

That is why the distinction between noun and verb must have a clearly defined position within the dimension of PARTICIPATION.

This leads us to two further problems:

- A. Is the noun-verb distinction the beginning - the one pole of the dimension?
- B. If this is not so: what is the boundary, what is at the beginning of this dimension? (see below section 3.1).

At the other pole, at the end of the dimension the participative relation is not inherent, but has to be established by saying (predicating) something about it. Here the principle of predicativity is maximally active. That is why we call it the predicativity pole. We have here the demarcation problem, too: when do we reach the maximum predicativity, i.e. where is the upper limit of the dimension?

3. The sequence of techniques (programs) and the procedures within the techniques (subprograms, subroutines)

3.1 Indication and predication

The principles constituting the dimension (indicativity and predicativity) are both present in each technique, albeit in different quantities: maximum indicativity implies minimum predicativity, and there is some degree of indicativity even if predicativity is at its maximum.

The lower limit of the dimension--so to speak the basis upon which the whole dimension rests--is the point where indicativity and predicativity are both present but nothing is specified at all about PARTICIPATION. This is the case of the so-called logical predicates (Seiler 1977:256f.), for instance:

- (2) a. APPLIES in APPLIES (*I, musician*), i.e. *I am a musician*
b. APPLIES in APPLIES (*this, harpoon*), i.e. *This is a harpoon*
- (3) IDENT(ical) in IDENT (*Morning Star, Evening Star*), i.e. *The Morning Star is the Evening Star*
- (4) (NOT) TRUE in (NOT) TRUE (*it*), i.e. *It is (not) true*
- (5) EXISTS in EXISTS (*God*), i.e. *God is, God exists, There is a God*

The logical predicates are partially modelled by the operators of formal logic. These do not suffice to apprehend the relation between indication and predication present in the examples given in (2)-(5), or indeed in any similar sentences of other natural languages. We therefore prefer to use an abstract representation by means of logical predicates (or LOG PREDs for short). In many languages they have no morphological exponency, in other languages they are partially represented by the copula or a predicate like IS TRUE or EXISTS.

What distinguishes LOG PREDs from the usual predicates which we call semantic predicates (or

SEM PREDs)? All the following play a role in the distinction:

A. Both one-place and two-place SEM PREDs must accord to certain selection restrictions relative to possible arguments:

- (6) *sleep (x)*, CONDITION: *x* must be [+animate]
- (7) *hit (x,y)*, CONDITION: *x* must be [+animate], *y* may be [+animate]

LOG PREDs may also be one- or two-place, but they do not have to obey any selection restrictions. Thus for APPLIES (*x,y*) it holds that of any *Y* can be said that *X* applies to it.

B. Even if we do not enter into a lengthy discussion about the extension (class) of LOG PREDs, the above examples (2)-(5) invite the conjecture that LOG PREDs form a continuum of content complexity. Independently of that complexity LOG PREDs have a common denominator: they have always a truth value (as against SEM PREDs). In other words: the logical predicate TRUE is superordinate to all of them. This can be abstractly represented as follows:

- (8) TRUE (APPLIES (*I, musician*)), i.e. *I am a musician*

Since LOG PREDs do not have selection restrictions or any other categorial restrictions, embeddings like (8) are permitted.

C. LOG PREDs, as against SEM PREDs, are irrelevant for representing a *Sachverhalt*, i.e. they do not say anything about PARTICIPATION. Their central function is different, viz. the assertion of truth.

Despite their differences, LOG and SEM PREDs have something in common: the sentences in which they appear have always two parts. We have a referential element--usually a deictic one, like in (1) and (4)--coupled to an asserting, predicating, essentially generalizing element. This is the case even for apparently simple utterances like:

- (9) False!
- (10) Night! [= G'night!, Good night!]

Here a deicticum (*that* or *what* you are saying in the first example) or a specific situation of a deictical nature (in the second one) must be assumed and may if necessary be expressed in words.

Thus referential and indicative features (INDICATION and PREDICATION) are both always present when a thought (a conceptualisation) is linguistically represented. In the case of SEM PREDs the thought is related to a *Sachverhalt*; but LOG PREDs have a metalinguistic character--the thought is not related to a *Sachverhalt* but at most to the linguistic representation of a *Sachverhalt*.

Whereas the truth of SEM PREDs is assumed as given (if it is not explicitly denied), the very

function of LOG PREDs is the assertion of truth. In that sense one can take LOG PREDs as the basis of all predication and therefore of the dimension of PARTICIPATION.

A related intuition about the role played by LOG PREDs must have lead Aristotle to explain very different construction as synonymous, such as copula sentences with a participle (e.g. 'that man is a going one') and finite verb sentences ('that man goes'):

- (11) Oudèn gàr diaphérei tò: *ánthro·pos hugiaino·n estin è· tò: ánthro·pos hugiainei* oudè to: *ánthro·pos badízo·n estin è· témnon* tou: *ánthro·pos badízei è· témnei*, homoío·s de kai epi tôn állo·n. (Metaphysics, Book Delta, ch. VII, p. 1017a28-31)

'For there is no difference between *the man is [a] recovering [one]* and *the man recovers*, nor between *the man is [a] walking [one]* or *[a] cutting [one]* and *the man walks* or *cuts*; and similarly in all other cases.'²

In the Greek of the old days an expression like *ánthro·pos témnon éstin* must have sounded as

² This is Sir David Ross's famous translation (cf. *The Works of Aristotle Translated into English*, vol. VIII, Oxford, at the Clarendon Press, 1908), with appropriately inserted brackets. I quote it here because it is an instructive instance of how misleading a translation can be: it makes it seem as though Aristotle wrongly identified the so-called Present with the Present Progressive. The point is, of course, that the philosopher and logician was rather making up a sentence structure (NP + *be* + Present Participle) which did not actually exist in Ancient Greek. Seiler's original paraphrase gives us, for instance, *der Mensch ist ein schneidender*, which is more faithful but has its own troubles, viz. that there is no indefinite article in the original Greek. The emended English form *the man is a cutting one* has a pro-form besides! [T]

artificial as English *the man is a cutting one*. If Aristotle nonetheless invents such sentences, it is plausible to assume that he was moved by the insight that the logical predicates involved in them are somehow the basis of all predication. Insofar as they do not specify anything about PARTICIPATION, i.e. insofar as they may be said to be the unmarked pole of the dimension, they are indeed the foundation of all predication.

3.2 Noun-verb distinction and verb classes

In the last section I spoke of the contribution made by SEM PREDs and LOG PREDs in the linguistic representation of thoughts. One must be very clear in one's own mind that thoughts must be holistic. Analytic approaches of the following kind:

- (12) something and what is said about it
 (13) you take first one thing
 and then you say something about it

do not concern the thought that has to be represented but its linguistic representation. The analytic character of the linguistic representation is the necessary consequence of the linearity of language.

The linguistic utterance as representation of a thought consists of two main components: a distinction is made between a mostly referential (deictic, indicative) and a mostly qualifying

(generalizing, predicative) component. One cannot imagine a language which does not make this distinction one way or the other.

This duality is essentially functional. Its true nature would be misunderstood if it would be directly transposed to a semantic and/or syntactic or morphosyntactic level. Such misunderstandings result in statements like the following:

- a. "Every language has a subject and a predicate" (syntactic perspective)
- b. "Every language has nouns and verbs" (taken as word classes: morphosyntactic perspective; taken as correlates of objects or events: semantic perspective)

Our standpoint is functional, i.e. embracing and overriding semantics, syntax and morphosyntax. We thus explicitly reckon with languages in which a morphosyntactically or semantically based distinction between nouns and verbs would be either weakly marked, or perhaps even not at all so. On the other hand, our functional perspective makes it appear plausible or even probable that such a distinction should be gradual--a more or less (not an all or none) distinction. The scale leads from a weak (or even lacking) through to a strong grammaticalized distinction. In the latter case we would be able to talk of nouns and verbs as *categories*.

The categorial distinction between nouns and verbs is weakly marked e.g. in many Ural-Altaic

languages, in the Eskimo-Aleut and in North American Indian languages (especially those of the north-west). Some of these languages have been analyzed by competent experts as lacking any morphological, syntactic and semantic distinction between nouns and verbs (e.g. for the Salish group; see Kinkade 1983, Kuipers 1968). However, if one examines the corroborating examples, then one cannot avoid the conclusion that the sentences involve a component having a predominantly referential (indicating) function and a component having a predominantly qualifying (predicating) function; and again, that the latter represents the participle, i.e. the basis of PARTICIPATION, since it more or less clearly implies or signals the participants. Thus indication and predication are both present--which is the crucial thing from our standpoint. The noun-verb distinction is a gradual distinction within a particular languages as well as in typological comparison.

Relevant and exceedingly useful work--both because of the historical exposition of research and with an eye to what seems to be the right way to look at the problems themselves--has been done by H. Walter (1981), though, I am sorry to say, few people seem to have read it. Walter demonstrates that the noun-verb distinction cannot be judged by just one criterium; it depends rather of a system of parameters. In his work he considers seven such parameters, some of which will be briefly discussed:

A. Degree of overlap between nominal and verbal flexion paradigms, e.g.

- | | | | | |
|------|----------|---------------|---------|-----------|
| (14) | aki-vo-q | 'he answers' | uvdlo-q | 'day' |
| ESK | aki-vu-t | 'they answer' | uvdlo-t | 'days' |
| (15) | kér-em | 'I bid him' | test-em | 'my body' |
| HUNG | | | | |

The extent of such overlaps vary from one language to the next and can be quantified. Thus the so-called index of indistinction amounts to 0.7 for Eskimo, to 0.38 for Hungarian, and to 0.28 for Turkish.

B. Degree of categorial ambivalence, i.e. the existence of so-called noun-verbs, e.g.

- | | | | | |
|------|------|----------|---|--|
| (16) | fagy | 'frost' | - | 'to freeze' |
| HUNG | les | 'ambush' | - | 'to lurk' |
| | nyom | 'track' | - | 'to press' (orig. 'to make a footprint') |

Noun-verbs are stems that can be recognized as categorially fixed nominal or verbal forms only in context, i.e. by addition of items of the nominal or the verbal flexion.

C. Predicative noun flexion, i.e. the existence of noun stems which accept parts of the verbal flexion when used as predicates, e.g.

- | | | |
|------|-------------|------------------|
| (17) | tüccar | 'director' |
| TURK | tüccar-di-m | 'I was director' |
| | PF-1.SG | |

All this shows that the noun-verb distinction is a multifactorial affair. In that respect it is quite similar to the other techniques of

PARTICIPATION, as discussed in section 2 (e.g. orientation, case marking, causativization) and in that respect it must be viewed as an independent technique of PARTICIPATION.

But now: how should we specify the function of the noun-verb distinction?

One decisive insight is this: the Noun category is unthinkable without the Verb category; and vice versa. In other words: Noun and Verb are complementary. In many, especially older, theories this fact is not recognized at all; and this leads to invincible contradictions, e.g. when people assert that in a given language (say, Eskimo) the verbs are strictly speaking nouns--or the other way round. The existence of any one of the two categories cannot be denied, since each one of them can only be defined with respect to the other (cf. Walter 1981:24ff., 71f.).

If this complementarity is taken into account, then the above question can be answered as follows: verbs are the typified (categorialized) representatives of participees, to which participants are potentially or virtually assigned. They are essentially relational, because number and kind of the participants assigned to them are intrinsic to their semantic and/or morphosyntactic structure. And again, nouns are the typified (categorialized) representatives of participants, which are assigned to participees. They are not essentially relational but

rather--typically--the terms of the participative relation.

When the noun-verb distinction is weakly developed, nouns and verbs are not opposed as two disjunct classes; even within a particular language are there transitional forms. The term "participium" of the Roman grammarians (a translation of the Greek *metokhé* 'participation') means that such forms 'partake' in both nominal and verbal features. In recent times people have tried to deal with such transitional phenomena by positing the concept of a "squish" or "continuum" (see Ross 1972, 1973), whose theoretical status has otherwise not been made clear--not, that is, outside UNITYP.

Ross presents us with the following hierarchy (1972:316):

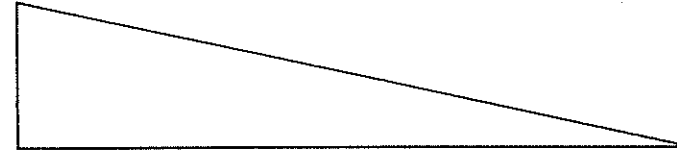
- (18) VERB > Present Participle > Perfect Participle > Passive Participle > ADJECTIVE > Prep. (?) > "adjectival noun" (e.g. *fun*, *snap*) > NOUN

The capitalized categories V, A and N are considered by Ross as a kind of cardinal points in categorial space. In order to substantiate his "squish" thesis, i.e. his idea that there is a gradual scale V > A > N, Ross adduces a battery of transformations which, if applied to verbs, often yield grammatical structures, but less so if applied to adjectives and hardly at all if applied to nouns. Thus consider "Preposition Deletion":

- (19) a. Your odor surprised (*to) me
b. Your odor was surprising *(to) me

The preposition *to*, assumed to be present in deep structure, must be deleted if we have the finite verb *surprised* but is obligatorily kept if we have the nominal form *surprising*. In the case of most processes (e.g. "Fact Deletion", "Raising", "Preposing", and so on) the same "funnel direction", i.e. the same direction of a crescendo wedge was postulated by Ross, viz.

- (20) V A N



Given that finite verb structures are most accessible to processes like these and noun structures least so, it was concluded that nouns were syntactically "inert", adjectives less "inert", i.e. more freely usable, and verbs most "volatile".⁴

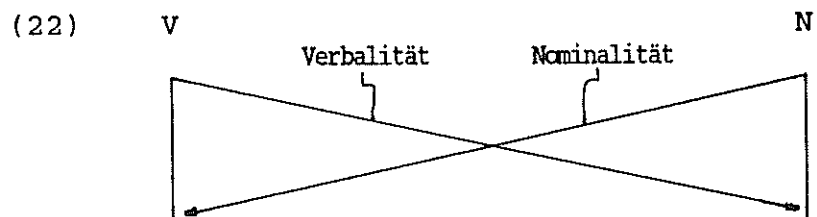
Now among the syntactic processes considered by Ross there is one, viz. "Constituent Deletion", which shows not one but two wedges which run in opposite directions. Consider:

⁴ René Thom (1973) has presented a similar characterization: verbs would be "most volatile", nouns semantically "dense" and syntactically "inert".

- (21) a. It is surprising (to me) that you know him
 b. It surprises *(me) that you know him

I.e. the object can be deleted in the presence of the nominal form *surprising* and must be kept in the presence of the finite verb form *surprises*.

Ross has observed and presented the facts correctly, but he has not drawn the necessary conclusion. According to his diagram (20) nouns would be just something negative, i.e. defined by the lack of verbal properties; the suggested on-sidedness cannot do justice to the actual state of affairs. To his diagram we oppose the following (after Walter 1981:153):



In between both extremes N and V we have to place all those forms which have both verbal and nominal properties (adjectives, participles, etc.). This hypothesis asserts that all transitional forms between Noun and Verb--and strictly speaking even the Noun and Verb themselves--partake of nominal and verbal properties in inversely varying proportions. The symmetry present in diagram (22) rests upon the functional definition of verbs as relational representatives of participlees. The morphologic,

syntactic and semantic evidence would, if taken in isolation, yield an asymmetry or dominance in favour of the Verb. The Noun represents the indicativity pole (parsimonious morphosyntactic means), the Verb the predicativity pole (descriptivity, increasing introduction of "machinery"). Therefrom results a preponderance of the Verb. However, from a functional standpoint, nouns and verbs have to be seen as in the last instance equipollent.

Let us consider the position described by Hopper and Thompson in their recent paper (1984). They also consider Noun and Verb from a functional point of view, viz. that of their relative prominence in discourse. However, they arrive at results which are quite different from the ones sketched above. A very important idea with them is the prototypicality of both categories and accordingly the gradual scaling from "high categoriality" to "low categoriality". The prototypical function of a highly categorial verb is "to report an event", whereas that of a highly categorial noun is to introduce important participants and "requisites" into discourse. The more the function of a noun or verb approaches these prototypical values, the more shall they be provided, in particular languages, with the morphosyntactic marks typical for those categories.

There are three main objections to Hopper and Thompson. First, we must note a curious circularity in the argumentation in that Noun and Verb are recognized as such precisely on the

basis of their morphosyntactic marks. Second, the authors only present evidence for the categoriality of nouns. Thirdly and finally, they postulate separate scales for the gradual manifestation of categoriality of nouns and verbs. Thus both scales end up in "zero categoriality", so to speak in NOTHING. And it is not very clear what would that mean. The assumption of "zero categoriality" is in any case inconsistent with the concept of a linguistic sign proposed by de Saussure: a linguistic sign always stands for something--or else it is not a linguistic sign at all.

The way out of this dilemma seems to me to be that we see the Noun and the Verb as necessary correlates of each other; further that one examines the hypothesis that a gradual decrease of verbality is inversely proportional to a gradual increase in nominality--and vice versa.

We come thus to the question of verb classification, which is tackled in recent work only in connection with case marking, more specifically in connection with so-called split case marking (Tsunoda 1981), or else in the general discussion of sentence structure (Foley/Van Valin 1984). There is no doubt that a verb is just a verb--rather the semantic structure of the lexical entities marked as verbs are decisive for the constitution of the participative relation. And since the verb is the prototypical representative of the participee, the distinction of verb classes is a

relation-centralizing procedure with participees as backfeeding targets.

How such a verb classification should be theoretically based and empirically substantiated is right now a moot question. However, it should be clear that the relevant criteria have to do with the relation of the participee to the participants. The distinction which immediately comes to mind is that between static and dynamic verbs. The former show transitions to nominality. The latter are differentiated according to how participants participate, i.e. according to the degree of control, of effectivity of action, of affectation upon the undergoer.

The principles of INDICATION and PREDICATION (together with LOGICAL PREDICATES) as well as the technique of NOUN-VERB DISTINCTION (together with VERB CLASSES) have been somewhat lengthily discussed, because they were barely touched upon in the survey of techniques (section 2). The remaining techniques shall be dealt with more briefly.

3.3 Valency

We can define valency as the minimum linguistic signalization of the presence of the participative relation, i.e. the relation between a participee and some participants. This definition is functional and that means broader than a syntactic, a semantic or a pragmatic one.

The functional perspective takes all these aspects into account; it is comprehensive.

"Linguistic signalization" entails that the relation has to be linguistically recognizable (at both the level of expression and the level of content). The thought or *Sachverhalt* is not crucial but its linguistic representation (see II, 2). Thus a *Sachverhalt* whose linguistic representation involves the verb *buy* entails a series of components, e.g. the buyer, the salesman, the commodity, the price, the interest of the parties, the magasin, the commodity's going over from the salesman to the buyer, the buyer's will to buy, etc. This list is indefinitely long. As against it, we have a limited list of possibilities upon which the *Sachverhalt's* cognitive-conceptual elaboration is already concentrated. And when the *Sachverhalt* is linguistically represented a further selection is made as to the participants which are "brought into perspective" (cf. Fillmore 1977). Typically we have an actor and an undergoer. The English verb *buy* forces us to bring both participants into perspective, i.e. to linguistically represent them. As against this, we **can** in English include other relations to other participants, but we **must not** do so. The important thing is that the pre-linguistic level, i.e. what we call *Sachverhalt* or "thought", already undergoes a selection or "perspectivization", and that the linguistic representation implies a further selection or "perspectivization". Thus we should not

altogether exclude the *Sachverhalt*--the "commercial event" (Fillmore) in our example with *buy*--from consideration, although the explanation of valency is based not on this but on what is linguistically represented.

The qualification "minimum" in the definition of valency means that the relation between participle and participants is already provided for in the participle. This has its foundation in the technique of NOUN-VERB DISTINCTION; and this again is a manifestation of the general functional principles of indicativity: what is here to be expressed, viz. the participative relation, is represented indicatively, deictically--just posited as present. You cannot penetrate deeper into it by means of morpho-syntactic analysis. As elsewhere, the predominance of this principle has got the advantage of a holistic, instantaneous apprehension of a thought content, "straight away", without analytic-descriptive machinery; on the other hand, it has got the disadvantage of a certain lack of explicitness.

Now if the relation to the participants is already provided for in the participle, then you do not need to mention the participants at all. Precisely this would be the "minimum linguistic signalization".

Minimum signalization in this sense is possible in many languages if some or all participants are recoverable from the context; such is the case in our example (3) of section 2 above, i.e. *ich gebe* said in German when playing

cards instead of *ich gebe euch die Karten*. This has been rightly distinguished as the context-bound facultativity of actants from the context-free one by Mosel (1984). Context-bound facultativity can also be viewed as ellipsis, although not all languages make use of it to the same extent (omission of all or some actants). Context-free facultativity, however, is determined by morphosyntactic rules. Moreover, it is correlated to non-facultativity, i.e. to the obligatoriness of actants. When we talk of valency as a linguistic technique, we mean above all precisely this interplay between facultativity and obligatoriness. This has to be observed both within a particular language and in typological comparison.

Now if we want to apprehend the facts adequately, then we must not only consider the presence or absence of participants (syntactically: of actants) but also their structural (i.e. semantic and morphosyntactic) properties. These aspects--what is generally called government--have been studied by Lehmann in a seminal paper (1983). This is the place to discuss the Japanese facts, viz. that a given verb does not lay down which actants have to appear on the surface, but it DOES lay down which case any surfacing actant must be in (see Matsubara 1984).

The technique VALENCY has also to do with another question: if it is already decided at the level of the participle which participants have to be present, either quantitatively

(number of participants) or qualitatively (which structural properties they must have), then is it also decided at this level that the participants shall have the minimum linguistic signalization (i.e. no overt marks)? Lehmann has proposed the term "relation centralization" for such a linguistic feature. As against this we observe that the neighbouring techniques have a tendency to further (i.e. non-minimum) marking of the relation on the participants ("relation decentralization").

The evidence indicates that both tendencies (centralization and decentralization) are effectively counteracting each other both in the technique VALENCY and in the neighbouring ones--but centralization is clearly predominant. However, if we want to express other relations beside AGENT and PATIENT (say INSTR, BENEF, LOC), then we are often forced to introduce further linguistic means which are no more (or not only) realized on the participle but (also) on the participants. The means used may even then be reduced to a minimum, i.e. as much as needed but no more. It is then justified to talk of valency increase. Causativization (i.e. the introduction of a "causator" who makes a "causee" do something) is also a case of valency increase.

The consequence of all this is that VALENCY play a role in all the following techniques of the dimension. That is only to be expected in the dimensional model, because the "minimum", less marked expression is implied by the "non-

minimum", more marked one--but not the other way round. The limits of VALENCY (and thus of the whole dimension) are reached when additional material does not say anything about the participative relation--this happens with complex clauses which are there for a different aim (see below 3.9).

It is within a particular language that we can most clearly apprehend the grammaticalization (the morphosyntactic phenomena) of valency. This is visible wherever the omission (or addition) of an actant results in an ungrammatical sentence. All sorts of variations can be observed here according to the semantic nature of the verb or the verb class; and we hardly know, nor have good descriptions of, the system behind those variations.

The situation in cross-linguistic comparison is similar. We observe that the interplay of facultativity and obligatoriness is different in different languages. Putting together these differences into a system is also urgent. Investigations such as these would make possible to see valency as a multi-factorial concept and to describe the involved factors (the parameters) separately.

The overall question reads: what is the functional correlate of this interplay of facultativity and obligatoriness?

A very general answer is: the point is to represent linguistically the difference of each single relation (participlee - *i*th participant, participlee - *j*th participant, etc.) and at the

same time to identify semantically and syntactically (i.e. to identify AG, PAT, etc., or subject, direct object, etc.). To fulfill the first function **distance** (of each participant to the participlee), i.e. closeness of the relation, is crucial. This is correlated in the technique VALENCY with the interplay of facultativity and obligatoriness. Consider a verb like eat. It has a facultative direct object, or patient, which is actually omitted in the following sentence:

(4) The cannibal ate (the missionary)

Well then, the said participant is distanced in its relation to the participlee by this non-specification or omission. The subject cannot be thus omitted in English, which means that its relation is much closer, non-distanced. And it is precisely the resulting graduation that makes possible to identify the terms of the relation as such (direct object vs. subject, patient vs. agent, etc.).

It follows that to ask whether a given verb is transitive or intransitive (alternatively, whether it is transitively or intransitively used) is to ask for valency. That is, if really nothing more is being asked. Valency is thus to be distinguished from transitivization (see below 3.5)--a technique which certainly presupposes the distinction between transitive and intransitive verbs but is constituted by a whole set of parameters (cf. already Hopper/Thompson 1980).

3.4 Orientation

Orientation as an identifiable technique, distinguishable from all other techniques, has thus far seldom been brought into focus. Most relevant is the work by Serzisko (1984). The data involved here appear in the literature as passivization (more generally voice or diathesis), inverse flexion together with obviation, also transitivity and case marking.

That this technique comes "after" VALENCY and "before" TRANSITIVIZATION in the ordered scale of our dimension, is supported by the fact that it rests upon the former and implies the latter.

Besides the principles of Indication and Predication, which form the basis of the whole dimension, i.e. which are implied by all techniques, ORIENTATION implies the separation of the Noun and the Verb as classes (the technique NOUN-VERB DISTINCTION), furthermore the distinction of different classes with stronger nominality or stronger verbality (predominance of the nominal or the verbal principle). ORIENTATION (to be understood here *prima facie* as directedness) becomes relevant to the extent that the participle is linguistically represented by a predominantly "verbal" verb, i.e. a verb of action--and not a verb of state or process.

ORIENTATION also implies VALENCY in that directedness presupposes the possibility (laid down by the features of the participle) of

expressing or omitting the participants. Already Kaznelson (1974) had recognized that VALENCY has to be distinguished from directedness, because there is no actualized directedness in VALENCY.⁴

On the other hand, ORIENTATION plays also a role in the "following" techniques (TRANSITIVIZATION and so on); in this sense it is presupposed by them. Thus it holds that, if the differential marking of A and O (AG and PAT or subject and object) becomes greater thanks to transitivity, case marking, etc., then the directedness of these participants becomes stronger and the reversibility of orientation (what Serzisko calls "reorientation") becomes easier.

We can now define the technique of ORIENTATION, relatively to the "preceding" techniques as an additional specification of the relation between participle and participants. We must distinguish two points here: there is, on the one hand, a preferential treatment of one participant above the others, and the participle, on the other hand, controls this preferential treatment by feedback. Let us look at these two points separately. In the following we shall use (like we did before in I, 2) the more or less neutral--i.e. neither purely semantic nor purely morphosyntactic but more comprehensive--symbols: S for the only participants, and A/O for the participants of a two-place verb.

⁴ I owe Serzisko this reference to Kaznelson.

Normally, a "preferential treatment" is accorded to one among several participants; therefore at least two participants (and thus a two-place verb) must be at least facultatively there. A special case must be allowed, viz. when a sole participant (S) is capable of undergoing a "special treatment" besides its "normal" one. This seems to be the case with the so-called medial voice. Secondly, a "preferential treatment" means that the non-preferred participant is actually "discriminated against" the preferred one. Thirdly, by a "preferential treatment" the participant in question is brought nearer (closer) to the participee; as against it, the other, discriminated participants become distanced from the participee, they obtain a looser relation to it.

All these aspects of "preferential treatment" are more or less emphasized in the phenomena of voice (diathesis), especially in passivization but also in medialization, and in the so-called inverse flexion.

Now to speak of the participee as "controlling (the preferential treatment) by feedback" means that the "preferential treatment" of a participant is already present and active (provided for) in the participee. Such a control may also be gradual, i.e. the "preferential treatment" may in some cases be less marked in the participee and more so in the participants. The limits of the technique are reached when the "preferential treatment" of a participant results from using linguistic means

totally alien to the participee. This is the case in the procedures of topicalization, like in (7), or left-dislocation, like in (8), which we discussed in I, 2:

- (7) a. I like beans.
b. Beans I like.
- (8) a. Congressmen don't respect the President any more.
b. As for the President, Congressmen don't respect him any more.

As we indicated in I, 2, these procedures should be excluded from ORIENTATION, and therefore from PARTICIPATION, even if they certainly accord "preferential treatment" (in one sense or the other) to one participant.

Now of the two mentioned phenomena, viz. inverse verb flexion and voice, the former is more "centralized", i.e. more strongly originating in the participee. In a scale internal to the technique of ORIENTATION they should appear in the order given above.

The phenomenon called **inverse verb flexion** (not discussed before in I, 2) is well documented for the Algonquian languages, although it is also present in Nootka (Northwestern Pacific Coast), in some Australian languages and in the Tibeto-Birmanian family. A good introduction to the subject is given by Hockett (1966) with special reference to Potawatomi (see the summary in Seiler 1984). We shall only consider the two-valued verb forms of

Potawatomi. We have here first the person prefix, then the stem, then the orientation and directionality suffixes, then a position for plurality, and finally the so-called obviative suffix. Let us see some examples:

- (23) a. Direct flexion: 1 → 3⁶
 n-wapm-a
 1.SG-see-DIR 'I see him'
- b. Inverse flexion: 3 → 1
 n-wapm-uk
 1.SG-see-INV 'he sees me'
- (24) a. Direct flexion: 2 → 3
 k-wapm-a
 2.SG-see-DIR 'you see him'
- b. Inverse flexion: 3 → 2
 k-wapm-uk
 2.SG-see-INV 'he sees you'
- (25) a. Direct flexion: 3 → 3 (further)
 w-wapm-a-n
 3.SG-see-DIR-OBV 'he sees the other one'
- b. Inverse flexion: 3 (further) → 3
 w-wapm-uko-n
 3.SG-see-INV-OBV 'the other one sees him'

We have here three important pairs of concepts: ACTOR vs. UNDERGOER, direct vs.

⁶ We use the following abbreviation: 'n → m' means 'the *n*th person acts upon the *m*th person'.

inverse, nearer referent vs. further referent (obviation). There obviously are two subsystems within the flexional system:

- A. One of the participants takes part in the speech act (1st or 2nd person), the other does not (3rd person). The direct form (suffix -A) is then used for the expected, "natural", situation, viz. that in which the speech act participant at the same time is the ACTOR and the person who is outside the speech act (3rd person) is the UNDERGOER. In other languages this situation is not particularly indicated. The inverse form (suffix -uk(w)-) reverses the situation: the speech act participant is the UNDERGOER, the person outside the speech act is the ACTOR.
- B. If no one of the participants is a speech act participant (i.e. both are 3rd persons), then obviation comes to the fore. All NPs having animate referents get divided into two classes: proximate and obviative. A Potawatomi rule concerning text structure lays down that within a given text section one of the participants must be chosen as proximate. This is clear from the morphology--and also from the fact that all affixes of coreferential agreement (all person affixes) belong to the proximate set, i.e. they are not marked. All other participants of this text section must be obviated as further referents. This is done by means of NPs and of person affixes taken from the obviative set, i.e. by a special, marked, obviative morpheme. Obviation in Potawatomi is integrated into the inverse flexion in that the direct form is used in the "natural", expected, situation, viz. that in which the nearer referent is the ACTOR and the further referent is the UNDERGOER.

The remaining possible situation is that in which a speech act participant acts upon another speech act participant (1 -> 2 and 2 -> 1, i.e. 'I - you' and 'you - me'). Here we have a special mark: the presence or absence of a specific suffix.

It is true both of inverse flexion and of obviation that the "special treatment" requires a special (marked) element, while the "normal case" is indicated by the absence of this element (and thus is unmarked). What shall be "normal" and what "special" is decided by a hierarchy of naturalness. As to this hierarchy, we must distinguish (with DeLancey 1980) two aspects (see I, 4.5). On the one hand, we have the **attention flow** (AF), which is related to the natural sequence of the event, as seen from the standpoint of a nonparticipant observer. The natural orientation or directedness is from the **ACTOR**—the entity from which something comes out—to the **UNDERGOER**—the entity which something acts upon. On the other hand, we have the **viewpoint** (VP), typically the speaker's, from whose perspective the event is seen or described. Everything depends here on which participant appears to the speaker as the nearest and most significant. The natural directedness of the event (AF) can be reversed under the influence of VP, so that the **UNDERGOER** receives a special treatment instead of the **ACTOR**.

If we consider obviation in itself (i.e. independently of the inverse flexion), then we

may observe a kind of reversal of the "special treatment": an entity is here marked not as nearest to, and most significant for, the speaker but the other way round—as far from him, as a **further referent**. The participant involved is literally distanced from the participee.

In the case of **passivization** we have (like in inverse flexion) a reorientation in the treatment of A and O. Also similarly, the basis is a "natural" or "expected" weighting of A and O, viz. the active version, the reversal of which is the passive. In **antipassivization** we get something comparable, only the other way round: the "natural" treatment of A and O is ergative, and the antipassive produces a reorientation. The weighting, in analogy to the case of inverse flexion, is done with a view to properties having to do both with AF and VP. The former refers to the natural flow of the event from **ACTOR** to **UNDERGOER** (semantically from AG to PAT) and the latter to referential features such as significance for (or closeness to) the speaker, topicality, definiteness. The complex and multi-factorial concept "subject" (see Keenan 1976) embraces some of these properties.

It is also true of passivization that the participee controls directedness and its reversal by feedback. Morphologically, the verb form is especially marked in many languages possessing a passive. This is in agreement with the idea that passive is, syntactically, phrasal not sentential (see Keenan 1980 and above I,

2.1). On the other hand, passivization differs from inverse flexion in that certain features of the participants play a more or less important role in the former: Givón's typology of passive constructions rests upon a scale from "relation centralizing" to "relation decentralizing" (see Givón 1981; cf. also above I, 2.3). The most strongly centralizing language type consists of three features: the AG phrase is totally suppressed,⁶ the case marking of the other participants (the new TOPIC included) remains the same, and the verb is assigned a special passive marker (the Ute type). The most strongly decentralizing type also consists of three features: the case marking (and especially the subject case marking) of the participants is changed to signal the reorientation, the AG phrase is not obligatorily suppressed, and the passive version is more static than the active one (the English type).

Typology strikingly shows how passivization is a subcontinuum within the technique of ORIENTATION and, beyond that, within the dimension of PARTICIPATION. The point is always that the participative relation becomes increasingly specified through an increasing displacement of the formal means from the participle to the participants--from centralization to decentralization.

A last observation concerns the fact that languages (language types) have an overall

⁶ Keenan (1981) also considers agentlessness as a feature of the "basic passive" (cf. I, 2.1).

tendency either to A-orientation or to O-orientation (which in both cases may be reversed in one or the other direction). An unmarked voice which shows at least some semblance of O-orientation is the ERG-ABS system. An unmarked voice with A-orientation is that of the "active" type and of the NOM-ACC system (see Comrie 1981b:69). The latter might, however, be (all things considered) the "more natural" and therefore present in a larger number of languages.

3.5 Transitivity

A terminological remark is in order: the name of this technique--"transitivity" instead of "transitivity"--is deliberate. It stems from the idea that a technique (any technique) is not static, or even that it is not anything (a property or a state) but rather *does* something (we *do* something by it and with it).

When people talk of "transitive" and "transitivity", they often designate, in an undifferentiated fashion, facts which have each a hierarchically different status. This is the main obstacle to an adequate understanding of the relevant phenomena. We shall use the following terminology: "transitive (tr.)", as opposed to "intransitive (itr.)", is a morpho-syntactic property of a verb, i.e. that verb can or must enter into a relation with an object/PAT besides entering a relation with a subject/AG. If this is what is meant and no more, then it is

a question of VALENCY (see I, 1 and II, 3.3). On the other hand, "transitivization" is a functional term which designates a technique constituted as such by two counteracting principles: transitivization (TR) and intransitivization (ITR). It is in order to avoid a cumbersome double name ("TR-ITR") that we have adopted the positive term "transitivization" both for the technique as a whole and for one of its two principles (TR, as opposed to ITR). The reader must beware of a possible confusion here. Anyway, transitivization as a technique presupposes a distinction in valency between transitive and intransitive verbs; but it is rather more complex than just valency.

Let us propose the following definition of transitivization as a technique: it is the turning point of the whole dimension of participation, i.e. it signals the transition from **government** to **modification** as the predominant procedure, or else from **relation centralization** to **relation decentralization**.⁷ Now the content of transitivization as a principle (TR) is the effective action of an ACTOR upon an UNDERGOER. This must be viewed from both perspectives: from the ACTOR as the controlling element and from the UNDERGOER as the controlled element. This principle is a centralizing one, i.e. both participants appear as closely bound to the participee. As against

⁷ See Lehmann (1983) for the distinction between "government" and "modification". As I pointed out in II, 3.3, the other pair of terms has been later introduced by the same author.

it, the content of the principle of intransitivization (ITR) is the lack, or at least the scarcity, of any action by an ACTOR upon an UNDERGOER. This principle is a decentralizing one, i.e. participants appear as distanced from (loosely bound to) the participee--even if there are two of them. Semantically, the opposition between both principles is the opposition between stativization and habitualization. The interaction of these two counteracting principles results in a continuum (from greater predominance of TR to greater predominance of ITR).

This definition (and its consequences) are fundamentally different from Hopper and Thompson's view of transitivity (1980). However, their research does not lose any of its significance for that; in fact, it is indispensable for any progress in the field.

The technique of transitivization has a functionally well defined position within the overall continuum of the dimension of PARTICIPATION--so much so, that only such a position will enable us to understand it completely. The technique is based upon the interaction of two complementary and equally important principles (TR and ITR). The ITR principle is not just the denial (or the absence) of TR. Hopper and Thompson (1980) present a continuum (or I should say rather a scale; see Seiler 1983) from "high transitivity" to "low transitivity", which ends up in "nothing". This view is inconsistent with the

nature of the linguistic sign, for the linguistic signs of ITR also "stand for something".⁹

Hopper and Thompson list ten parameters or criteria as formal correlates of "high" and "low" transitivity. As any mere list, it is not ordered. However, the whole point is precisely how far these criteria belong to the participee and how far they belong to the participants. The following belong to the participee: action (kinesis), specificity, actuality, reality, affirmativity; also aspect (completeness), punctuality, telicity, resultativity. The rest belong to the participants: (a) the number of participants; (b) concerning A: activity, volitionality, index-referentiality; concerning O: affectedness, individuation, attainment, impingement.¹⁰

Such a division already entails that certain properties and marks appear on the participee, while others appear on the participants, and it surely matters which appears where. It is characteristic (iconical) of the transitional position of TRANSITIVIZATION (between government and modification) that marks should appear on both participants and participee. These marks are prima facie relevant criteria. Now Hopper and Thompson speak of parameters (1980:251f.); but if they are parameters, then they should appear as such, i.e. within a graduated scale.

⁹ Compare the remarks above on Hopper/Thompson 1984 (section 3.32).

¹⁰ Hopper/Thompson's list was completed by relevant criteria taken from Tsunoda (1981) and Silverstein (1976). See also 2.47.

This is certainly true for some of them (e.g. agentivity, individuality, kinesis, etc.). What is more than doubtful is their evaluation to the effect of determining "higher" and "lower" transitivity by just adding them up in yes-no oppositions.¹¹

I see another unresolvable inconsistency. On the one hand, the "transitivity hypothesis" posits correlations among marks of high transitivity and correspondingly also among marks of low transitivity (1980:255). On the other hand, however, whenever transitivity is calculated, each mark is taken in isolation and added to the others--as though it was independent of them. What then results is not a continuum but rather a binary distinction of high vs. low transitivity. Hopper and Thompson try to explain high and low transitivity functionally by connecting them with the discourse principles of "grounding" ("foregrounding" vs. "backgrounding"). There certainly is some important truth in this explanation--the fundamental relation between ground (ITR) and figure (TR). But we cannot accept this application to discourse as a primary datum; we propose rather that it follows from the basic function of the technique of transitivization as defined above.

To support this proposal, I would like to mention some controversial points, which can be clarified by our approach:

¹¹ This criticism is already in Drossard (1983:2).

First, Hopper and Thompson (1980:254) are surprised by the fact that (26), i.e. a sentence with only one participant, should be higher in transitivity than (27), i.e. one with two participants:

(26) Susan left.

(27) Jerry likes beer.

Their explanation of this fact boils down to mechanically adding marks up.

Now, *leave* is a verb of action (see the remarks on verb classes in 3.32) and accordingly presupposes a close connection with its participant(s). We thus have a strong relation centralization (of the sole participant here, since the other one is not mentioned). On the other hand, *like* is not a verb of action and does not presuppose an AGENS but at most an EXPERIENCER, whose relation to the participle is necessarily less close. That is why other languages, like Spanish, provide this participant with a more distanced or more decentralized mark, here the dative:

(28) Me gusta la cerveza.

Second, the indirect object (IO), as represented by the dative, can express a more distanced relation of a participant, as illustrated in (28). On the other hand, the dative can also a particularly close relation. Take Spanish again:

(29) a. Busco mi sombrero.

'I am looking for my hat.'

b. Busco a mi amigo.

'I am looking for my friend.'

(29b) shows a dominance of TR with a definite, human O and thus centralization; (29a) shows more decentralization with an inanimate O. Centralization is thus more marked in (29) and decentralization in (28). But in both cases the marking is done on the participants and by the very same formal means (the adposition A). It is the transitional status of the technique of transitivization which allows us to understand this. Incidentally, the dative is also the turning point within the continuum of case relations (viz. from the more concrete to the grammatical and vice versa).

Third, there is a controversy between Hopper/Thompson and Comrie about the O-relation. For Comrie (1981a:122ff.), in a sentence with two actants, A is typically animate and definite, while O is typically inanimate and indefinite. He says that the statistics support his claim (Givón 1979). Hopper and Thompson use other statistics (1980:290f.) to assert that the "normal" or typical O is definite. From each side follow different conclusions.

The contradiction can be dissolved if one takes the "dual" nature of the technique of transitivization into account--its complementary principles TR and ITR. If TR is dominant, then

the controlling participant A must be faced with a participant O which can really and actually be controlled; this shall be only or mainly a definite and animate being, for an indefinite and inanimate object cannot be controlled in the proper sense of this term. But if ITR is dominant, and the relation is rather distanced, then the above requirement does not hold; on the contrary, it is even plausible that a distanced participant (one loosely related to the participee) shall be an indefinite and/or inanimate object.

Fourth, a widely used test of transitivity is passivization, e.g. *John grew a beard* vs. **A beard was grown by John*. In this example *grew* would be considered at least as diminished in transitivity. But why should this test work? Because of the complementary nature of the technique of transitivization. If TR is dominant, one participant (the ACTOR) must exert control and the other one (the UNDERGOER) must be controlled. This means that the orientation (the directedness) must be reversible; and passivization is the formal means to do so in languages like English.

Fifth, the diversity of parameters is not only an intra-linguistic fact but can also be observed across languages. In neither case has it been exhaustively investigated. I don't think it is very likely that a merely additive calculation will be the last word. Typological comparison requires a study of cooccurrences and exclusions. Such a study is relatively easy for

languages like Tolai (see Mosel 1982:200ff.) which is able, by means of derivational suffixes, both to transitivize an intransitive version and to intransitivize a transitive one.

After all these special problems I would like to make a last remark concerning foundations. The relation to an ACTOR and the relation to an UNDERGOER can be expressed by a marker which represents the participants and appears on the participee. This has been called "indirect (case) marking" (Mallinson/Blake 1981; see also 2.44). We thus have to distinguish "cross referencing" from "agreement". Both result from the transitional character of the technique of transitivization. In the case of agreement the participee (as the governing element) refers to certain properties of the participants (as the governed element), e.g. to number and person in Latin. One could even speak here of a double direction of marking, since properties of a participant determine properties of the participee. Anyway, these kinds of agreement are limited (see Lehmann 1983:351). In the case of "cross referencing" representatives of a pronominal kind refer to class or case of the corresponding participants. As shown above (section I, 4.4), these representatives may even be such that can be distinguished and classified as belonging to an accusative, an ergative, or an active system—exactly like in case marking. However, it was also shown that case marking and indirect marking can obey different systems (e.g. in Warlbiri). It is therefore inadequate

to reckon indirect marking to case marking without further ado.

3.6 Case marking

In this field it is methodologically very important to keep the levels of analysis separate--conceptual, semantic, syntactic, morphologic, pragmatic. Only in this manner can we adequately describe how they interact and only then it becomes clear that the different levels do not correspond one to one. Another danger that may thus be avoided is that of trying to reduce all phenomena to just one level, e.g. to "actant structure" (syntactic level) or to "role structure" (semantic level). The definition that follows has to be understood functionally, which means embracing all the above levels.

Case marking (CM) is the signalization of relations of the participee to its participants on the latter. Such a signalization, in contradistinction to the "preceding" techniques, is only partially feedbacked, controlled or governed by the participee. Partially new information about the relations of the participants to the participee as thereby given: the relations become increasingly established (principle of predicativity) but therefore also increasingly distanced. The limit is reached when no morphosyntactic or semantic interaction can be observed. The additional information allows for a differentiation of the fundamental ACTOR-UNDERGOER dichotomy into a variety of

semantic case roles: AG, PAT, EXPER, BEN, INSTR, LOC.

According to this definition, case marking (like transitivization) must be understood as stemming from two counteracting pulls: relation centralization and relation decentralization. It follows from this that CM (just like all other techniques in this dimension) is a multifactorial concept.

The meaning of case forms,⁴ as analyzed by Jakobson (1936/1971) by means of his three correlation bundles (viz. relation, extension, and position), clarifies our point (see above I, 4.21). The first correlation (the *Bezugskorrelation*) concerns the relation of an event to (i.e. its impingement upon) a participant (such a relation is backfed by the participee). The second correlation (the *Umfangskorrelation*) concerns the extension, i.e. the degree of participation of the participants in the event represented by the participee (as seen from the participant's perspective). The third correlation (the *Stellungskorrelation*) concerns the position, i.e. the distance of a participant from the event represented by the participee (as seen from both perspectives, the participee's as well as the participant's).

The case paradigm and its structure (see I, 4.22) yields further confirmation of the correctness of our view of CM as resulting from a conflict between centralization and decentralization. The grammatical cases are governed--they are more strongly typified,

governed--they are more strongly typified, devoid of content, syntacticized, and they constitute the core of the case paradigm. The concrete cases are modifying--they convey additional information, they are less syntacticized, and they lie at the periphery of the case (matrix) space. The syntagmatic findings and the paradigmatic findings are two aspects of one and the same relationality (see Seiler 1967:65ff.). Even within one case we can observe, in its different uses, the conflict between both tendencies: as Kuryłowicz has pointed out (1949/1960:13ff.), the accusative, being "primarily" a grammatic case, can "secondarily" assume a concrete meaning, e.g. 'direction'--and vice versa, the instrumental, which is "primarily" concrete, can be "secondarily" used grammatically (syntactically), viz. as subject. We shouldn't be surprised if this dynamic of counteracting forces, intrinsic to the case system, is also reflected in diachrony: in linguistic change the forces of "usure" and "expressivité", to use Frei's expressions (1929), are very active (see I, 4.22, where we connect these expressions with the principles of indicativity and predicativity).

We should not forget that the transition from "grammatical" to "concrete", and vice versa, is not immediate but gradual--and continuous. This continuum also plays a role in the "following" techniques (verb serialization, causativization). And it corresponds, of course, to the

well-known hierarchy of accessibility of syntactic relation to relativization (Keenan/Comrie 1977, Comrie 1981a:148ff.).

Our view of case marking as a continuum (or rather as a subcontinuum within the overall continuum of the dimensional), as laid down in the above definition and remarks, relieves us from the duty of giving the exact number of case relations--a task which the case grammarians (Fillmore 1971) have for a long time vainly tried to solve. We have pointed out the acting forces and the ordering principles which derive from them; we have pointed out the continuum thereby constituted and its limits. Within these limits the number of "cases", both semantically and morphosyntactically, may vary--which agrees with the empirical findings.

A functional evaluation of the three basic CM systems (NOM-ACC, ERG-ABS, and the "active" system; see I, 4.6), as well as of split CM (see I, 4.7), must in the last instance be derivable from our definition. For this we have to take into account that all procedures observed in the "preceding" techniques (indication/predication, noun-verb distinction, valency, orientation, transitivization), and their functional counterparts, are components or factors of the phenomena under discussion.

A fundamental fact is that CM in the overwhelming majority of the languages investigated, obeys the Principle of Economy, i.e. the mark assigned to the only participant of an intransitive verb coincides with one of the two

participants of a transitive verb (see I, 4.6). This shows that the participative relation obeys one and the same principle--closeness of the relation vs. distance.

The active system unites and divides in a consistent semantic fashion (AG vs. PAT) and thus the corresponding CM is strongly controlled by the participlee, i.e. by the distinction of active or dynamic vs. inactive or static verbs. In this system there is hardly any syntactic typification or syntactic use.

The NOM-ACC system unites and divides in a partially semantic and partially syntactic fashion. The equal treatment accorded to S and A goes hand in hand with: (a) sentence-initial position, (b) participant's control upon agreement, and (c) absence of overt CM. These three features constitute together the so-called SUBJECT; and each of them is a strategy for coding the TOPIC. All this may be brought together from the standpoint of orientation: NOM-ACC languages are A-oriented; passivization operates a reversal of this A-orientation. As against them, ERG-ABS languages have O-orientation, which is reversed by anti-passivization. The ERG-ABS system, however, is not quite the mirror image of the NOM-ACC system; for the concept of a subject is problematic in the former case.

All in all, it would appear that relation centralization is stronger in the ERG-ABS system than in the NOM-ACC system; but this is just now only a conjecture.

Now, how can split CM be explained in our dynamic model, i.e. by centralization and decentralization? We have met the following factors:

- (30) a. Verb classes, i.e. the semantic character of the verb: degree of impingement, effectiveness, control (see the verb class scale in Tsunoda 1981, presented above in section I, 4.7).
- b. TAM specification of the verb (see Tsunoda 1981).
- c. Properties of the participant NPs: agentivity, animateness, empathy hierarchy (see Silverstein 1976, DeLancey 1980).

Not only CM as overall technique but also split CM, i.e. the transition from one system to the other, is determined by several factors, the first two of which depend on the participlee while the third has to do with the participants. One can imagine that in some languages the centralizing factors will override the decentralizing ones, and in others it will be the other way round. An urgent task would be to investigate each particular language for the interaction of the above factors (in case all three should indeed play a role).

As a last remark, let us point to a formal connection which can be understood in the dimensional terms I am proposing. ORIENTATION--as well as the "following" techniques insofar as they include orientation as a component--makes variously use of the combination of a full verb with an auxiliary (e.g. 'be', 'become', 'come',

'get', 'go') as formal means for passivization inter alia. On the other hand, these or related auxiliaries also play a role in TAM distinctions. The similarity or even identity of these formal means may be understood if one learns to appreciate the role played by TAM distinctions in the constitution of the participative relation as stemming from the interaction of centralizing and decen-tralizing forces. This is, as we have seen, a feedback control factor for CM--and at the same time the point of transition to verb serialization.

3.7 Verb serialization

Verb serialization serves to introduce participants in accordance with the participee and its inherent features. The formal means used is the positing of a "second verb" belonging to a closed set. This "second verb" has auxiliary character, i.e. it is less independent than the "first" or main verb, both as to the selection of participants and as to the verbal categories (TAM, polarity), and in addition it is also less semanticized, i.e. it has less content.

The definition allows for degrees in independence (i.e. how far the "second verb" may be a full verb). The lowest degrees go down to adpositions and even to case marking. It could be asked whether "adpositions" do not constitute a technique for themselves. An argument in favour is that adpositions (and especially prepositions) may, systematically as well as

diachronically, be derived from categories other than serial verbs, say from relational nouns such as 'back', 'face', 'forehead', and so on (see Kölver 1983 and above I, 5). Given the present state of the art, I wouldn't like to take a firm position either pro or con. Anyway, the question "Serial Verb or Preposition?"--and "Co-verb or Preposition?" (see Li/Thompson 1981)--cannot be a categorial all-or-none question.

The dynamics of counteracting forces (centralization vs. decentralization) may be followed all the way down to the smallest details in the case of verb serialization. If verb serialization develops in the direction of adposition or even of case marking, then the semantic content of the "second verb" tends to disappear while that of the "first verb" becomes richer--the whole development leading to the transitivization of the latter (see I, 5), i.e. to centralization. On the other hand, the appearance of verb serialization, both synchronically and diachronically, is inversely proportional to the closeness of the relation between participants and participee. If the relation is less inherent to the participee, then it would be tend to be established by particular formal means--the serial verbs--and vice versa: if the relation is established by means of serial verbs, then it will be more distanced. The following hierarchy holds (see 2.5 and Kuhn 1981):

- (31) INSTR
 > DIR > LOC > BEN > PAT
 COMIT

If a participant role PAT is anchored to the participee through verb serialization, then this will also be the case for all participant roles to the left of PAT; the converse is not true. Thus there are languages which show verb serialization only for INSTR but none which show it only for PAT. In fact, verb serialization is seldom applied to PAT and never for AG. Even within a particular language it is the same hierarchy (31) which governs the transition of the "second verb" from almost full verb to preposition-like coverb--as has been made clear by Paul (1982).

The meaning of "distancing" and "distanced or loose relation" becomes clearer in the technique of verb serialization: it allows for the introduction of participants which are weakly or not at all provided for in the participee; it does so by increasingly predicative means, i.e. by means which are themselves relational and thus introduce more information. Of course, these participants, which are thus introduced by verbal means, do not govern the participee--this would be a contradiction in terms. One should rather say that they modify it (like adverbials).

The technique of verb serialization make contact with Aspect (cf. II, 3.6): a combination of a "full verb" with a "functional verb" like 'take', 'go' or 'come' serves to express the

complexity or globality of the action ("the action taken together" or "as a whole"), or else its effectiveness. Thus consider the following Spanish sentence:¹¹

- (32) Tomo y me voy
 I take and me go
 'I shall go now'

Still, there is a difference with respect to verb serialization: the two verbs are conjoined by 'and'.

Although functional verbs constrain the choice of participants (arguments), this is nevertheless open as to either A or O. If the latter is realized, then a construction appears which is quite similar to a causative one and thus in a way represents the transition to the following technique--like in this Yatie sentence already quoted (see I, 5.5):

- (33) a. utsi ikù 'The door is shut'
 YAT door close
 b. iwyi awá utsi ikù
 child took door close
 'The child shut the door'

3.8 Causativization

Causativization implies a complex participee. Two components have to be distinguished: one

¹¹ See Coseriu 1966; for a similar construction in Modern Greek see Seiler 1952:1548ff.

must represent the cause or causation, and the other must represent the effect or result. A systematic opposition must obtain between the causative construction and a non-causative one which represents the result in itself, as an "autonomous event" (Talmy 1976). The A of the causing component is the **causator**; the SUBJ or A of the effect or resulting component is the **causee**. The representation of the latter is variable: it can refer to actions, events, states. The representation of the causing component is not variable. This component can be represented by a verb (English *cause*, German *machen*, *daß...*, French *faire*, and so on). The construction has then two verbs (periphrastic causativization). In this case there are again several possible degrees as to which verb controls which. On the other hand, the causing component can be represented by a derivational morpheme affixed to the resulting component (morphological causativization). In fact, we have a continuum from periphrastic to lexical causativization. The semantic counterpart is a continuum from indirect or mediated causation (periphrastic) to direct or immediate causation (lexical). What we said above on control (see II, 3.5) suffices for direct control; but in case it is a matter of indirect or mediated control (i.e. in case the "causee" may or may not have control), the question arises as to how will the scale of control exerted by the "causee" be coded. We have again a hierarchy here (see Comrie 1981a:174 and above I, 6):

(34)	INSTR		DAT		ACC
		>		>	
	OBL		IO		DO

I.e. if the "causee" is INSTR (or OBL), then it has more control than if it is DAT (or IO); and again if it is DAT (or IO), then it has more control than if it is ACC (or DO).

The technique of causativization is again a turning point; in fact, it is the endpoint of the dimension of PARTICIPATION³ as such. For it represents the transition from simple sentences to complex sentences. It is true that on the strength of evidence from particular languages and on the strength of conceptual analysis it might be said that a simple participle, represented by a simple transitive verb, intrinsically presupposes not only the event as such but also its causation (principle of indicativity); and also that this component (the causing component) can then be made explicit by another verb, say *cause* (principle of predicativity). And we have thus again the complex dynamics already sufficiently described, viz. explication (periphrastic causativization) vs. grammaticalization (via morphologic causativization up to lexical fusion). However, all this concerns what is in the participle and not the relation of participle to participants. It is rather a matter of separating a second, more or less independent, participle having its own relations to the participants. In this sense we must say that the dimension of PARTICIPATION

ends here. Of course, in another sense it is continued by complex sentences.

3.9 A note on complex sentences

It is well known that when describing and explaining complex sentences we have to do with relations of dependence. Dependence, that is, between participees: between a governing participee, typically represented by a Main Verb, and a governed participee, typically represented by a Subordinate Verb. Now since participees do not exist without participants, these get involved in the dependence relation. A participee with its participants may assume the role of participant toward a superordinate participee. We then speak of complement sentences. Now as a subordinate participant enters into a more distant or looser relation to its superordinate participee, it slowly glides from a complement sentence to a modifying adverbial sentence and even to freer constructions down to juxtaposition or parataxis.

Givón (1980:332ff.) has proposed a typology of complement sentences in form of a "hierarchy of binding". His concept of **binding** is rather close to our concept of relative distance (closeness) between participee and participants. One finds here again the counteracting, conflicting forces:

A. The relation is intrinsic to (provided for in) the participee (indicativity, government). We have here first a classification

of verbs (like with simple sentences). But these verbs are not arbitrary--they denote mental and emotional acts of animate beings, especially of humans. Givón (1980:369) has classified them according to their **binding strength**, i.e. according to how far they determine the properties of participants (here of subordinate sentences). The crucial parameters are here "success in action", "emotional commitment", and "epistemic certainty". Each one of them is hierarchically ordered. The higher a given verb is in these scales, the stronger is its power to determine the semantic and morphosyntactic configuration of the subordinate sentence - down to defectiveness (i.e. the subordinate sentence will have to be represented by a nominalized verb or an infinitive, with or without participants, etc.).

B. The relation is only partially inherent to the participee (predicativity, modification). Like with simple sentences again, additional information will be conveyed which characterizes the superordinate participee. The degree of explicitness, and thus of independence, of the subordinate sentences is correspondingly higher.

All in all it might be said that the participation which we face in the case of complex sentences is of a very special kind, because it concerns the mental and emotional life of people.