

nd denote perfectivity and antipassive ones denote
an imperfectivity:

- A
e) (28) a. Na va'ai le tama i le i'a
rn TNS look-at the boy OBL the fish

'The boy was looking at the fish' [antipassive
on version]
- l) b. Na va'ai-a e le tama le i'a
ow TNS look-at ERG the boy the fish
es
on 'The boy spotted the fish' [ergative version,
(66)]

4. Case-marking

4.1 General remarks

) Let us look at what we have covered so far. We
) have progressed from **inherence** to **establishment**
) regarding the relation between participee and
participants (and indirectly regarding the
mutual relation of the participants). This is
n the problem which has to be solved when we
d transform thought into language. The following
, is a summary of the techniques dealt with thus
, far as opposed to the one we shall consider in
y this section.

) **VALENCY:** It becomes observable in the case of
s non-occupancy or incomplete occupancy of
participant-places and is thus inherent in
the participee, i.e. the verb.

) **ORIENTATION:** Once the participants are named one
has here to make clear the connection

between them and the participee by selecting a starting-point and showing a direction, as illustrated by the passive voice.

TRANSITIVIZATION: If there are two participants, either there is a transit from the first to the second - in which case each has a full relation to the participee - or else there isn't - in which case one has two alternatives, viz.

- (a) One participant is incorporated into the participee and its relation to the latter is thus not equivalent to the relation the other participant has.
- (b) One participant gets "demoted", i.e. taken away from the participee, and again its relation to the latter is not quite full.

CASE MARKING: The participants (arguments, NPs) get each its own marking - as opposed to transitivization, by which they were just named, and to valency, which even left them nameless.

The question is now: What is marked by case marking and what for? We must here insist upon our methodical principle, i.e. to distinguish different aspects and levels:

(A) The conceptual-cognitive relation between participee and participants.

Regarding the situation depicted by the participee, the participants have to be prototypically so specified: The first participant carries out, causes, provokes,

controls...; the second participant is affected or controlled - by... Foley/van Valin (1984) associate to them the concepts ACTOR and UNDERGOER. The relation of these to semantical relations is characterized as follows: if the sentence has got an AG, then it is an ACTOR, but not every ACTOR is an AG; and similarly for the relation PAT - UNDERGOER. We must mention here Wierzbicka's attempt to consider "cases" as grammatical concepts that may be defined universally, e.g. she defines the Accusative Case as "something happened to Y because X did something" (Wierzbicka 1981:55).

(B) Semantical relations like AG, PAT, BEN, INSTR, LOC, etc.

Fillmore proposed them as "case roles". It must be observed that semantical relations are "derived" as opposed to the "primitives" mentioned in (A). There is no one-to-one correspondence between the concepts as such and the semantic roles, as the following examples show:

- (29)
- a. George (AG) killed the dragon.
 - b. The gun (INSTR) smashed the window-pane.
 - c. Charles (GOAL, RECIP) received a telegram.
 - d. The dog (EXPER) scented the deer.
 - e. The satellite (SOURCE) sends messages.

Although in each of these sentences the first NP is associated with a different semantic role, all five are ACTORS in Foley's sense - a fact that is expressed in English by giving them the same syntactic treatment. An UNDERGOER can also be assigned different semantic roles:

- (30) a. Frank sent Charles (GOAL, RECIPIENT) a telegram.
 b. The burglar robbed Charles (SOURCE) of all his belongings.

(C) Syntactic relations like SUBJ, DO, IO.

It must also be pointed out here that the relation to the above-mentioned levels (A) and (B) is rather heterogeneous: as not every ACTOR is an AG, thus not every AG is a SUBJ. This is most clearly and eminently illustrated by passivization, which assigns SUBJ status to the PAT. This and other syntactic processes, like relativization (relative sentence formation), show that syntactic relations may aspire to a certain relative autonomy.

(D) Morphologico-syntactic case marking (form and meaning of case morphemes).

Case marking encompasses affixes, adpositional phrases, adverbial phrases, word order, etc. There is again no one-to-one correspondence to the above levels (A)-(C), albeit focal correlations may be observed (SUBJ/NOM, DO/ACC, etc.). There is no univocal correlation between cases and case markers even

when a syncretism has taken place, i.e. when two cases get identical markers in one sector of the paradigm and different markers in another sector. Thus in Russian, where NOM and ACC coincide under certain conditions (cf. Wierzbicka 1981:52).¹

- (31) Mat' b'et doč'
 mother-NOM beats daughter-ACC
 (=ACC) (=NOM)

'A/The mother is beating a/the daughter' (12)

According to the intended reading *mat'* is SUBJ and *doč'* DO; but a different possible reading would have *mat'* as DO and *doč'* as SUBJ. If we add modifying adjectives that agree in case with the nouns, then we can see that identical case forms but different cases are involved.

- (32) Bol'shaja mat' b'et malen'kuju doč'
 big-FEM-NOM mother beats small-FEM-ACC daughter

'A/The big mother beats a/the small daughter' (13)

Syncretism may be found not only in the mapping from case forms to cases but also in that from case forms to syntactic relations. Thus, if we take the SUBJ of a transitive sentence (S_{tr}), its DO and the SUBJ of an intransitive sentence (S_{itr}), then we shall find that only two of these three syntactic relations are formally

¹ The following two examples were taken from Wierzbicka (1981). The numbers following them refer to that paper.

distinguished (underlining means identical case marking).

(33) NOM/ACC system (e.g. German, Turkish, Quechua)

Str V DO

Sitr V

(34) ERG/ABS system (e.g. Basque, Dyirbal)

Str V DO

Sitr

(35) "Active" system (e.g. Guarani, Dakota, Tolai)

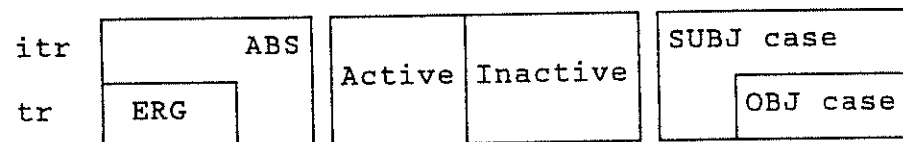
Str V_{dyn} DO

Sitr V_{dyn}

Sitr

Taking case roles into account we may represent the syncretism of the above systems as follows:

(36) ERG/ABS system "Active" system NOM/ACC system



The ergative system is complementary to the NOM-ACC system. This is shown e.g. in the treatment of the opposition active/passive in both systems. The passive in NOM-ACC systems is similar to an ergative construction whereas the antipassive of ERG-ABS systems is very much like the active in NOM-ACC systems:

	Passive of NOM-ACC systems	Antipassive of ERG-ABS systems
AG	oblique case (marked)	ABS (unmarked)
PAT	NOM (unmarked)	Oblique case (marked)
	Marking relations like in ERG constructions of ERG-ABS systems	Marking relations like in ACC constructions of NOM-ACC systems

The above syncretisms have shown that there certainly are associations among (A) through (D) but no one-to-one correspondences. In general one can say that case forms mark

- (a) conceptually the relation of the participants to the participle;
- (b) semantically the relation of the predicate to its arguments in form of semantical case roles;
- (c) syntactically the syntactic relations;
- (d) morphologico-syntactically the meaning of the case morphemes.

Now the old question whether case marking has got a purely discriminating function, i.e. is exhausted by the distinction of A and O in cases of possible confusion (viz., according to Comrie 1981a, in abeyance to the parameters of animacy - A being typically animated - and definiteness - O being typically indefinite), or whether it has only got an encoding function, i.e. a proper meaning (thus Hopper/Thompson 1980; Wierzbicka 1981, 1983), cannot be definitely decided in favour of either side.

4.2 Form and meaning of case functions

4.21 Meaning

Jakobson (1936/1971) attempts to describe the so-called 'global meaning' (*Gesamtbedeutung*) of the Russian case system. As a consequence of strong grammaticalization processes, the Russian case system is peculiarly cohesive - as opposed to languages which express functions like INSTR, LOC, etc. by means of prepositions. This cohesion suggests that we must consider the levels (A)-(C) over and above level (D), i.e. the case morphemes as such.

Following Jakobson we would like to insist upon three principles which are pervasively active in morphology and therefore must also be active in case marking:

I. The distinction marked vs. unmarked (*merkmalhaft* vs. *merkmallos*), i.e. a category C_1 indicates the presence of a property A and a category C_2 does not

indicate the presence of A, in other words does not say anything about A. If and when C_2 indicates the contrary of A (non-A), then this is a special meaning of C_2 . Thus in the case of gender the masculine is the unmarked term against a marked feminine.

II. The relation between global and contextual meaning (*Gesamtbedeutung* vs. *Kontextbedeutung* or *Kontextvariante*). We have already mentioned, under (i), the meaning 'non-A' as a contextual meaning of an unmarked category. The global meaning of a given category is then the common denominator of all contextual meanings of that category. Russian case morphology (which in this respect is not different from that of most European languages) affords an example: ACC is the marked category with a global meaning 'action directed towards an object' as opposed to NOM which is the unmarked category. Both cases belong to a correlation of reference in that NOM does not mean 'nothing' - but is associated to ACC through its non-referral to a property of relatedness (of the action) to an object represented by the NP.

Some contextual variants of ACC are:

- (a) 'the strong ACC' within which one can distinguish between effected vs. affected OBJ (German *ein Bild malen* 'paint a picture' vs. *ein Buch lesen* 'read a book');
- (b) 'the weak ACC' which applies to sectors of time and space as fully occupied by an action (*einen Tag leben* 'live one day') and to reified actions (*einen Kampf kämpfen* lit. 'fight a fight').

The following properties characterize the 'weak' ACC as opposed to the 'strong' one:

- the 'weak' ACC can combine with verbs which are normally intransitive (cf. *einen Traum träumen* lit. 'dream a dream');
- 'weak ACC' constructions cannot be passivized (* *ein Tag wird gelebt* 'a day is lived');
- the 'weak' ACC can co-occur with the 'strong' one (*den ganzen Weg quälte mich der Durst* 'thirst tormented me all the way').

III. The principle of opposition:

- (a) The reference correlation shows that ACC and NOM are opposed to one another (in that respect DAT and INSTR behave similarly).
- (b) With regard to the position correlation ACC is the unmarked case as opposed to DAT. The basis for comparison is here the degree in which the object is affected by the action. Either a marginal case (marked) indicates that a NP stands in a peripheral relation to the content of the sentence or a so-called full case (unmarked) is used to avoid saying anything about the peripheral position of the NP. We find that DAT, INSTR, LOC are in this respect opposed to NOM, ACC, GEN.
- (c) With regard to the extension correlation ACC is again the unmarked case as opposed to the marked GEN. The

marked case indicates that the object denoted by the NP participates less than fully in the event expressed by the sentence, either adnominally (*das Wort des Menschen* 'man's word') or adverbally (*der Ehre teilhaftig werden* 'share in the honours'). This can also occur with LOC.

Thus, every case takes part in several oppositions, i.e. in several correlations. Hence the meaning function of a given case consists of several components, in other words it is multi-factorial. A matrix represents cases as sets of 'm' vs. 'u' relative to the correlations that constitute the parameters:⁴

(37)

	NOM	ACC	GEN	DAT	INSTR	LOC
Reference	u	m		m	u	
Extension	u	u	m	u	u	m
Position	u	u	u	m	m	m

Now, if we look for a match between these correlations and the dimension of participation, what common denominator of meaning would there be for the case morphemes? The reference correlation would match the event or action perspective, i.e. the view from the participee; the extension correlation would match the view from the participants; and the position correlation would match the interaction of participants and participee.

⁴ Abbreviations: u = unmarked (merkmallos); m = marked (merkmalhaltig); blank = the opposition is neutralized.

Again, as in the above-mentioned techniques (orientation, etc.), the relation between participee and participants is what case marking is all about. And what is specific or characteristic is precisely marking. Jakobson's paper shows that case morphemes do not only have a discriminating function but - because of their positive meaning - also an encoding one.

4.22 Case forms

Case forms constitute a paradigm. Paradigms are constructs designed to explain linguistic facts and based upon two principles (cf. Seiler 1966, 1967):

A. The principle of constant ratio.

Consider the Latin case:

(38) dominus : domini = dux : ducis = rectus : recti, etc.

The GEN is expressed in one case by *-i* and in another case by *-is* (by allomorphs, to formulate it in the terms of classical morphology), but the opposition to the NOM indicated above is exactly the same, i.e. there is a constant ratio that associate all right members in their opposition to all left members of the 'minimal pairs'. This is the categorial aspect of the paradigm.

B. The principle of similarity or of the correlation of properties.

The point here is to decide how many properties the two cases we want to compare really have in common. This is why another apt label could be 'the principle of cross-classification'. The schema (37) shows that similarity is a gradual phenomenon and so does justice to traditional case ordering, e.g. NOM and ACC differ only in one respect (the reference correlation) and again ACC and DAT only in one respect. Given that NOM and DAT differ in two respects (correlations), they are further away from each other.

Similarity is reflected in many linguistic facts, e.g. in commutability. NOM and ACC are more similar to each other than are NOM and LOC. NOM and INSTR are in certain contexts commutable (cf. Jakobson 1936/1971:49):

- (39) a. On byl titular-nyj sovetnik
he was titular-NOM councillor-NOM

'He was titular councillor'
- b. On byl titular-nym potom nadvornym
he was titular-INSTR then court-INSTR

sovetnikom
councillor-INSTR

'He was (first) titular councillor, then court councillor'

NOM indicates permanent properties, INSTR indicates accidental, acquired ones. The

commutability test is evidence for the closeness between certain cases as against others. Thus there are certain case forms, the so-called grammatical or syntactic cases, that belong more intimately to the paradigm than do other more marginal cases, the so-called concrete or adverbial cases. We regard NOM, ACC and INSTR as syntactic cases and LOC, BEN and partly INSTR as adverbial ones; DAT lying somewhere in between. Concrete cases are almost univocally correlated with semantic relations; grammatical cases rarely so. Rather, the meaning of the latter is associated with syntactic functions. All cases may nonetheless assume an adverbial meaning under certain circumstances. Consider the 'ACC of direction' (Latin *Romam ire* 'go to Rome') or the 'locative GEN' (*Romae ire* 'go about in Rome'). The adverbial meaning of concrete cases is primary and the syntactic meaning secondary; in grammatical cases it is the other way round (cf. also Kuryłowicz 1949/60).

Concrete cases can become grammatical ones through diachronic grammaticalization processes (cf. Lehmann 1982). To adopt this perspective we must assume that not only NPs accompanied by case affixes which are members of a clearcut paradigm are case-marked, but also NPs accompanied by adpositions.

- (40) a. Caesar legatos ad Hannibalem misit
 Cesar envoys to Hannibal sent
 'Cesar sent envoys to Hannibal'
- b. Caesar legatos Hannibali misit
 'Cesar sent Hannibal envoys'

The expression *ad Hannibalem* in (40a) is adverbial but *Hannibali* in (40b) is an argument of the verb. Now compare Italian:

- (41) Cesare mise legati a Annibale
 Cesar sent envoys (towards) Hannibal

The substantive *Annibale* is not inflected. Whether a *Annibale* in (41) is a complement or an adverbial cannot be decided. In other words, the phrase which in Latin (40a) is clearly identifiable as adverbial may be interpreted, in Italian (41), as an argument: the concrete Directive of Latin has become the grammatical Dative of Italian.

As we observe in the transition of concrete cases to grammatical ones, two very general forces are active in language, "la loi de l'usure" and "le besoin de l'expressivité" (Frei 1929), i.e. **indicativity** and **predicativity**. Indicativity means the inherence of an implicitly given relation and predicativity means the establishment, or 'explication', of a relation - something is said about that relation. Grammaticalization may be defined as the tendency to indicativity, i.e. to a position in which the participants are taken as given and may thus be manipulated.

Predicativity may be defined as the quantity of information that a speaker offers about certain relations. This quantity can be measured by the number of possible contrasts. There are, for instance, 15 to 20 prepositions in Latin, a number significantly greater than the number of

cases. Concrete cases, often realized through adpositions, are therefore more predicative than grammatical ones. Increasing grammaticality is thus correlated with decreasing concrete meaning (inverse ratio). Grammatical cases are meaningful only in that they indicate syntactic functions. The subject relation is the one most devoid of concrete meaning - the endpoint of increasing grammaticality.

That with increasing indicativity any given relation between a participant and its participle appears more and more as given and inherent is manifested in the very different goals such a relation has to attain in contrast to a more predicative one: we manipulate them - topicalize them (passivization), relativize them, etc. - these are **syntactic** operations. Grammatical cases, which are associated with a higher degree of indicativity, play an important syntactic role in the relations of the participants. As we stated above, increasing grammaticality correlates with decreasing concrete meaning. When we say that the subject relation (indicated by the most grammaticalized case form) is the emptiest, we do not mean that it has no meaning but only that its meaning is strongly 'typified' (frozen, rigidized, abstract).

The case hierarchy, leading from 'grammatical' to 'concrete' cases, has been substantiated by so-called accessibility hierarchies, like the one posited for relativization (cf. Comrie 1981a:148ff.).

Languages like German or English scarcely present any restrictions as to the case a given NP must have in order to be relativized.

- (42)
- a. The man who bought the book for the girl [= S]
 - b. The book that the man bought for the girl [= DO]
 - c. The girl whom the man bought the book for [= BEN]
 - d. The place at which ... [PP = LOC]

Other languages have severe restrictions in this respect, e.g. Malagasy:

- (43)
- a. nahita ny vehivavy ny mpianatra
saw the woman the student
V O S

'The student saw the woman' [ibid., (47)]

- b. ny mpianatra [_S izay nahita ny vehivavy]_S

'The student who saw the woman' [ibid., (48)]

Sentence (43a) cannot mean 'The student whom the woman saw', because a NP can only be relativized if it is SUBJ in the main clause and if the correferential REL-marker is also SUBJ in the subordinated clause. In order to relativize other case relations Malagasy must take recourse to different voices (Passive, Circumstantial) by which the intended NPs are first brought into subject position and then relativized.

In Kinyarwanda this syntactic operation is only possible for SUBJ and DO. On the basis of

this and similar facts an implicational hierarchy can be posited:

(44) SUBJ > DO > IO > BEN > LOC

In this hierarchy the probability that a NP may be relativized decreases from the right to the left and it can be predicted that if a language *L* allows for relativization at a point *x* (for a given case function) in the continuum, then all case functions to the left of *x* may also be relativized.

Now if we want to posit a paradigm on the basis of a case hierarchy which is ordered from syntax to semantics, the question arises whether adverbials still belong to that paradigm?

In the above description of paradigms we distinguished two principles, one of which (constant ratio) operates discretely, whereas the other (similarity) allows for continuity or graduality. Hence we may expect gradual transitions at the borderline between adverbs and the proper cases.

The grammarians of Alexandria, especially Dionysios Thrax, used to distinguish between 'flexion' (*klísis*) and 'derivation' (from which comes the *parágo·ga* 'derivative'). An adverb is there considered a *méros lógou ákliton*. In contrast, Aristotle used the one concept of *ptôsis* 'fall (lat. *casus*)' for both flexion and derivation. Thus *dikaío·s* 'rightly' appears as a case of the adjective *díkaios* 'right'.

From a diachronic perspective a fluctuation between adverb and case proper may often be

observed: Latin adverbs like *recte*· 'rightly', *cito*· 'quick', *supra*· 'above, over' may be tracked back to Old Latin ablatives *recte·d*, *cito·d*, *supra·d*. These forms correspond to the Sanskrit *-a·t* ablatives that clearly belong to the case paradigm. A productive pattern got frozen somewhere in the way to Classical Latin and the changed forms were transformed from elements of a declension to non-flexive adverbs.

4.3 Word order

Does word order belong to case marking? Let us remember the principle (cf. p. 30) that case marking refers to marking of the participants, i.e. (semantically) of the arguments or (syntactically) of the actant NPs. Vennemann 1974 identified a connexion in English between case marking and word order, since it is true that in the history of this language the originally free word order froze to the extent that overt case marking was lost. On the other hand, there is no universal inverse ratio in that respect, as was shown by Steele 1978. The lack of case marking to distinguish between A and O - i.e. its discriminating function - does not necessarily lead to fixed word order. This is proven by the existence of languages without any case marking which have nevertheless a free word order, e.g. Classical Nahuatl, Karok, Wiyot.

However, Vennemann would insist that the connexion between SVO (as in English) and case

marking is significantly non-accidental. This connexion was already pinned down by Greenberg in his Universal 41:

If in a language the verb follows both the nominal subject and nominal object as the dominant order, the language almost always has a case system. (Greenberg 1963/66:96.)

One can therefore expect that caseless languages do not allow S and O to be side by side with each other, i.e. are not SOV (and perhaps not even VSO) but SVO languages. The subject/agent NP would be distinguished from the object/patient NP by its pre-verbal position. The statistics offered by Mallinson/Blake (1981:179) are quite instructive in this point; they compared quite a few languages as to possible correlations between unmarked word order and the presence or absence of case marking:

(45)

	+ case marking	- case marking	ratio
SVO	9	26	1:3
SOV	34	7	5:1
VSO	3	6	1:2

The choice of a sample is not unproblematic - this could be responsible for the unexpected correlation as to VSO order. These are mostly Australian languages which usually combine SOV

order (but word order tends here to be quite free) with case marking. The answer to the question as to whether word order has a case marking function must be: only marginally - the main method being marking of the participants. Word order is plurifunctional insofar as it also (and mainly) subserves other goals, viz. topicalization, distinction between possessor and possessum, determination, etc. Its value as a means for case marking could only be assessed if one could establish a clear correlation with overt case marking, either historically (as with Vennemann) or statistically (as with Mallinson/Blake).

4.4 Verbal case marking

If syntactic or semantic relations have to be marked, then two alternatives are open. Either the direct one, i.e. to mark the participants (the NPs) by means of affixes, adpositions, etc., or the indirect one, i.e. to mark another part of the sentence - and that typically means the verb. One way to accomplish the latter is "cross-referencing", a mechanism which the following example (cf. Mallinson/Blake 1981:42) aptly illustrates:⁵

(46) a. Ali a-na-kimbia
SWA Ali he-PRES-run 'Ali runs' (2.1)

⁵ Most examples in this section were taken from Mallinson/Blake (1981). The number following an example refers to that work.

- b. Ali a-na-m-penda m-wanamke m-rembo
 Ali he-PRES-her-love m-woman m-beautiful

'Ali loves a beautiful woman' (2.2)

The affix *a* of the verb complex in (46a) and (46b) cross-references the SUBJ *Ali* and *m* in (46b) cross-references the OBJ *wanamke* and to its attribute. The verb agrees with the NPs as to noun class. The distinction between SUBJ and OBJ is fulfilled without marking the participants. In contrast to normal agreement, the cross-referents are pronominal, weakened noun substitutes, i.e. the verb complex in (46) constitutes a full grammatical sentence. Cahuilla also distinguishes SUBJ and OBJ by means of cross-referencing, but the OBJ has an additional case affix so that direct and indirect case marking appear together.

- (47) né pé-iy pe-n-teew-gal
 CAH I him-ACC O-S-see-DUR 'I see him'

A further method of indirect case marking is agreement between the verb and its participants (cf. Mallinson/Blake 1981:43f.):

- (48) a. God lufa menn 'God loves men' (2.4)
 OE
 b. God lufia menn 'Men love God' (2.5)

The verb *lufia* agrees with the NP *menn* of (48b) as to number, so that only one reading is possible ('God loves men' is not possible because the SUBJ has to be plural). In contrast to "cross-referencing", the agreement affixes of

the verb are not weakened noun substitutes, but rather the lexical NPs are obligatory and the verb complex is not a full sentence.

Indirect marking is dependent upon language type. Thus the agreement affix of Latin verbs agrees in number and person with the SUBJ, whereas the OBJ is directly marked by means of an ACC affix:

- (49) a. Rex agricola-m lauda-t
 king peasant-ACC.SG praise-3SG

'The king praises the peasant' (2.26)

- b. Reg-es agricola-m lauda-nt
 king-PL peasant-ACC.SG praise-3PL

'The kings praise the peasant' (2.27)

The agreement affixes of *S_{tr}* and *S_{itr}* are identical in the indirect marking procedure that follows the NOM-ACC pattern; but if instead the language follows the ERG-ABS pattern, then it is the agreement affixes of *S_{itr}* and *O* which are identical:

- (50) a. ři v-ač'-ula
 man he-come-PRES 'The man comes' (2.28)

- b. ebél-alda ři v-ač'-ula
 mother-SUP man he-discover-PRES

'Mother discovers the man' (2.29)

Threefold systems (e.g. Takelma) distinguish *S*, *A* and *O* by pure "cross-referencing", i.e. by different pronouns bound to the verb.

If we now take Dakota as an example of the active type, we find that "cross-referencing" is realized by means of bound pronominals which are opposed in regard to person (first vs. second) and agentivity (agentive vs. stative):

(51) Bound pronominals of Dakota

	agentive (active)	patientive (stative)
First Person	wa-	ma-
Second Person	ya-	ni-

- (52) a. wa-i' 'I arrive' (2.30)
 b. ma-si'ca 'I am bad' (2.31)
 c. ma-ya-kte 'You kill me' (2.32)

In Potawatomi (Algonquian) the marking of syntactic and semantic relation depends upon a certain naturalness hierarchy. This hierarchy reflects the probability that a given entity appears either as SUBJ/AG or as OBJ/PAT:

- (53) a. n-wapm-a
 I-see-DIR 'I see him'
 b. n-wapm-uk
 I-see-INV 'He sees me'

If an entity that is so to speak pre-destined to fulfill the function of subject (or object) appears as OBJ (or SUBJ), then the verb gets marked by an 'inverse' affix.

The pivot of this probability system is the speaker (EGO) who is prototypically SUBJ/AG. The probability for a given entity to appear as SUBJ/AG decreases as its probability to appear as OBJ/PAT increases; we get thus the following hierarchy:

1 > 2 > 3 > Proper Noun > human > animate > inanimate
 SUBJ/AG ←-----→ OBJ/PAT

If both SUBJ and OBJ belong to the category 3SG, then one of the participants is 'obviated' and thus identified as OBJ (in such case the above hierarchy cannot express the distinction).

Indirect marking, like word order, belongs only marginally to the case system. The roles of the participants are certainly marked but only indirectly by means of cross-referencing or agreement affixes.

Combined direct and indirect marking can be realized either mixedly (ergatively and accusatively) or homogeneously. Thus, both marking techniques are accusatively realized in Indo-European, Uralic, Altaic and Semitic languages but ergatively realized in Avar. We find lack of congruence, in the form of direct ergative and indirect accusative marking, in Australian languages, e.g. in Walbiri and Djaru. The converse, i.e. direct accusative and indirect ergative marking, has not been found. The explanation of this fact is that first and second person pronouns are predestined for NOM-ACC marking and verbal cross-referencing comes

from pronominal elements. Thus, if the pronouns are already accusatively marked, then their transformation into an ergative pattern when introduced into the verb as affixes is unlikely to occur.

If we focus on the way the relation between participants and participee is established, then we can distinguish the techniques mentioned so far.

VALENCY: The said relation is inherent to the meaning of the verb itself.

ORIENTATION: The participants are manipulated upon the basis of their relative importance in the said relation.

TRANSITIVIZATION: It indicates the "transition" of an action or event from one participant through the participee to another participant.

CASE MARKING: The relation is marked exclusively in the NPs.

Indirect marking - which marginally belongs to both case marking and transitivization - shows that the above techniques can be distinguished but not without overlap.

4.5 Particularly marked constructions

The concept of passive applies to NOM-ACC languages. The general function of the passive can be conveniently illustrated by means of the following examples (Mallinson/Blake 1981:73):

- (54) a. I was crushed by falling debris.
b. Falling debris crushed me.

The AG is indefinite and inanimate, the PAT animate and definite. English native speakers assess the passive version (54a) as more natural than its active counterpart (54b). The entity which according to the "empathy hierarchy" seems predestined for the AG relation is in (54) the PAT, whereas the inanimate entity is AG. This unnatural assignment is somehow compensated by giving the subject position to the inanimate PAT - this explains the greater naturalness of (54a) against (54b).

Jakobson (1936/1971) describes what is most important for the speaker (EH) and what initiates the action (AG) as the "hero of the event".

The passive thus assigns subject position to the NP which was the OBJ. According to DeLancey 1980, passivization and the so-called "split-ergativity patterns" are based upon the two cognitive-psychological concepts of "attention flow" (AF) and "viewpoint" (VP). In the following I shall try to explain how these factors illuminate the mechanisms and functions of some particularly marked constructions.

The natural AF consists of the temporally objective sequence of events as seen from the standpoint (VP) of an impartial observer. The starting-point is a certain configuration of entities before the very first change and the

endpoint is the configuration that obtains after the last change has taken place.

The linguistic AF consists of the sequence of NPs in the sentence as motivated by a speaker who wants his/her hearer to follow the utterance in a certain way. The starting-point is the first NP and the endpoint is the last NP.

If both AFs are correlated, then the natural AF is depicted by linguistic iconism, as in (55a):⁶

- (55) a. I drove from Bloomington to Philadelphia.
b. I drove to Philadelphia from Bloomington.

In (55b) the natural sequence is inverted. Passivization would then be a means to manipulate the AF. Since (55) is a local example, the starting-point and the endpoint are also locally situated. The question is now what is the starting-point in nonlocal examples and why would we want to invert the natural AF at all.

The last question finds its answer in the deictic concept of "viewpoint" (VP), which is either speech-act-centered and therefore coincides with one of the speech act participants (SAPs) from whose standpoint the event is described, or else is attached to a nonparticipant observer. The prototypical VP is primarily the spatial position of the speaker. If the speaker is not near the hearer in the said event, then the speech act parameter allows

⁶ See DeLancey 1981:(18), (19).

for two alternatives (VP = speaker's position or VP = hearer's position):

- (56) a. Ich gehe nach Köln
GER I go to Cologne 'I am going to Cologne'
b. Ich komme nach Köln
I come to Cologne 'I am going to Cologne'

In (56b) the VP is the position of the hearer who is in Cologne, because that is the only meaningful case in which the verb *kommen* (which emphasizes the endpoint of the action) can be used.

Both parameters, AF and VP, interact. In transitive sentences there is one NP which is prototypically the starting-point of the linguistic AF and at the same time of the VP. This is the basis of the subject relation. If VP and starting-point of AF do not coincide, then particularly marked procedures are needed. Such is the origin of some constructions [DeLancey 1980:(34)]:

- (57) a. She gave me a check
b. I (GOAL) got a check from her (SOURCE)

In (57b) the VP (*I*) is the endpoint of the natural AF which is inverted by the linguistic AF. Since AG/SOURCE *she* is the predestined VP, it must be particularly marked. A similar process occurs in (58).

- (58) a. She kicked me
 b. I got/was kicked from her (?) [DeL (35)]

These phenomena belong to the technique ORIENTATION (cf. 2.2). However, the following connexions to CASE MARKING are revealed:

- (a) If VP and the starting-point of the natural AF coincide, then the first NP of the sentence (i.e. the starting-point of the linguistic AF) gets the unmarked case, either NOM or ABS; and agreement with the verb is typically triggered by the NP bearing the VP.
- (b) If VP and the natural starting-point do not coincide, then these prototypical subject properties get assigned to two different NPs.

The VP is the position with which the speaker usually identifies him/herself, and that is either his/her own or that of a SAP. The higher the position of an entity in the EH, the more likely it is as the choice of VP. This explains the greater naturalness of the passive version as against the active construction in (54), in which VP and starting-point do not coincide.

The raison d'être of the passive is that these two parameters may diverge.

The concept of the antipassive applies to ERG-ABS systems. The AG (S_{tr}) has the same case form as S_{itr} , i.e. is mostly either unmarked or zeroed. The PAT is either totally eliminated or removed ("demotion"), i.e. it is taken away from the verb either by a PP or by an oblique (thus marked) case. A schema of this may be the following (cf. Mallinson/Blake 1981:75):

(59)

	ERG	ABS	OBL
Ergative construction	AG	PAT	
Antipassive construction		AG	(PAT) ¹

Antipassive constructions have both a syntactic and a semantic function. They are less transitive than the corresponding ergative constructions and designate semantically unfinished or habitual actions, as the following examples show (Mallinson/Blake 1981:(2.72) and (2.73)):

- (60) a. mat'umpa-yu kukapi țaca-mu
 kangaroo-ERG grass eat-PAST
 'The kangaroo ate the grass'
- b. mat'umpa kukapi-u țaca-li-ma
 kangaroo grass-PAT eat-ANTIPASS-PRES
 'The kangaroo eats grass'

4.6 Case marking systems

Let us describe the essential characteristics of the different case marking systems on the basis of the examples given in Mallinson/Blake 1981:²

¹ PAT is often optional or must even be obligatorily deleted.
² Most examples in this section were taken from Mallinson/Blake (1981). The number following a sentence refers to that work.

A. The NOM-ACC system, e.g. Korean:

- (61) a. ønni ka eyja e anja itta
COR sister NOM chair LOC sit is
'Sister is sitting on the chair' (2.8)
- b. ønni ka jungkuk yoli lul hanta
sister NOM China dish ACC do
'Sister cooks a Chinese dish' (2.9)

S and A have the same mark (NOM), O a different one (ACC). The unmarked NOM is often represented by zero, whereas the marked ACC receives a special mark.

B. The ERG-ABS system, e.g. Yalarnnga (Australia):

- (62) a. Kupi waya kunu-ŋka
fish that water-LOC
'That fish is in the water' (2.12)
- b. Kupi-ŋku milna ɬaca-mu
fish-ERG fly bite-PAST
'That fish bit the fly' (2.13)
- c. ɬa-ɬu kupi waɬa-mu
I-ERG fish kill-PAST
'I killed the fish' (2.14)

S and O have the same mark (ABS), A a different one (ACC). The unmarked ABS is often represented by zero, whereas the marked ERG gets a special mark.

C. The active system.

The active system is the rarest of the three main types (the NOM-ACC system is the commonest). It always distinguishes between agentive (AG) and nonagentive (PAT) participants, even in intransitive sentences, i.e. the only participant of 'run' has the same mark as has the A of 'kill' - and the only participant of 'be shut' as the O of 'kill'. For example, in Eastern Pomo (North America):

- (63) a. há· mí·pal ša·k'a
I him killed
'I killed him' (2.17)
- b. wí ɕe·xelka
I slip
'I am slipping (accidentally)' (2.18)
- c. há· ɕe·xelka
I slip
'I am slipping (deliberately)' (2.19)

In this language there is a mixture of all three systems: appellatives are marked after the ERG-ABS system, but pronouns behave as follows (cf. McLendon 1978):

- some intransitive verbs require that their S has the same mark as has the A of transitive verbs, e.g. *há·* for 1SG;
- other intransitive verbs require their S to have the same mark as has the O of transitive verbs, e.g. *wí* for 1SG;

- yet other intransitive verbs admit both *ha-* and *wí* according to degree of agentivity, which explains the difference between (63b) and (63c).

In the pronominal domain Eastern Pomo follows the active system insofar as the first two verb classes result from the distinction agentive vs. nonagentive.

We must here add that, beside the three above-mentioned systems there is yet (e.g. in some Australian languages) the so-called "3-way marking" which always assigns different marks for S, A and O.

Finally, some linguists have posited a "Philippine-type marking" for languages like Tagalog, in which the participants get a prepositional mark according to their case role except for one participant which gets a topic marker instead of a case role preposition, its semantic role being indicated within the verb.

I shall now try to give a functional explanation of these systems. But first I would like to remind the reader of what case marking is all about. The overall task is the constitution, identification and distinction of the relations between the participee and the participants. All aspects are involved: pragmatic, semantic, syntactic and morphosyntactic. The consideration of the case paradigm and the related phenomenon of grammaticalization permits us to posit a continuum of relations that leads from the 'concrete' to the 'grammatical' cases. For the

concrete cases it is true that grammatical relations and meaning (case role) coincide and that the corresponding NPs remain unaltered under syntatic operations (e.g. passivization). Their valency status is that of "freely volunteered information", whereas their case marking is complex, i.e. it requires more expenditure. With increasing degree of grammaticalization the concrete meaning decreases and the "typicization" of the relation increases. Here syntax (i.e. SUBJ, OBJ), semantics (AG, PAT) and pragmatics (TOPIC, COMMENT) fall asunder. It is only within the domain of "grammatical" cases that the latter component plays a role at all.

Again, it is here that the conceptual-semantic entities ACTOR and UNDERGOER (Foley/Van Valin) enter the scene. The way these are associated with TOPIC and COMMENT seems to depend upon: (a) the language type (i.e. either ERG or ACC system); (b) the semantic roles assigned them (since two-NP sentences always have one as an ACTOR and the other as an UNDERGOER); (c) the syntactic relations (SUBJ vs. OBJ) attached to the NPs; and (d) their inherent lexical content according to an empathy hierarchy. Case marking is crucial in establishing the connexions.

The following facts make up the starting-point of our attempt at explanation:

- (a) In so-called "intransitive" sentences a participee (morphosyntactically a verb) is put in a relation to a participant (NP), here symbolized as S.

- (b) In so-called "transitive" sentences a participle is put in a relation to two participants, A and O.
- (c) S, A and O are linguistically distinguished according to a principle of economy, i.e. either S/A vs. O (NOM vs. ACC) or S/O vs. A (ABS vs. ERG).
- (d) Different perspectives ("levels") are involved, viz.
 - conceptual: ACTOR and UNDERGOER
 - semantic: roles like AG, SOURCE, EXPER, GOAL, PAT
 - syntactic: relations like SUBJ, DO, IO, BEN, INSTR, LOC, ABL
 - pragmatic: the two multifunctional entities TOPIC and COMMENT (TOPIC consisting of both AF and VP)
 - morphologico-syntactic case marking

The problem is now: What role does case marking play in the identification and association of the entities under (d)? What distinguishes the three systems with regard to this question?

A. The active system.

This system consistently distinguishes between AG and PAT, i.e. case marking primarily refers to the case roles. A language seldom follows the active system all the way down (is seldom strictly dominated by semantic relations); we find instead a mixture with the other systems. Such a mixture contributes to the identification of syntactic relations.

B. The nominative-accusative system.

This, as I said, "commonest of all systems gives S and A equal treatment in spite of their semantic heterogeneity; its workings are thus primarily syntactic. The equal treatment of S and A is associated with (cf. Mallinson/Blake 1981:100):

- sentence-initial position
- control over agreement
- no overt case marking

All three properties highlight the so-called SUBJ but they are also strategies for marking the TOPIC. It is common that a NP is iconically marked as TOPIC by sentence-initialness and extraposition. An extraposed NP that the sentence anaphorizes is often reintegrated to the sentence by cliticization of the anaphorical pronoun (which thus becomes an agreement marker). Extraposed TOPICs are mostly not case-marked; but case markers belong rather to the anaphora: "... one usually wants to talk about a participant, not a relation..." (Mallinson/Blake 1981:100).

The subject appears, therefore, as a grammaticalized TOPIC. Yet the context can force a separation of SUBJ and TOPIC. The ACC is hence a secondary TOPIC. It is semantically more homogeneous, i.e. generally PAT if one takes this function as a comprehensive concept that embraces things like "affected", "effected" and "neutral". Thus one can certainly view the

complements of quite different verbs -like *hit*, *build*, *see*- as having a common denominator.

C. The ERG-ABS system.

These systems give equal morphosyntactic treatment to S and O. A semantic commonality can be much more easily detected when S appears with a state-denoting verb (static) than when it appears with a verb that denotes a typical action (dynamic). More precisely the semantics look so (cf. Wierzbicka 1981):

- the marked ERG-case denotes an AG which acts upon a PAT;
- the unmarked ABS-case denotes an entity which does not act upon anything.

SUBJ/AG is normally the TOPIC in NOM-ACC systems since SUBJ/AG has the properties which go into topicalization strategies (e.g. verbal agreement, unmarked case, etc.) whereas in ERG-ABS systems the TOPIC is normally the PAT. The following experiment is evidence for this (see Mallinson/Blake 1981:108):

(64) Bolivia attacks Ecuador
 ERG/AG ABS/PAT

Imagine (64) is an ergative construction. If you ask a native speaker of an ERG-ABS language what the above sentence is about, he will answer *Ecuador*. In NOM-ACC systems the answer would be *Bolivia*. ERG and ACC NPs are the corresponding secondary TOPICS.

In ergative languages the ERG is specially marked and correlates with AG. The ABS is unmarked, often zeroed, and it correlates with PAT. In accusative languages the correlations are the other way round: the unmarked NOM correlates with AG whereas the marked ACC correlates with PAT.

It follows from the above that there may be two opposite directions for the flow of observation of the participants-participle relation. Ergative languages are PAT-oriented, they view the event depicted by the predicate from the side of the PAT; hence ABS is the grammaticalized, i.e. typical, TOPIC. Accusative language are AG-oriented; hence SUBJ is the grammaticalized TOPIC. Both systems afford the possibility of switching the flow (i.e. VP change) by means of the antipassive or passive. These switches are realized through especially marked constructions.

Although ergative constructions, as was said above, so to speak correspond to the passive, and accusative (active) constructions to the antipassive, the symmetry is not complete. We must distinguish:

- in NOM-ACC systems the SUBJ has to be explicated as the natural AG/TOPIC, i.e. it is represented by the unmarked NOM;
- in ERG-ABS systems the AG and the TOPIC are distributed in a different way, i.e. ABS usually marks the TOPIC and ERG the AG.

Eventually, the second aspect contains the explanation for the fact that accusative languages are more common than ergative languages.

4.7 Split ergativity

Split ergativity is the combination of the ERG and ACC case marking in one language - distributed across its subsystems. Scarcely any language may be called purely ergative or purely accusative. If we are pursuing a functional explanation of such combinations, we must take account of the peculiarities of the case marking systems. First of all, in accusative languages O is marked whereas in ergative languages A is. The question is then: In which subsystems is there a special need to mark either O or A?

An answer to this question and hence a functional explanation of split ergativity has to be found in the empathy hierarchy which is scale of naturalness with AG and PAT as its two poles. Natural AGs are the first and second personal pronouns whereas natural PATs are inanimate and nonhuman nouns. If there is natural correlation, then no special marking is needed. However, as in Potawatomi, (cf. (53)) a special case marking becomes necessary when prototypical AGs (or PATs) are used as PATs (or AGs). In typically transitive sentences an animate entity acts upon nonhuman or inanimate entities.

(65) Empathy hierarchy and case marking³

1 > 2 > 3 > Proper Nouns > human > animate > inanimate

PAT

ACC ----->

AG

ERG <-----

Thus, if in (65) an entity x located to the right of 3 is AG, then x gets ERG-marked; again, if an entity y located to the left of Proper Nouns is PAT, then y gets ACC-marked. But the switch from one case marking system to the other can occur somewhere else. As indicated above, this implies a certain natural - hence unmarked - direction of "transitivity". Any reversal of this natural direction is specially marked. Now, given that the AG hierarchy and the PAT hierarchy hold independently of each other, certain overlaps in case marking may be observed, e.g.

(66)

1 > 2 > 3 > Proper Nouns > human > animate > inanimate

PAT

ACC ----->

AG

ERG <-----

The case marking of a NP depends, therefore, on its inherent lexical content and on the AG or PAT correlation. Since most splits apply to the

³ Cf. Silverstein 1976:122.

three leftmost items of the empathy hierarchy, let us be reminded of Silverstein's "maximal syntactic feature analysis" (1976:117), so as to put some flesh into the concept of "lexical content":

(67)

		1st incl.		2nd	3rd
		du.	pl.	sg.	pl.
Person	EGO	+	+	-	-
	TU	+	+	+	-
Number	Plural	+	+	-	+
	Restricted	+	-	+	-

Apart from the semantic specifications of the NPs, splits can occur because of the lexical differentiation of verbs ("verb split") or because of the tense, aspect or mood of verbs ("TAM split"). The standard treatment of these two types of split is Tsunoda (1981). His position is that both splits are functions of the same factors, especially the "effectiveness condition" of the participle concerning the effectiveness, definiteness, and actuality of the participants A and O. He predicts that split languages will case-mark like ergative or accusative languages if the effectiveness condition is fulfilled; if it is not, then the tendency would be to pair off the unmarked case of both systems (ABS or NOM) either with an oblique case or with another kind of ABS or NOM.

The effectiveness condition has 13 parameters (cf. Tsunoda 1981:393f.), as set forth in (68) on next page.

The parameters of (68) are similar to those of Hopper and Thompson (1980) and their weaknesses are similar. No statement is made as to the interdependence of the listed factors, something which could possibly reduce the number of parameters. Again, the "effectiveness condition", as is usual with constructs of this kind, was not obtained on a purely empirical basis, but rather depends on what we already knew about effectivity and transitivity.

A related factor which conditions splits is Tsunoda's hierarchy of verb types (cf. 1981:395), which is reproduced as (69) on next page. This hierarchy expresses the degree of effectiveness of a two-place situation. One of its correlates is the probability of occurrence of either passive or antipassive, which decreases from left to right. For illustrative purposes, let us consider Tsunoda's own examples, taken from Avar (NE Caucasus) and Tonga. The case which comes first is in each example the one assigned to A, and the second case form is the one assigned to O. Type 1 verbs govern ERG-ABS in Avar:⁴

(70) t[anaqan-as bats' t[awana
hunter-ERG wolf-ABS killed

'The hunter killed the wolf' (1)

⁴ The following examples were taken from Tsunoda (1981). The numbers following each sentence refer to that work.

(68) Tsunoda's Effectiveness Condition

	Fulfilled	Not fulfilled
A	action	state
B	effect upon O	no effect upon O
C	O attained	O not attained
D	O totally affected	O partially affected
E	accomplished	not accomplished
F	punctual	durative
G	telic	atelic
H	resultative	not resultative
I	specific or singular action or situation	habitual or generic action or situation
J	O definite, specific, referential	O indefinite, non- specific, nonreferential
K	actual, realized	potential, not realized
L	realis	irrealis
M	affirmative	negative

(69) Tsunoda's 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		

In contrast, type 2 verbs belong to a LOC-ABS frame:

(71) inssu-da (ʒindargo) was wiʒana
 father-LOC (one's) child-ABS saw
 'The father saw the child (of his own)' (2)

As to type 3, there is one verb which means 'search' when used with ERG-ABS and (less effective) 'wait' when used with ABS-APUDESSIVE:

(72) ʒi limaq valáhula
 man-ABS child-APUDESSIVE waits
 'A man waits for a child' (3)

At least some verbs of knowledge (type 4), e.g. 'know', 'understand', 'forget', behave like type 2 verbs. In contradistinction, type 5 verbs have a DAT-ABS frame:

(73) di-ye y-as y-ol'-ula
 I-DAT FEM-girl-ABS FEM-love-GEN.PRES
 'I love the girl' (4)

Verbs of possession (type 6) take GEN-ABS:

(74) ebelaʒ-ul v-ac v-ug-o
 mother-GEN HUM-brother-ABS HUM-be-PRES.IND
 'The mother has a brother' (5)

Case distribution in Tonga is as follows:

Verb Type	Case Frame
1	ERG-ABS
2	ERG-ABS ('hear', 'find') ABS-DAT/LOC ('see')
3	ERG-ABS ('search') ABS-DAT ('wait')
4	ERG-ABS ('know') ABS-DAT ('remember') DAT-ABS ('understand') LOC-ABS ('forget')
5	ABS-DAT/LOC ('love', 'like')
6	ABS-ABS

Tsunoda deals mainly with ergative languages. But Basque is, for instance, also ergative and its verbs, regardless of which type they belong to, take ERG-ABS (although there is a TAM split, too). Since the "effectiveness condition" does not surface in Basque case marking, it proves to be only a potential factor. On the other hand, when the verb type hierarchy determines case marking splits, the turning points (i.e. the points in the hierarchy where one case frame replaces the other) are language-specific - see Tsunoda's tabulation of verb splits in the accusative languages English and Japanese (1981:412f.).

A further kind of split is TAM split. It is in general true that the NPs of verbs in perfective past tenses get a more transitive

case marking than the NPs of verbs in imperfective, present or future tenses. Thus in Hindi:

(75) ləɽke-ne bylli dekhi həy
boy-ERG cat-ABS has seen

'The boy has seen a cat' (23)

(76) ləɽke-ne bylli-ko dekha həy
boy-ERG cat-DAT has seen

'The boy has seen the cat' (24)

(77) ləɽka bylli/bylli-ko dekhta həy
boy-ABS cat-ABS/cat-DAT sees

'The boy sees a cat/the cat' (25)

There is also corroborating evidence from Georgian which has ERG-ABS for the Aorist series and ABS-DAT for the Present series. Contrary to Georgian - which has an additional verb split - Basque has only the TAM variety. The participants of progressive verb forms are marked with ABS-ABS and those of perfective verbs with ERG-ABS. And now we come to TAM and verb splits in accusative languages.

Although both split patterns at first sight appear to be very different phenomena, when considered together they are quite parallel, i.e. the classes resulting from the splits are similar. Certain semantic verb classes show preferences for certain TAM distinctions, so that certain correlations are expected to occur. Thus, the aspectual opposition perfective vs. imperfective in Russian applies to many but not

all verbs. The verbs which, because of their semantic content, are highly transitive, hence leftmost in Tsunoda's verb hierarchy, do have both perfective and imperfective forms. Further right (to less and less transitive verbs) the perfective forms yield to the less transitive imperfective forms.

The vexed question as to whether it is the perfective or the imperfective form which is marked can also be answered. For verbs to the left of the hierarchy the perfective form is unmarked, because for them both semantic content and aspectual form are highly transitive. Symmetrically, the imperfective is the unmarked form for the verbs to the right. Hence aspectual derivation follows the verb hierarchy. Perfectivization results in change of verb class. The imperfective *bit* 'beat' belongs to the 1b-class whereas the perfective *u-bit* 'beat dead, kill' is a member of the 1a-class.

The functional standpoint, which cannot limit itself to description, asks a further question: What exactly are TAM and verb splits?

Central participants, which in all respects are fully involved in the event, are separated from peripheral participants. Central participants are not only more involved in the participle than are peripheral ones, but they are also more essential, more obligatory. Central participants, i.e. the NPs of highly transitive constructions, are marked by means of central, grammatical constructions whereas

peripheral participants are indicated by peripheral, concrete case forms.

(78) Central and peripheral case forms

Central		Peripheral	
m	>	u	> OBL
ERG/ACC	ABS/NOM	DAT, LOC, INSTR, BEN	

Now the functional question is more imperative and general: What is the function of all splits? On the one hand, they concern the participle insofar as it is its semantic content which determines and governs the verb hierarchy and the TAM splits. On the other hand, these splits concern the participants insofar as it is their semantic content which governs the empathy (saliency) hierarchy. In general, all splits concern the relation of participation in that they either characterize the naturalness of the semantic relations between participants and participle (cf. Silverstein 1976) or else separate central from peripheral participants (cf. TAM and verb splits). Thus they apply to the dyad ACTOR/UNDERGOER and to the distance of all possible participants from the participle.

5. Verb serialization

Verb serialization is a phenomenon which has its home in the Kwa languages of Africa like Ewe and Yoruba, and in South East Asian languages like