ.
warrior-ABS dagger-INST enemy-OBL stabbed
'The warrior stabbed the enemy with his dagger'.

(These are instances of verb-split; the case-marking alternation is shown by more than one verb jointly. See *3.4.*, (e).) In fact, some verbs can take both case frames and show a similar semantic differentiation (often involving a change in the verb morphology, from transitive to intransitive), e.g.:

(28) p:saśa-m c'əy-ər ya-d-ə.
girl-ERG cherkesska-ABS 3sg(3sg)sew-PRES
'The girl is sewing the Cherkesska'.

(29) p:śaśa-r c'əy-əm ya-d-a.
girl-ABS cherkesska-OBL 3sg(3sg)-sew-INTRANS/PRES
'The girl is trying to sew the Cherkesska' or 'The girl is sewing away (on the Cherkesska)'.[41]

Other examples given by Anderson involve *plow* and *love*. (These are instances of TAM-split; the case-marking alternation is shown by individual verbs, involving a change in the verb morphology. See *3.4.*, (c).) Catford and Anderson show that in each pair, ERG-ABS indicates that the action is more effective/conclusive/definitive/etc. or that the O is more fully/conclusively/etc. affected. In contrast, ABS-OBL indicates that the action is less conclusive/successful/etc. or that the O is partially/superficially or less conclusively/completely/etc. affected.

The Adyghe split has to be regarded as intermediate (cf. *3.4.*, (d)). Some of the instances are in the nature of verb-split, but others are in the nature of TAM-split. And yet, they all show essentially the same semantic differentiation and exactly the same case-marking alternation. It is misleading to divide them into two types. But, it is also misleading, and difficult, to assign all of them to one of the two types. Adyghe split shows that verb-split and TAM-split are fundamentally no different from each other. (See also Djaru in *5.6.*)

Similar splits occur in all of the other four N.W. Caucasian languages, e.g. Kabardian; and in Hunzib, N.E. Caucasus (Catford, 1975: 34, 40–41).

5.5. Samoan

According to Chung (1978: 49), ergative languages of Polynesia each have two types of two-place verbs:

a. canonical transitive verb: ERG-ABS
b. middle verb: ABS-DAT or ABS-LOC

A middle verb describes 'an event that does not affect the direct object immediately' (Chung, 1978: 216), i.e. an event in which EF-CON fails. Indeed, the middle verbs in most Polynesian languages include *see, listen* (type 2); *wait* (type 3); *understand* (type 4); *love, want* (type 5). That is, this verb-classification is a verb-split. For examples, see *4.2.* and Table 3.

In Samoan, when suffixed with *-a* or *-ina*, some of the middle verbs take ERG-ABS, i.e. they are transitivized. Milner (1974) says that they show a certain semantic differentiation, as shown in Table 5. (Milner himself uses the expressions 'imperfective', 'perfective', 'action or process itself', and 'result of action or process'.)

(30) 'ua va'ai 0 le tama 'i le i'a.
PRES look ABS the boy DAT the fish
'The boy looks (or, has looked) at the fish'.

Table 5. *TAM-split in Samoan*

middle verb ABS-DAT or ABS-LOC imperfective action or process itself		middle verb plus *-a* or *-ina* ERG-ABS perfective result of action or process	
va'ai	look	va'ai-a	catch sight of, spot, identify
mafai	be possible	mafai-a	manage, succeed, achieve
māfaufau	ponder, reflect, cogitate	māfaufau-ina	imagine, conceive; dream
manatu	think, ask oneself	mānatu-a	bear in mind, consider; remember
iloa	know, be aware	iloa-ina	be sure, certain, convinced

(31) na va'ai-a e le tama 0 le i'a.
PAST look-*a* ERG the boy ABS the fish
'The boy spotted (or, had spotted) the fish'.

This split is one of 'perfective/actual/resultative'-versus-'imperfective/potential/non-resultative'. Also, it is restricted to 'a small majority, or perhaps minority of middle verbs' (Chung, 1978: 285, 364–369).[42]

5.6. Warrungu, Djaru, etc. (Australia)

Warrungu, north Queensland, has an antipassive-type TAM-split. The antipassive appears to emphasize the continuousness/progressiveness of the action. Examples include Note 11, (i)–(iv). The demoted O is either INST or DAT, and this is based on the semantics of the verb. At least in the non-future (i.e. unmarked) tense, the demoted O is DAT if it presents an (unattained/unaffected) goal of pursuit, e.g. Note 11, (iv) and *ngarrumpa-kali-n* 'try in vain'. Otherwise (particularly with verbs of action), the demoted O is INST. *nyaka-kali-n* 'see/look/find' can take both ABS-INST and ABS-DAT; and, with ABS-DAT, can (though not always) mean 'search'. Thus, compare:

(32) pama-ngku yuri nyaka-n.
man-ERG kangaroo-ABS see-NF
'A man saw (found, etc.) a kangaroo'.

(33) pama yuri-wu nyaka-kali-n.
man-ABS kangaroo-DAT see-*kali*-NF
'A man was (or, is) looking for a kangaroo'.

(Compare (33) with Note 11, (iv).) This pair, (32) and (33), shows an opposition of 'actual/realized versus potential/unrealized'. Warrungu also has an NP-split (cf. 2) and a verb-split (*4.3.*, Table 3).

In Alawa, Northern Territory (Sharpe, 1972: 102–103), the three verb complexes *see/watch*, *think/remember*, and *feel/catch* take ABS-GEN(/PURPOSIVE) (agreeing with A only) rather than ERG-ABS (agreeing with both A and O) 'when the action has not attained its goal'. Hence ERG-ABS 'The man was watching the kangaroo' versus ABS-GEN 'The man was watching for kangaroos'; and ERG-ABS 'The man caught some fish' versus ABS-GEN 'The man was feeling for fish'. The demoted O, in GEN, appears to be deletable (cf. Notes 11 and 26).

In the verb-split of Djaru, W. Australia (*4.3.*), type-1 verbs ('direct effect on O') and type-2 verbs ('perception') all take ERG-ABS. In type 3 'pursuit', some take ERG-DAT, and others take ABS-DAT. Now, in types 1 and 2, at least the following three verbs can take both ERG-ABS and ERG-DAT (not ABS-DAT), showing a semantic differentiation similar to that in Alawa and in the Warrungu pair (32);(33). Thus:

	ERG-ABS	ERG-DAT
pat man-	'touch'	'try to touch'
nyang-	'see/look'	'try to look, search'
pura nyang-	'hear/listen'	'try to listen'

ERG-DAT indicates potential (as yet unrealized or unsuccessful) activities or the unattainedness/unaffectedness of the O. Thus, compare (12), involving *nyang-* 'see' in ERG-ABS, with:

(34) mawun-tu nga-0-la jaji-wu nyang-an.
man-ERG C-3SgNom-3SgDat kangaroo-DAT see-PRES
'A man looks for a kangaroo'.

(Also, compare (34) with (13), involving *muwu wung-* 'search', always in ERG-DAT.) This Djaru split, e.g. (12) versus (34), is intermediate (*3.4.* (d)). Semantically, this split is similar to the TAM-splits given above. And yet, unlike them and like many verb-splits, it involves no change in the verb morphology. And, in terms of semantics and case-marking, the pair (12);(34), for instance, is identical with the pair of *nyang-* 'see' (type 2) (12) and *muwu wung-* 'search' (type 3) (13), of the verb-split. Like the examples in Adyghe (*5.4.*), these Djaru examples show that verb-split and TAM-split are fundamentally no different.

The same split (ERG-ABS versus ERG-DAT), with essentially the same semantic differentiation and with no change in the verb morphology, occurs in Walbiri, southeast of Djaru (Hale, 1973: 336, n.d.: 44–47), and in a few other neighbouring languages (my own data). But, this split in Walbiri appears to occur in a much larger number of verbs than in Djaru; examples include *spear*, *hit*, *shoot*. (In Djaru, for example, *spear* in (12) cannot take ERG-DAT.)

5.7. *Kalkatungu (Australia), Eskimo, and Tongan*

Kalkatungu, W. Queensland (Blake, 1977: 17–18, n.d.) has an antipassive-type TAM-split. ABS-DAT (used with verbs of action, too) indicates 'uncompleted or habitual activity'. For example, *ŋaŋtamai* means 'find' in ERG-ABS and 'search' in ABS-DAT, with no change in the verb morphology. The following pairs show an opposition of 'definite/specific versus indefinite/non-specific' O:

(35) ŋa-ɻu ɻuji wakaṛi ŋa-ci-wa-ɻaŋu.
I-ERG cook fish-ABS I-DAT-lig.-ABLATIVE
'I am cooking the fish from my (wife)' (i.e. 'the fish my wife gave me').

(36) maṭu maa-ci ɻuji.
mother-ABS food-DAT cook
'My mother is cooking food'.

(35) describes 'what the agent is doing to the patient'. But (36) describes 'that the agent is performing (or has performed) an activity and the further specification of that activity happens to involve mentioning patient'.

Eskimo has a split between ERG-ABS with definite O, versus ABS-INST with indefinite O. Kalmár (1979) says that ERG-ABS is used when O NP presents given information (previously mentioned or presupposed); but that ABS-INST is used when O NP presents new information (neither previously mentioned nor presupposed). The demoted O in INST is often deleted (Miyake, private communication).

Tongan (Comrie, 1978: 365; cf. also Hopper and Thompson, 1980: 257–258) employs ABS-ABS, rather than ERG-ABS, for expressing 'engage in' (with no change in the verb morphology). Hence ERG-ABS 'John drank kava' versus ABS-ABS 'John engaged in kava-drinking'. O NP is indefinite/non-specific. (This split is intermediate, cf. *3.4.* (d).) Tongan has an NP-split (Note 29) and a verb-split (*4.2.*, Table 3) as well.

5.8. *Avar (Caucasus), Rawang (Burma), Yukulata (Australia), etc.*

Avar, N.E. Caucasus (Catford, 1975: 39–40) has an ERG-ABS versus ABS-ABS opposition:

(37) gaza-gun bel-gun un, hez nuχ
pick-WITH shovel-WITH having gone, they-ERG road-ABS
habuleb bugu.
making are
'Having gone out with pick and shovel, they are making a road'.

(38) hel nuχ habulel rugu.
they-ABS road-ABS making are
'They are making a road'.

ERG-ABS 'expresses primarily the action of the subject UPON A DEFINITE OBJECT', while ABS-ABS 'primarily indicates the occupation of the subject, the fact that the subject is in the process of fulfilling an action, LAYING NO SPECIAL STRESS UPON WHAT PARTICULAR OBJECT THE ACTION IS DIRECTED TO' (emphasis by Catford). Cf. Blake's comment on (36). (Avar has a verb-split as well, *4.1.*) Similar splits occur in Chechen and Bats (N.C. Caucasus), and Khinalug (N.E. Caucasus) (Catford, 1975: 37–39, 43). Thus, in Chechen, ABS-ABS *vis-à-vis* ERG-ABS expresses a customary or obligatory action, the habitual occupation or the ability of the subject.

Similarly, in Rawang, North Burma (Morse, 1965: 349–350), when a transitive verb takes ABS-ABS (rather than ERG-ABS), with the transitive suffix deleted, it expresses an 'action which is customary, or usual, but is referred to generally, non-specifically'.[43]

In Yukulta, northern Australia (Keen, 1972: 238), when a transitive verb takes ABS-ABS (rather than ERG-ABS), with the person-tense markers deleted from the sentence, it 'represents the competence of the subject to perform an action not his actual performance of the action'. (Yukulta has another TAM-split, *5.9.*) Pitjantjatjara, central Australia (Platt, 1972: 196) has a similar split, but apparently just with one verb 'talk'.

5.9. Yukulta (Australia) and Basque

In Yukulta (Keen, 1972; cf. also Blake, 1977: 19, Dixon, 1979: 96), nouns have an ergative declension, free pronouns a neutral declension, and bound pronouns an accusative declension. (This is an NP-split.) Bound pronoun(s), transitivity marker, and tense marker are suffixed to the sentence-initial word, in this order. ABS-BEN(efactive) (if O is a noun) or ABS-DAT (if O is a free pronoun) is used to describe an irrealis event: an event that did/does not take place, or that is unlikely to happen or can't possibly occur (e.g. unreal wishing). In other situations (e.g. an event that happened, or is happening, or is likely to occur; a future intention etc.),

ERG-ABS is used. (While ERG-ABS involves a transitive marker, ABS-BEN and ABS-DAT involve an intransitive marker.) Thus:

(39) tiṛ-iya-0-0-ka-nta
snake-ERG-3SgNom-3SgAcc-TRANS-TRANS.REAL.PAST
pa:tja maṇṭuwara.
bite-TR boy-ABS
'The snake bit the boy'.

(40) walira-0-0-nka tanka-ṛa kunawuna-nta
NEG-3SgNom-3SgAcc-INTR.PRES man-ABS child-BEN
palata.
hit-TR
'The man did not hit the child'.

In Basque (Moravcsik, 1978b: 271–272; Shimomiya, private communication), the negation of a transitive verb (normally occurring with ERG-ABS) takes ERG-ABS if O is definite but takes ERG-PART if O is indefinite (both frames involve a word-order change). Thus, compare (17) with:

(41) ni-k ez dut ikusi gizona.
I-ERG not have seen the man-ABS
'I have not seen the man'.

(42) ni-k ez dut ikusi gizon-ik.
I-ERG not have seen man-PART
'I have not seen any man'.

This Basque split involves two kinds of semantic oppositions: affirmative versus negative; and definite O versus indefinite O.

5.10. Summary of TAM-splits in ergative languages

Some representative TAM-splits — in terms of semantics and case-marking — are shown in Table 6.[44]

At least some (and possibly all) TAM-splits can be related to the verb-type hierarchy, and consequently to verb-split. (a) For example, we have seen in 5.4 that some instances of the Adyghe split show an alternation between two subtypes:

ERG-ABS:	ABS-OBL:
kill (subtype 1a)	beat, stab, strike (subtype 1b)
see (subtype 2a)	look (subtype 2b)

(b) And, both crosslinguistically and intralinguistically, the same (or similar) semantic differentiation, involving the same or similar case-

Table 6. *TAM-splits in ergative languages*

	When EF-CON is met:		When EF-CON fails:
	Always ERG-ABS		Some other frame
	Meaning, etc.	Frame	Meaning, etc.
Hindi	perfective	ABS-ABS	imperfective
Basque		ABS-ABS	progressive
Tongan		ABS-ABS	'engage in'
Avar	O definite/specific	ABS-ABS	O non-specific; occupation
Yukulta	performance	ABS-ABS	competence
Georgian	perfective/punctual	ABS-DAT	imperfective/durative
Yukulta	realis	ABS-DAT	irrealis
Basque	affirmative or O definite	ERG-PART	negative and O indefinite
Samoan	perfective/resultative	ABS-DAT or ABS-LOC	imperfective/non-resultative
Warrungu		ABS-INST	progressive
		ABS-DAT	progressive
	O attained	ABS-DAT	O unattained
Djaru	actual/realized; O attained	ERG-DAT	potential/unrealized; O unattained
Kalkatungu	completed; O specific	ABS-DAT	uncompleted; O non-specific, habitual
Eskimo	O definite/old	ABS-INST	O indefinite/new
Kurmanji	past	ABS-OBL	present
Adyghe	conclusive; O totally affected	ABS-OBL	inconclusive; O partially affected

marking alternation, can be shown both by involving two different verb-types and by involving two different tenses/aspects/moods or the like. For example (the number in parentheses indicates the verb-type):

Djaru	ERG-ABS	ERG-DAT
	nyang- 'see/look' (2)	muwu wung- 'search' (3)
	nyang- 'see/look' (2)	nyang- 'search' (3)
Warrungu	ERG-ABS	ERG-ABS
	nyaka- 'see/look/find' (2)	yangka- 'search' (3)
	ERG-ABS	ABS-DAT
	nyaka- 'see/look/find' (2)	yangka-kali- 'search' (3)
		nyaka-kali- 'search' (3)
Kalkatungu	ERG-ABS	ABS-DAT
	ŋaŋtamai 'find' (2)	ŋaŋtamai 'search' (3)

These examples show that verb-split and TAM-split are fundamentally no different from each other. These examples also show relative treatment of

EF-CON; *beat* (subtype 1b) is treated as non-effective as opposed to *kill* (subtype 1a); *see* (subtype 2a) is treated as effective as opposed to *look* (subtype 2b); *search* (type 3) is treated as non-effective as opposed to *see*, *look*, *find* (type 2). See *3.1.*, *3.2.*, *4.6.*, and *5.4.*

5.11. TAM-split and the like in accusative languages

Many accusative languages have phenomena that are parallel to TAM-splits or the like in ergative languages. Moravcsik (1978b) and Hopper and Thompson (1980) give many examples. We will give some examples below.

In Hungarian (Moravcsik, 1978b) we have:

(43) Átúszta a tavat.
across-swam-he/she-it the lake-ACC
'He/she swam the lake'.

(44) Átúszott a tavon.
across-swam-he/she the lake-on
'He swam across the lake'.

O NP (the lake) is fully/totally affected/involved in (43), but only partially in (44). Similarly:

(45) János rámázolta a festéket a falra.
John onto-smeared-he-it the paint-ACC the wall-onto
'John smeared paint on the wall'.

(46) János bemázolta a falat festékkel.
John in-smeared-he-it the wall-ACC paint-with
'John smeared the wall with the paint'.

The wall is fully/totally involved/affected in (46), but only partially in (45). Although the case-marking distinction is unclear or non-existent, English does have parallel phenomena; see the English translations for the Hungarian sentences, and Anderson (1971). Other examples from English include (Anderson, 1971, 1976, 1977):

(47) The boy shot the girl.

(48) The boy shot at the girl.[45]

In Finnish (Timberlake, 1977; Aronson, 1979; Itkonen, 1979), O NP is PART rather than ACC (a) when it expresses an indefinite quantity of something divisible; (b) in all 'irresultatives' (roughly, imperfectives); and (c) in all negative sentences. Similarly, O NP of negated verbs can be GEN rather than ACC in Lithuanian (Lisausksas, 1976) and Polish (Moravcsik, 1978b: 264), and PART (*de*) in French. Cf. Yukulta and Basque in *5.9.*

Similarly, in Russian, O NP of negated verbs can be GEN rather than ACC (Timberlake, 1975, 1977). Russian (Watanabe, 1981) also has an opposition of NOM-ACC versus NOM-INST (Note 17 (d)). Thus, NOM-ACC 'A man rotated a wheel' versus NOM-INST 'A man rotated (or, swung) a walking stick'. O NP in ACC is more fully/totally involved/affected than O NP in INST; once the man stops the action, the walking stick (INST) will cease to move, but the wheel (ACC) will still be rotating. Watanabe (1981) shows that the verb-type hierarchy (*3.2.*) is crucially relevant to aspect of Russian verbs. For example, (a) verbs at the left end each have corresponding perfective and imperfective forms. But, as we go down the hierarchy, verbs are more likely to lack perfective forms and have imperfective forms only. At the right end, the two verbs of possession (type 6) each have imperfective forms only. (b) At the left end, perfective forms are unmarked, while at the right end imperfective forms are unmarked. This solves the long-standing controversy as to whether perfective or imperfective is basic in Russian. (c) Aspectual derivation can be regarded as movement up or down on the verb-type hierarchy. Thus, from *bit'* 'hit; imperfective' (subtype 1b), we can obtain *u-bit'* 'kill; perfective' (subtype 1a). (d) Various meanings of verbal prefixes (including aspectual ones) can be stated neatly in terms of the verb-type hierarchy. Thus, *po-* means 'resultative' in subtype 1a; 'once' in subtype 1b; 'for a while' in types 2 'perception', 3 'pursuit', and 4 'knowledge'; 'a little (of intensity)' in types 4 'knowledge' and 5 'feeling'; and 'inceptive' again in types 4 and 5. The suffix does not occur in type 6 'possession'.

6. Summary and conclusions

We have attempted to show that for verb-split and TAM-split:

a. a given split is not a conflict of two (or more) different case-marking patterns, but is conditioned by one single, integrated scheme;

b. either type of split occurs in a systematic, non-random fashion, both crosslinguistically and intralinguistically.

We have proposed effectiveness condition, unmarked-case constraint, and universal case-hierarchy. We have suggested that when EF-CON is met, we have the transitive case frame (ERG-ABS, NOM-ACC), which consists of the two central cases, highest on the universal case-hierarchy. But, when EF-CON fails, one or both of A and O can be demoted on the hierarchy towards the peripheral OBL. And we will have non-transitive frame(s) in addition to, or in place of, the transitive frame. Specifically, verb-split is conditioned by the verb-type hierarchy, which is based on EF-CON. Among the OBLs, DAT is common, particularly when the O presents the unattained/unaffected goal of pursuit or action (e.g. ABS-DAT) and when possession, feeling or ability is expressed (i.e. DAT-ABS, DAT-NOM).

We have presented evidence to show that verb-split and TAM-split are fundamentally no different from each other:

a. Both types of split involve common semantics (EF-CON) and common case-marking mechanisms (unmarked case-constraint, universal case-hierarchy, and demotion on it);

b. Consequently, there is parallelism between verb-split and TAM-split in terms of semantics and case frames;

c. Some instances of TAM-split can be clearly related to the verb-type hierarchy, and consequently to verb-split. That is, the verb-type hierarchy, too, operates as a common principle;

d. There are instances that are intermediate between verb-split and TAM-split.

Previous works, which dealt with part of this topic, have been incorporated into one single and more general framework.

Most of our examples are taken from ergative languages, but parallel phenomena do exist in accusative languages.

Finally, this paper has also shown that a grammatical treatment of a semantic parameter is often in relative (rather than absolute) terms.

Received 16 January 1981
Revised version received
28 July 1981

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Notes

* I would like to thank sincerely the following people who read drafts of this paper, and/or gave valuable comments/suggestions, and/or information on specific languages: Bernard Comrie (Chukchee, Indo-Iranian and Caucasian languages); R. M. W. Dixon; Jeffrey Heath; Kudoo Hiroshi; Miyajima Tatsuo; Miyake Masataka (Eskimo); Miyaoka Osahito (Eskimo); Mizutani Osamu; Muraki Shinjiroo; Noda Keigou (Kurmanji, Pashto, and other Iranian languages); Okutsu Keiichiroo; Oota Eriko; Ootsubo Kazuo; Alan Rumsey; Shibatani Masayoshi; Shimomiya Tadao (Basque and Georgian); Takahashi Taroo; Claude Tchekhoff (Avar and Tongan); Sandra A. Thompson; Watanabe Toshihiro (Russian); Yoshimura Chikao; and two anonymous referees of *Linguistics*. In particular, special words of thanks are due to Bernard Comrie, who provided extremely helpful and detailed comments. I also benefited from the audiences of two meetings (see Note 2). It is needless to say that all remaining faults are my own. Fieldwork on Warrungu was funded by the Australian Institute of Aboriginal Studies, who also jointly funded fieldwork on Djaru with Griffith University.

1. In a Japanese name, the surname (e.g. Tsunoda) precedes the given name (here, Tasaku).
2. I wrote the first draft of this paper in April 1980, and read its abridged version to a meeting of the Linguistic Society of Japan in May (its summary has been published as Tsunoda, 1980), and to a meeting of the Kansai Linguistics Society in June. I revised the paper into the final form, incorporating some additional works — particularly, Hopper and Thompson's paper published in the June, 1980 issue of *Language*, which earlier versions of my paper had overlapped in many ways. However, my argumentations and conclusions are not necessarily identical with theirs, and differences from — as well as similarities to — theirs will be pointed out.
3. There is also the active-inactive pattern (A=Sact≠Sinact=O), in which A NPs and volitional/agentive S NPs are presented by ERG, and O NPs and other S NPs are shown by ABS. See Fillmore (1968: 54), Comrie (1973; 1976b; 1978: 366–367), Catford (1975: 19–22), and Dixon (1979: 80–85). See Note 8.
4. Another (and uncommon) type of split involves the distinction of main/independent versus subordinate clauses (Silverstein, 1976: 113; Dixon, 1979: 96–98), e.g. Tsimshian, N. America (Silverstein, 1976: 113); Jacaltec, C. America (Craig, 1976); and Ngarluma and Yintjipanti, W. Australia (Hale, 1970: 772). A further (and again uncommon) type of split is conditioned by register/style, i.e. formal versus informal, e.g. Samoan (Ochs, 1980) and Pukapukan, Polynesia (Chung, 1978: 64, 324).
5. In a presentation of a case frame in this paper (e.g. A-ERG O-ABS, A-DAT O-ABS; or ERG-ABS, DAT-ABS), unless otherwise indicated A NP precedes O NP irrespective of the actual word order in the example.
6. Blake (1979: 338–339) in effect suggested a link, in terms of semantics and case-marking, between verb-split and TAM-split in Australian languages.
7. Hopper and Thompson (1980) in effect pointed out the link between verb-split and TAM-split (without using these terms), largely concerning their semantics both in ergative and accusative languages. (For previous works on this topic, see Notes 35 and 44.) We attempt, in addition, to set up a verb-type hierarchy, and to propose details of the case-marking mechanisms involved (e.g. a universal case-hierarchy, demotion on this hierarchy etc.).
8. There are a few exceptions (or near-exceptions). For example, in Middle Persian (Noda, 1980), which has a TAM-split and has the ergative pattern in the past tense, only the 1st person singular pronoun (at the left end of the hierarchy) and a few kinship nouns (also close to the left end) have an ergative declension, while other pronouns and nouns have a neutral declension. Other examples include Kurmanji (Payne, 1979; cf. *5.2.* below); and Bats, N.C. Caucasus (Comrie, 1973; 1978; Catford, 1975: 19–22), in which the ERG marking of volitional/agentive S NP (cf. Note 3) is restricted to 1st and 2nd person pronouns only, at the left end.
9. Hopper and Thompson's transitivity parameters are as follows:

Transitivity		
	High	**Low**
A.	2 or more participants, A and O	1 participant
B.	action	non-action
C.	telic	atelic
D.	punctual	non-punctual
E.	volitional	non-volitional
F.	affirmative	negative
G.	realis	irrealis
H.	A high in potency	A low in potency
I.	O totally affected	O not affected
J.	O highly individuated	O non-individuated

Since our effective parameters concern two-place predications, consisting of A and O, they exclude Hopper and Thompson's parameter (A). But the crucial difference is the lack of 'volitionality (E)' and 'agency/potency (H)' in our effectiveness parameters. These two seem to be different, in nature, from other parameters. For example, non-volitional/non-agentive actors (e.g. a meteorite, a cyclone) can carry out actions just as effectively/conclusively as, or even more effectively/conclusively than, volitional/agentive actors (e.g. a man). Also, one can accidentally/non-volitionally kill someone just as effectively/conclusively as one would when acting intentionally/volitionally. As further examples, *see* is non-volitional/non-agentive, and *look* is volitional/agentive. But, '*to see* (to form a completed visual image) is more definitive [/conclusive/effective — T.T.] than *to look at*' (Catford, 1975: 34). (The same applies to pairs such as *hear* and *listen*; *seem* and *think* (in the agentive sense); *smell* (non-agentive) and *smell* (agentive) etc., cf. Dowty, 1979: 66–68.) And, for instance, in Adyghe, N.W. Caucasus, *see* takes ERG-ABS, but *look* takes ABS-OBL(ique) (cf. *5.4.*). Here, not volitionality/agency but effectiveness/conclusiveness is reflected in the ERG marking of the A NP. These examples show that volitionality and agency do not necessarily correlate with our notion of effectiveness. See also Note 12.
10. Instead of 'verb', we should really use a more general term such as 'predicator', including adjective and sometimes even noun. However, we will often use the term 'verb' to refer to predicators in general unless there is likelihood of confusion.
11. Passive generally occurs in accusative languages, while antipassive (ANTI) occurs in ergative languages. As Silverstein (1976) points out, there is some parallelism between them. Both are surface-intransitive, corresponding to transitive sentences; the verbs (involving transitive roots) often take intransitive markers, e.g. suffixes. More examples of the parallelism follow.

Passive (A-OBL O-NOM; the actual order is generally NOM-OBL) corresponds to a transitive 'A-NOM O-ACC'. Its A, in OBL, is often insignificant/irrelevant/etc., and is normally not expressed, e.g. in English, or cannot be expressed, e.g. in Turkish (Lyons, 1968: 378). Passivization can be used to convert O in ACC into NOM, for the purpose of coreferential deletion, etc. (e.g. from *I came* and *He hit me*, we can obtain *I came and (I) was hit by him*), cf. Comrie, 1978: 346–347.

ANTI (A-ABS O-OBL) corresponds to a transitive 'A-ERG O-ABS'. Thus, in Warrungu, Australia (my own data, including Tsunoda, 1974a; 1974b; 1975; 1976a; 1976b), corresponding to transitive:

(i) pama-ngku yuri waju-n
man-ERG kangaroo-ABS cook-NON FUTURE
'A man cooked/cooks a kangaroo'.

(ii) pama-ngku kamu yangka-n
man-ERG water-ABS search-NF
'A man looked/looks for water'.

we can have:

(iii) pama yuri-ngku waju-kali-n
man-ABS kangaroo-INST cook-*kali*-NF
'A man was/is cooking a kangaroo'.

(iv) pama kamu-wu yangka-kali-n
man-ABS water-DAT search-*kali*-NF
'A man was/is looking for water'.

(The ANTI version *vis-à-vis* ERG-ABS appears to emphasize the continuousness/progressiveness of the action. For the difference between INST O and DAT O, see *5.6.*) In general, ANTI has a number of functions (although they are difficult to distinguish from one another). For example, (a) some ANTIs can have aspectual (continuous, progressive, etc.) or modal (irrealis, unrealized, etc.) meaning, e.g. (iii) and (iv) above. (b) The O, in OBL, is often insignificant/irrelevant, and can be deleted. That is, antipassivization can be used for deleting such an O. Thus, compare (iv) with another Warrungu example:

(v) pama waju-kali-n
man-ABS cook-*kali*-NF
'A man was/is cooking (something), a man was/is doing cooking'.

Some ANTIs appear to generally prohibit any overt expression of O, e.g. Chinook (Silverstein, 1976: 142). (c) Some ANTIs can be used for converting A in ERG into ABS, for the purpose of coreferential deletion, etc. Thus, in Warrungu, from:

(vi) pama yan-i
man-ABS go-NF
'A man went/goes'.

and (iv), we can obtain (with a change in the subordinate verb):

(vii) pama yan-i kamu-wu yangka-kali-yal
man-ABS go-NF water-DAT search-*kali*-PURPOSIVE
'A man went to look for water'.

(Normally, (ii) cannot be joined with (vi).) (d) It is relevant to mention that often the same verbal suffix can have a reflexive function as well as an ANTI function. Thus, the Warrungu sentence:

(viii) pama pampu-kali-n
man-ABS shoot-*kali*-NF

can mean 'A man shot/shoots himself' as well as 'A man was/is shooting (something)'.

In summary, antipassivization is an intransitivizing process, shifting A from ERG to ABS.

Those ANTIs which have aspectual or modal meaning are fundamentally no different from 'typical' TAM-splits, and are included in our discussion of TAM-split, e.g. Warrungu (*5.6.*) and Yukulta (*5.9.*), Australia. Discussions of ANTI include Bani and Klokeid (1976); Blake (1971; 1976a; 1977: 16–26); Bogoras (1922: 697, 768, 819); Catford (1975); Comrie (1973; 1978; 1979a); Dixon (1972; 1977a; 1977b; 1979); Hale (1976); Haviland (1979: 128–130); Heath (1976); Hershberger (1964: 47–48); Jacobsen (1969); Kalmár (1979); Larsen and Norman (1979); Silverstein (1976); Tsunoda (1974c); and Wagner (1978: 49). Some more sources are listed in the discussions of TAM-split.

12. The facts given in this paper support Hopper and Thompson's (1980) claim that transitivity is a continuum rather than a clear-cut dichotomy. However, my notion of transitivity is different from theirs.

Note first that while the present paper deals mainly with case-marking (as a grammaticization of the effectiveness parameters), Hopper and Thompson are more concerned with the discourse function of the transitivity features.

Hopper and Thompson (see pp. 254–255, particularly) seem to suggest that any realization — whether morphosyntactic or semantic — of the high transitivity features (Note 9) manifests higher transitivity than otherwise. And, a sentence which has more 'high' features is regarded as more transitive than one which has fewer 'high' features. Thus, *Susan left* (action, telic, punctual, volitional) is more transitive than *Jerry likes beer* (two participants).

But, my notion of transitivity solely depends on morphosyntactic criteria: the transitive case-frame (ERG-ABS, NOM-ACC) and/or a few syntactic processes, e.g. passivization and antipassivization, which occur towards the left end of the verb-type hierarchy. In my concept of transitivity, realizations of the effectiveness parameters do not necessarily manifest transitivity — unless they are reflected in such a criterion. For example, *He loves me* (NOM-ACC) and *John loves Mary* (NOM-NOM), both passivizable, are transitive, but *He left* is not.

Hopper and Thompson regard both the ERG marking of A (p. 257) and the ACC marking of O (p. 262) as signals of high transitivity (and I agree with them). They also say that volitionality and agency of A show high transitivity, and non-volitionality and non-agency of A low transitivity. However, in the majority of NP-splits (cf. Silverstein, 1976; Blake, 1977; Dixon, 1979), e.g. Warrungu (my own data), inanimate nouns, which are always non-volitional/non-agentive, take ERG for A (as do some other nouns); and pronouns and sometimes kinship and proper nouns, which are all potentially volitional/agentive, take ACC for O. In my view, in such instances, both volitionality/agency and non-volitionality/non-agency manifest transitivity. See Note 9.

13. Watanabe (1981) modifies our verb-type hierarchy, and proposes the following types for Russian verbs: 1 'change'; 2 'direct effect on O'; 3 'perception'; 4 'pursuit'; 5 'knowledge, language activity'; 6 'emotion/feeling'; 7 'possession, inclusion'; 8 'ability'. This classification seems to be suitable for describing case-marking and aspect of Russian verbs. See also *5.11.*

14. Observations essentially identical with this constraint are made by Shibatani (1977: 807; 1978: 256) on Japanese; and by Dixon (1979: 75) on ergative and accusative languages in general. See Note 26 for an example of how the constraint works.

15. There are exceptions to this constraint. I will give some of them, without restricting myself to verb-split and TAM-split. (a) Two notable exceptions in ergative languages are ERG-DAT (found with only certain verbs in Djaru etc., cf. *4.3.*, *5.6.*; and with human or definite O NP in Hindi etc., cf. *5.3.*) and ERG-PART(itive) (involving indefinite O NP of negated verbs in Basque, cf. *5.9.*). (b) A language with an NP-split can have the frame 'noun(A)-ERG pronoun(O)-ACC', with no UNM NP. (See 2, particularly the last paragraph.) (c) In the active-inactive pattern (Note 3), a sentence with an ERG-marked S NP will lack an UNM NP. (d) It is sometimes difficult to decide which case is unmarked, the phonological and syntactic criteria conflicting with each other. Choctaw (Heath, 1977) appears to be such a language. (e) Russian has 'A-INST O-ACC' when A refers to natural power, uncontrollable cause, or the like (Shimomiya, 1976: 84). (f) Japanese has 'A-*de* (INST/LOC) O-*o* (ACC)' when A refers to an organization, institution etc., e.g. the police.

I have listed several exceptions, but the constraint is still valid. The exceptions generally occur only under marked circumstances, e.g. together with a defined and limited set of NPs (e.g. Hindi, Russian, Japanese) or verbs (e.g. Djaru); and in marked sentences (e.g. Basque). And there do not seem to be many languages in which this constraint is in no way applicable.

16. There are languages in which MRK, UNM, and (some of) OBLs are, in form, not distinguished. But, there is crosslinguistic evidence to suspect that this three-way classification of cases is (latently) valid in these languages as well.

For example, in many ergative languages, e.g. Warrungu, ERG (i.e. MRK) and INST (an OBL) are identical in form. But many of these languages provide evidence for distinguishing between them. Evidence 1: we can naturally have a transitive sentence 'A-ERG O-ABS inst-INST Verb', e.g. (i) in Note 17. Now, for example, in Dyirbal reflexive constructions (Dixon, 1972: 94), Warrungu reflexives and reciprocals

(Tsunoda, 1974a: 472–473, 478–479, 509–511), and in Kalkatungu reflexives (Blake, 1977: 45), ERG is deleted, but INST remains, i.e. 'A/O-ABS inst-INST Verb-REFL (or, Verb-REC)'. (That is, (viii) in Note 11 can contain a noun such as *rifle*-INST.) Evidence 2: in languages which have a cross-reference system, ERG (referring to generally animate or human but occasionally inanimate agents) can be cross-referenced, but INST (generally referring to inanimate instruments, including body parts) cannot. See Blake (1977: 45), Heath (1978: 42), and Tsunoda (1978: 148; forthcoming).

As another example, in English nouns lack the NOM-versus-ACC distinction (among others) and pronouns lack the ACC-versus-DAT distinction. And yet, English does have phenomena that are parallel to those that occur in languages with such a case distinction. These phenomena include passivization (Notes 11 and 26), verb-split (Table 4), and TAM-split (*5.11.*).

It would seem then that this three-way classification is universally valid although some languages have 'syncretisms' (Blake, 1977: 60) of cases.

17. Some languages apparently have ABS-ERG in antipassives and/or in TAM-split. But, there is crosslinguistic evidence to suspect that it is in fact ABS-INST (a type of ABS-OBL) — Comrie and Tchekhoff, (private communication). (a) First recall that there is often evidence for distinguishing between ERG and INST (Note 16). (b) In Warrungu, we can have:

    (i) pama-ngku kupu-ngku kamu pija-n.
    man-ERG leaf-INST water-ABS drink-NF
    'A man drank/drinks water with a leaf'.

    When confronted with its antipassivized version:

    (ii) pama kupu-ngku kamu-ngku pija-kali-n.
    man-ABS leaf-INST water-? drink-*kali*-NF

    the informant said that the sentence meant the man drank BOTH the leaf and water. This shows that *kamu-ngku* is in the same case as *kupu-ngku*, i.e. INST. (c) In some languages, LOC and INST are identical, as distinct from ERG. If the case frame in question is really ABS-INST, in such languages we would expect to have ABS-LOC/INST rather than ABS-ERG (Tchekhoff, private communication). In fact, this is exactly what we encounter in Yidiny (Dixon, 1977b), see Note 26. (d) A parallel case frame NOM-INST *vis-à-vis* NOM-ACC is common in Slavic languages (Comrie, private communication), see *5.11.* (e) It is relevant to mention that it is easy to postulate a possible line of development of ABS-INST (but not ABS-ERG). To a sentence such as (v) in Note 11, one might add a noun that describes the manner/way/means by which cooking is done, e.g. 'kangaroo-INST', producing a sentence such as 'A man was/is doing cooking by means of a kangaroo'. When the addition of an INST noun is established and conventionalized, we will have an ABS-INST antipassive, e.g. (iii) in Note 11. (This line of development was suggested in Tsunoda, 1974c.)

18. In ABS-ABS and NOM-NOM, disambiguation between A and O can generally be achieved by verb agreement, word order, semantics of NPs etc.

19. Unlike in a usual kind of case-hierarchy, ACC is ranked higher than NOM in Figure I. But, unlike the former, Figure I concerns EF-CON (among others), and as we will see shortly, this ranking is semantically natural.

20. This classification groups DAT with other OBLs, although the usual 'abstract/grammatical-versus-concrete/local' distinction (Lyons, 1968: 295) groups DAT with UNM and MRK, separately from other OBLs.

21. I do not know how this classification of cases will apply to the cases involved in multiple-place predications such as causatives. But, it does apply to those involved in verb-split and TAM-split. I know no exception to it.

22. If A NP takes MRK, we have the ergative pattern (A≠S=O) and the ERG-ABS frame. If O NP takes MRK, we have the accusative pattern (A=S≠O) and the NOM-ACC frame.

23. It is then possible to say that, concerning indication of involvement in the activity, MRK (ERG, ACC) is marked *vis-à-vis* UNM (ABS, NOM) and OBL. Similarly, Moravcsik (1978b: 281) says that ACC-marked O is marked (e.g. affected, totally involved) *vis-à-vis* non-ACC-marked O.

24. Similarly, Hopper and Thompson (1980: 257, 262) regard the ERG marking of A and the ACC marking of O as signals of high transitivity.

25. Observations essentially identical with (b)2 and (c)1 (together with (a)1) are made by Catford (1975), Anderson (1976; 1977), and Moravcsik (1978b). Thus, Anderson says 'It appears that it is possible in general to indicate that an object is incompletely, inconclusively, etc. affected, or that an action is incompletely, inconclusively, etc. carried out by putting the object into an oblique case' (Anderson, 1976: 23). Kuno (1973) proposes, for Japanese, a rule essentially identical with (a)2 (pp. 335–337) and one that is included in (c)2 (pp. 338–339). While the first three linguists are concerned with TAM-split, Kuno deals with verb-split. The present paper incorporates both views and all the proposed rules into a single, and more general framework.

26. The framework presented in *3.3.3.* appears to have a more general relevance than was implied by the preceding discussion. For example, (a) it is relevant outside verb-split and TAM-split. (b) It allows us to state in a parallel fashion some phenomena that occur in ergative languages and those in accusative languages. And, (c) it has a link to another syntactic process: deletion. Passivization and antipassivization are examples that demonstrate these three points. (In fact, some ANTIs can have aspectual or modal meaning, and they are regarded as TAM-splits and included in our discussions of them. Cf. Note 11.)

    (1) Passive (O-NOM A-OBL) is derived from the transitive 'A-NOM O-ACC' by demoting A from NOM (UNM) to OBL, and O from ACC (MRK) to NOM (UNM). The demoted A, now in OBL, is often insignificant or irrelevant (i.e. semantically peripheral), and can be deleted.

    (2) Antipassive (A-ABS O-OBL) is derived from the transitive 'A-ERG O-ABS' by demoting O from ABS (UNM) to OBL, and A from ERG (MRK) to ABS (UNM). The demoted O, now in OBL, is often insignificant or irrelevant (i.e. semantically peripheral), and can be deleted.

    Yidiny, Australia, provides a striking example of the application of the unmarked-case constraint, demotion on the universal case-hierarchy (realized as antipassivization), and deletion of demoted NPs (in OBL). This language has an NP-split (cf. 2.) and antipassives (*-:dji-n* constructions), with ABS-LOC(/INST) or ABS-DAT (cf. Note 17, (c)). And, 'Sentences in Yidiny should, if possible, include an absolutive or nominative NP (these constituents are only very rarely deleted). In contrast, dative/locative NPs — including those acting as surface realisation of O in a *-:dji-n* construction — are particularly liable to deletion. Thus, if a speaker wishes to indicate the A for some action, but prefers not to commit himself concerning the O, he can simply use a *-:dji-n* construction [with the OBL O NP deleted — T.T.]' (Dixon, 1977b: 279).

    One of the functions of passivization and antipassivization is, as we have just seen, to make one of the NPs peripheral. This may possibly be the reason why these two processes are generally incompatible with verbs towards the right end of the verb-type hierarchy (cf. *3.2.*), where at least one of the two participants is, in a sense, already peripheral, not being actually/closely/fully involved in any activity.

    This paper is not concerned with rule order. But it seems generally that the

unmarked-case constraint is valid both before and after the application of a rule such as indefinite NP deletion (cf. the Yidiny examples above, and Note 11, (v)) and coreferential NP deletion (cf. Note 11, (vii)).

27. I cannot offer any convincing explanation on this difference, but at least I can tentatively suggest that it is related to the following two facts: (i) unlike TAM-split, verb-split lacks the function of intransitivizing a verb (by changing A from ERG to ABS); and A does not need to occur in ABS, but can occur in OBL. (ii) In English, for instance, towards the right end of the verb-type hierarchy where EF-CON fails, we can have both 'A-oriented' and 'O-oriented' expressions, e.g. in type 5 'feeling': *I* (A-NOM) *is afraid* and *He* (O-NOM) *is fearsome*. (When the second participant is added, in OBL we have NOM-OBL and OBL-NOM, respectively.) However, towards the left end, where TAM-split in general occurs — cf. (i) in *3.4.* (and see *5.11.* for English examples), we can have 'A-oriented' expressions (e.g. *He drinks*), but not 'O-oriented' expressions (**drinks beer*). (In fact, in some TAM-splits, ABS-OBL or ABS-ABS is clearly 'A-oriented', with stress on the A's action, etc. and no stress on the object to which the action is directed. See *5.5.*, *5.7.*, and *5.8*) In the above English example, we need to use passivization to have an 'O-oriented' sentence. (The usual explanation on the unacceptability of a sentence such as **drinks beer* involves the syntactic constraint that an English sentence has to include a surface subject. But I think a semantic consideration, too, is relevant; recall that towards the right end, 'O-oriented' expressions are possible without using passivization.)
28. Roughly, *'i* appears to be LOC and *ki* DAT, although the difference seems to be difficult to pinpoint (cf. Chung, 1978: 26–30).
29. Tongan has an NP-split (cf. 2), nouns having an ergative declension and pronouns having an accusative one (Tchekhoff, 1974, 1979a: 199). In a sentence like (8), a noun used as A NP will take ABS, resulting in ABS-LOC.
30. ERG-DAT with no absolutive NP is very uncommon, not only in Australia, but also elsewhere, cf. *3.3.1.*, *5.3.*, Note 15 (a) and Note 37.
31. *jarra nyinang-* is, to be more accurate, a verb complex, consisting of the preverb *jarra* 'waiting' and the intransitive verb *nyinang-* 'stay'. Similarly for other verb complexes, e.g. *jarra nyang-*, involving the transitive verb *nyang-* 'see', cf. (12).
32. Djaru and Warrungu, like many other Australian languages, do not formally distinguish between noun and adjective.
33. In the Eskimo expression of possession, with ERG-ABS, the noun that refers to the possession itself is attached to the beginning of the verb *have*, but an adjective or the like that qualifies the possession noun occurs independently in ABS, still retaining the case frame ERG-ABS. Eskimo has another expression of possession, in which the possessor NP is ABS and the possession noun is similarly attached to the verb *have*.
34. In many grammars or discussions of ergative languages (e.g. the works listed in *5.2.* and *5.3.*), *see* is used in the representative examples of ERG-ABS. Of course, this implies that in these languages, *kill* (among others), too will take ERG-ABS.
35. There are many works that deal with part of our verb-split. They include (a) Blake (1976b: 422) on ABS-DAT *vis-à-vis* ERG-ABS in Australian languages (cf. *4.3.*); (b) Catford (1975: 11–12), Sridhar (1979), Kachru and Pandharipande (1978: 114–115), Shibatani (1978: 358–361), Wagner (1978), Cole *et al.* (1980) and Klaiman (1980) on DAT-ABS and/or DAT-NOM; (c) Lyons (1968: 391–397), Benveniste (1971) and Anderson (1977) on type 6 'possession'; and (d) Kuno (1973) on NOM-NOM and DAT-NOM in Japanese (Note 25). While the present paper is concerned with verb-split in two-place predications, Dixon (1979: 80–85) deals with the verb-split in S NP (in one-place predications), concerning the opposition of volitional/agentive versus non-volitional/non-agentive actions (cf. Note 3).

36. In fact, in Kurmanji, what I call ERG and OBL are formally identical, and jointly called 'oblique' (Bynon) or 'general oblique' (Payne). Although I have no internal evidence, I have tentatively distinguished between ERG and OBL. The reasons for this are in Notes 16 and 17. The same applies to Pashto (see below), and Adyghe and Kabardian (*5.4.*) among others.
37. ERG-DAT, with no absolutive NP, is very uncommon (*3.3.1.*; Note 15, (a)). The DAT marking of O in these northern Indian languages has to do with its semantics (humanness or definiteness). (See Moravcsik (1978b: 273–281), Comrie (1979b), and Hopper and Thompson (1980: 256–259).) But, the DAT marking of O in Djaru, etc. indicates inconclusiveness/uncompletedness/etc. of the action or unaffectedness/unattainedness of O (cf. *3.2.*, *4.3.*, *5.6.*, and *5.10.*).
38. Georgian has another verbal category: 'perfect', which describes (a) the result of an action; or (b) a past event which the speaker did not witness/experience and which he heard from someone else or guessed ('They say ...', 'I hear ...', 'It seems ...'). We have DAT-ABS in perfect. Then, Georgian has three case-marking patterns:

aorist:	present:	perfect:
A ≠ S = O	A = S ≠ O	A ≠ S = O
ERG ABS ABS	ABS ABS DAT	DAT ABS ABS

(In the perfect, at least, the distribution of cases is in the ergative pattern.) I do not know how to interpret the Georgian perfect in our framework, but Kudoo (private communication) suggests that DAT-ABS in perfect, too, is a grammatical realization of failure of EF-CON; the speaker is not certain of the occurrence/completion of the event (and, consequently, A is demoted from ERG to ABS).
39. These are examples of 'relative treatment' of EF-CON (see *3.1.*, *3.2.*, and also *5.1* and *5.10.*). They also provide evidence for subdivision of verb-types: *kill* (subtype 1a) and *beat* (subtype 1b); *see* (subtype 2a) and *look* (subtype 2b); and so on (see *3.2.* and *4.6.*).
40. In Tibetan, the same verb can mean both 'teach' and 'learn', involving an analogous case-frame alternation: 'teacher-ERG student-DAT subject-ABS Verb' and 'student-ABS subject-ABS Verb' (Nishida, 1979: 19). But see Note 43.
41. Anderson (1976: 21) says that the *-m* case has the functions of ERG, POSS, adverbial case etc., but he labels ERG separately from OBL, e.g. (28), (29). I support his labelling. See Notes 16 and 17.
42. In the majority of TAM-splits, ERG-ABS appears to be basic and non-ERG-ABS to be derived from it. That is, the verb involved is basically transitive, but is used intransitively under circumstances such as negation or inconclusiveness of the action, and/or when it involves morphological change(s) (cf. *3.4.* (f)). Here, it is natural to postulate demotion on the universal case-hierarchy from ERG-ABS to non-ERG-ABS (*3.3.3.*). The Samoan split (*5.5.*) is uncommon in that ERG-ABS is derived from the basic ABS-DAT or ABS-LOC. It is possible to regard this as promotion, A from ABS to ERG and O from DAT or LOC to ABS.
43. Yukawa's (private communication) fieldwork suggests that in Tibetan (cf. *4.1.*, Note 40), when presenting unusual/noncustomary (i.e. marked) activities, S and A are in ERG (and we have ERG-ABS). But, when describing customary/usual (i.e. unmarked) activities, S and A are in ABS (and we have ABS-ABS). This pattern, which we might call 'customary-noncustomary', is reminiscent of the active-inactive pattern (cf. Note 3).
44. A number of linguists have observed a link between ergativity and effectiveness/conclusiveness/etc. of the action. They include Anderson (1976; 1977), Aronson (1979), Blake (1977: 16–20; 1979: 338–339), Catford (1975) and Moravcsik (1978b). The facts given in this paper support this view.
45. These English examples support our view that the three-way classification of cases (MRK, UNM, OBL) is (latently) applicable to a language such as English, which lacks (part of) this case distinction (cf. Note 16).

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More on Spanish *selo*

JOHN HEWSON

Abstract

We are still a long way from a final elucidation of the Spanish clitic system, and the present paper suggests only some tentative steps forward in the continuing debate. It accepts Garcia's (1975) position that the clitics are to be explained in terms of an underlying content system. It also accepts Brakel's (1979) criticism that Garcia's explanation of certain constraints as due to inferential overburdening is unsatisfactory. It brings evidence to indicate, however, that Brakel's other claims (i.e. that selo *is an historically justified variant of* *lelo, *and the Spanish clitics are just like Portuguese clitics, etc.) are not tenable. Finally it suggests that the possible combinations of clitic pronouns may be explained more simply in terms of dependencies, and that the constraints on clitic combinations arise when the system of depencies fails to operate.*

A great deal has been written on the clitic pronouns of Romance languages during the past few years. Perlmutter (1971) attempts to deal with the problems that they present with what he called Surface Structure Constraints, a strategy that has since been criticised by several writers, along with Perlmutter's claim that such accommodations are explanatory (Suñer 1973: 149–150; Garcia 1975: 489ff; Brakel 1979: 660–661). It now seems to be generally agreed that Surface Structure Constraints are an *ad hoc* solution that is simply taxonomic and explains nothing.

As far as concerns Spanish, a more interesting solution is that of Garcia (1975) where she attempts to deal with the different semantic components of the various pronouns, and the constraints against co-occurrence, by means of the semantic features of the pronouns themselves. Garcia certainly reduces the extraordinary complexity of Spanish clitics to a system that could be learned by a child, and there is a natural requirement that underlying systems must ultimately be simple enough to be learned by

Linguistics 19 (1981), 439–447. 0024–3949/81/0019–0439 $2.00