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Participant roles, thematic roles and syntactic relations

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Abstract

Semantic relations are analyzed at the levels of participant roles, thematic roles and syntactic relations. The first level serves as a tertium comparationis for linguistic strategies recognized at the two lower levels.

A couple of functional subdomains of participation are analyzed, including causation, benefaction, external possession and concomitance. Languages differ typologically by their choice as to which participant roles they express and which ones they leave to inference.

In some participant constellations, the choice of a particular strategy is semantically motivated; in other constellations it is not so motivated, but may still be pursued by a language. A language may be characterized at the typological level by the extension of a strategy over and above its proper functional domain.

1. Introduction

This paper explores a descriptive framework, consisting of a methodology and a set of basic notions, for the semantic analysis of the relations of verbal dependents. It discusses a set of examples from diverse languages to support the following theses:

- Participant functions must be analyzed at different levels. Apart from the level of grammatical structure, several theories provide only one level at which participant roles are analyzed semantically, under the label of case roles or theta roles or the like. Such theories cannot account for the intricacies of participant relations, especially for typological differences in this domain.
- Participants are connected with the situation core and with each other by a complex network that goes far beyond relations that hold between the verb and its dependents. In particular, a given participant may bear more than one role at a time. Of particular importance in this respect are possessive relations among participants.
- Not every role that a participant bears at the cognitive-referential level is coded. Converting participant structure into syntactic structure involves making a choice as to which relations are coded and which are left to inference.
- The criterion of which participant roles are coded and which are left to inference provides an instructive syntactic typology in the functional domain of participation.

The paper draws on the results of a five-years project on the grammatical and lexical typology of Yucatec Maya,[1] which are freely made use of. The publications (Lehmann et al. 2000[D], 2000[i]) identify the sources of the examples.

2. Levels of representation

It is a basic methodological prerequisite of any comparison that the tertium comparationis must be independent of the comparanda. Consequently, if the comparanda are linguistic in nature, the tertium comparationis must be outside language. If we compare grammatical and lexical structures, the tertium comparationis must be in the realm of the designatum. Many have sought it in the real world. However, the tertium comparationis is not a real object; it is a parameter on which the comparanda take on values. It is, thus, a mental construct. The tertium comparationis in linguistics is of the same nature as what remains constant under translation. This is not the real world either, but instead the message, which is a mental construct, too.

E1. Linda fixed the boy's bike.

A sentence such as E1 represents a situation. A situation is a mental construct. It belongs to the level of cognitive and communicative domains which language serves. The sentence itself has a grammatical structure that is peculiar to this historical language, with an English-style subject, direct object, genitive attribute etc. These two levels are numbered #1 and #3 in T1.[2]

T1. ***Levels of representation***

#	level	type of entities	example components	roles
1	cognitive-referential	cognitive & communicative domains	situation: situation core, participants …	participant role
2	typological	strategies	proposition: predicate, arguments, relators …	thematic (macro-)role
3	language-specific	structures	sentence: verb, complement, adjunct, case …	syntactic function + significatum of case relator

The cognitive and communicative domains of level 1 comprise such concepts as spatial orientation, possession, reference, participation etc.[3] Each of these domains consists of a set of concepts and operations which are mapped onto linguistic expressions and their structure. In what follows, we will concentrate on one of these domains, viz. participation.

Translating E1 into German, we get E2.

E2.	Linda	flickte	dem	Jungen	das	Fahrrad.
GERM	Linda	fixed	the:DAT	boy	the	bicycle

Since E1 and E2 are translation equivalents, they may be assumed to represent the same situation. There is an interesting difference at level 3 of T1: *the boy* is a genitive attribute in E1,

[1] Support of Deutsche Forschungsgemeinschaft for grant Le 358/12 is gratefully acknowledged.

[2] Cf. Coseriu 1987:177-198. Participant roles and thematic roles are also distinguished in Van Valin & LaPolla 1997, ch. 3.2.3, but there thematic roles are purely semantic, whereas they have structural properties in the present conception.

[3] Cf. Seiler 1988 and 2000 for the theoretical background.

but a dative adjunct in E2. If we translate our example sentence into further languages, some like Turkish and Yucatec Maya (E3) will side with English in also representing this participant in a possessive attribute, while others like Latin (E4) and Wardaman will rather side with German in representing the participant in an adjunct.

E3.	t-u	yutskint-ah	u	klèetah	xibpàal	Linda
YM	PST-SBJ.3	repair-CMPL	[POSS.3	bike	boy]	Linda

E4.	Linda	puero	bicyclum	refecit.
LAT	Linda:NOM.SG	boy:DAT.SG	bicycle:ACC.SG	repair\PERF:3.SG

Of course, the English possessive attribute differs totally from the Yucatec possessive attribute; the latter does not have a genitive to begin with. And in all of these languages, the order of the constituents in question differs. We nevertheless recognize a common **strategy** in English and Yucatec, since *xibpàal* is a dependent of *klèetah* in E3 just as *the boy* is a dependent of *bike* in E1. The strategy consists in representing the participant in question by a possessive attribute to the nominal expression representing another participant rather than by an adjunct to the verb. Languages differ in the strategies that they prefer in the representation of situations. These strategies can be used to typologize languages. We can therefore posit the level of typological strategies in T1 as an intermediate level between cognitive and communicative domains and language-specific structures. While the entities of level 1 are non-linguistic, those of levels 2 and 3 are linguistic entities, but at different levels of abstraction.

While levels 1 and 3 are needed in any linguistic theory or description, since they are the levels mapped onto each other by language activity, level 2 fulfills a methodological function in typology. With respect to level 1, it categorizes the ways in which languages represent the designatum, thus bringing order into the variety. With respect to level 3, it serves as an intermediate tertium comparationis, because we do not compare the Yucatec possessive construction directly with the Latin dativus commodi, but instead we first relate it to the typological strategy of the possessive attribute, and only then do we identify possessive attribution and dative adjunction as two alternative typological strategies to represent the participant in question.

3. Situation structure

3.1. Elements

The basic concept of **participation** is the **situation** (sometimes called state-of-affairs or event). A situation consists of a set of entities called **participants** which are related to each other by a network of relations which constitutes the immaterial center of the situation, the **situation core**. Simply speaking, participants are generally represented by naked or cased noun phrases or adpositional phrases, while the situation core is generally represented by a verb. In E1, there are three participants, *Linda, the boy* and *the bike*; and *repaired* represents the situation core.

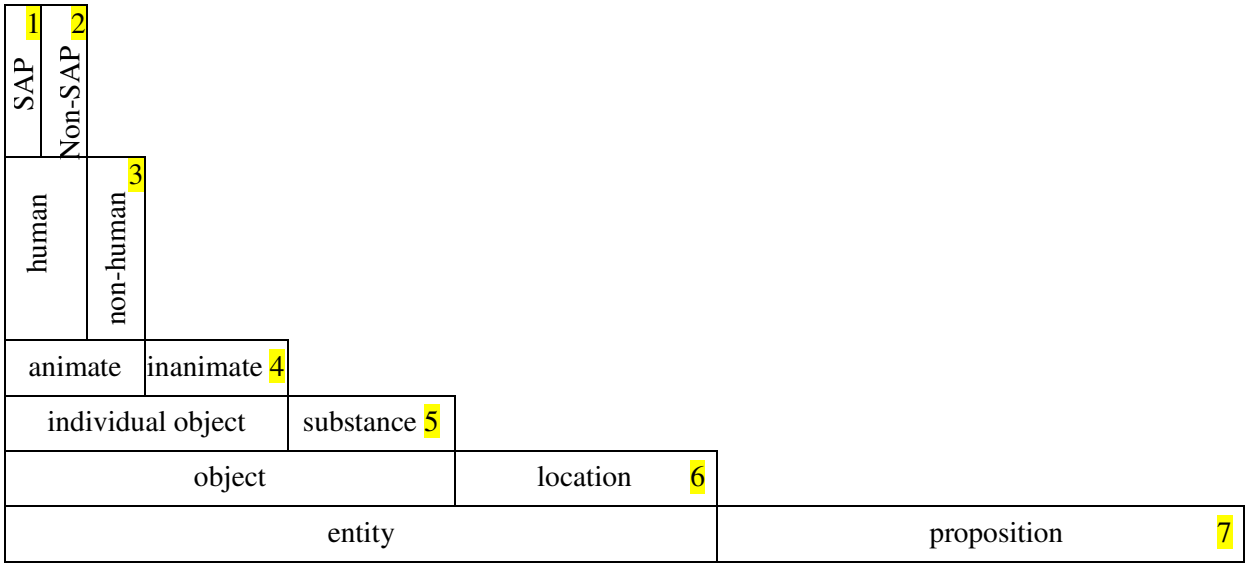
The situation core has a couple of properties the most important of which is its dynamicity. On this parameter, we distinguish properties, states, processes and events; and in the more dynamic situations, there are additional differences in telicity. Such distinctions are generally

(but not exclusively) coded in the predicate. The properties of the situation core are not at stake in the present treatment; cf. Lehmann 1991 and Van Valin & LaPolla 1997, ch. 3.

Participants have **properties** and **roles**. Their properties are independent of the situation; they are just categories into which entities fall. The roles are functions that these entities have in a particular situation; these are relational concepts.

The essential categories into which entities fall may be systematized in the form of a hierarchy which has been called animacy hierarchy but which we call (with Kuno & Kaburaki 1977) **empathy hierarchy** because empathy and not animacy is the decisive structuring factor. It has the seven basic levels represented in S1; finer distinctions may be made in specific languages.

S1. ***Empathy hierarchy***



To refer once more to E1, the two participants *Linda* and *the boy* are of the category of human beings, while *the bike* is an inanimate individual object.

The **roles** that participants bear in a situation are generic functions derived from the relations existing among them. Agent, patient, experiencer, beneficiary, instrument etc. are participant roles. Over and above their specificities, they are structured by two general parameters, control and involvement.

3.2. Involvement and control

The two essential parameters structuring the field of participant relations are the degree of involvement and the control of a participant. Both are gradient parameters. A participant is maximally **involved** in the situation if the situation is inconceivable without this participant, and the pole of maximum distance is reached when the participant is actually more deeply involved in a connected situation than in the situation at hand (cf. Lehmann 1991:207). **Central participants** are maximally involved; **peripheral participants** are loosely involved. Central participants are constitutive components of the situation.[4] Peripheral participants presuppose

[4] Central participants are "on the scene", as Kirsner 1985, §2.1 puts it.

the presence of central participants. They enrich a situation without changing its basic nature. Instruments and comitatives, for instance, only occur in situations with an actor and, possibly, another central participant, the undergoer. Syntactically, strong involvement of participants correlates with the valency dependence of the nominals representing them: Central participants tend to be represented by complements. Peripheral participants like comitative, instrument or beneficiary require additional apparatus: they tend to be coded as adjuncts, in oblique cases or adpositional phrases, or as dependents of additional verbs.

For central participants there is a second gradient, viz. **control**. Leaving aside one-participant situations, there is typically a cline between one participant that controls the situation and another one that is controlled by it. The control difference is relative. The participant that has most control in the situation is the **actor**, the one that is most controlled is the **undergoer**. The **indirectus** is the third-most central participant, which is neutral to control; we will come back to it in section 3.4. The prototypical actor is the **agent**, which in addition to control has intention; the prototypical undergoer is the **patient**, which in addition to being controlled is affected by the situation. The less involved a participant is, the less it is characterized by the control cline. Abstract entities are exempt from control. This relational structure of a situation is shown in S2.

S2. ***Involvement and control***

control cline / macrorole / involvement	**control** ⟷ **affectedness**			
	actor	**indirectus**		**undergoer**
central	agent	force	theme	patient
↕	experiencer			
	recipient/addressee/goal			
	emitter/source			
	beneficiary/place			
peripheral	comitative/ instrument			

3.3. Participant roles

For any given entity, the relations that it can contract are essentially conditioned by its properties. Just as a woman cannot have the same kind of relation to her husband and to her cat, so an animate being can have the role of an experiencer, but not the role of an instrument in a situation. Consequently, the roles are defined not only by relational features, but in the first place by properties of their carriers. The property most relevant here is the position on the empathy hierarchy S1 that a participant occupies. Several of the roles differ more by the empathy of the participant in question than by their relational function. T2 classifies some important participant roles by their empathy, involvement and control. The numbers for empathy refer to the levels of S1. Shading means ‘possible’, dark shading means ‘prototypical’. For involvement, ‘1’ means ‘central’, ‘-1’ means ‘peripheral’. For control, ‘1’ means ‘control’, ‘-1’ means ‘affectedness’. ‘0’ means ‘not specified’.

T2. ***Relational features and absolute properties of participant roles***

role	empathy							involvement	control
agent	1	2	3	4	5	6	7	1	1
force								1	1
comitative								-1	0
instrument								-1	0
experiencer								0	0
emitter								0	0
source								0	0
recipient/addressee								0	0
goal								0	0
sympatheticus								1	-1
patient								1	-1
beneficiary								-1	0
place								-1	0
theme	1	2	3	4	5	6	7	1	0

The following comments seem in order:

1. Some roles are indifferent to empathy. This is, first of all, the theme, which is only defined by its central involvement. Similarly, the patient is defined by its affectedness, which only excludes propositions.
2. Certain categories of the empathy hierarchy are constitutive of prototypical instances of a role. These are primarily the speech act participant and the location, less prominently the inanimate object. The other empathy categories are only covered by extension of a role to less prototypical representatives.
3. Several roles are not distinct by the above classification. These include the members of the subsets {comitative, beneficiary}, {experiencer, recipient, addressee}, and the local roles {source, goal, place}. All of these are non-central. While the central roles differ essentially by control and affectedness, the non-central roles differ by particular features that are outside T2.
4. Some of the roles come in minimal pairs and triples:
   a. Pairs that differ – at least in T2 – only by empathy include the agent and the force, the comitative and the instrument, the emitter and the source, the recipient and the goal, the sympatheticus (see p. 10) and the patient.
   b. N-tuples that differ from each other only by involvement are comitative/beneficiary vs. experiencer/recipient/addressee/emitter.
5. Many more roles are differentiated for empathic than for anempathic participants. This is a consequence of an anthropocentric world view: we just know and care more about the ways that ourselves are engaged in situations than the ways of other objects.
6. Among the roles that are not specified for control and affectedness, there are some which could not possibly be specified for it, like the local roles; and there are others which may

materialize, in different situations, with or without control. For instance, the beneficiary in E1 looks as if he had no control of the situation and were rather affected by it. But if we add the adverbial *upon his request* to E1, this supposition, if it ever was there, is cancelled. Thus, the concept of the beneficiary is compatible both with the idea of the participant in question controlling and of this participant undergoing the situation. The same is true for the roles of comitative and experiencer.

3.4. Macroroles

There are two main strategies of structurally representing participant roles at the typological level: Either the dependent in question is governed through verbal valency, or it is not. In the former case, it is a complement, in the latter case, it may be an adjunct or may be in an even more peripheral construction. A complement need not bear a case relator; it may be governed directly. An adjunct is typically joined to the verb by some relator. There are exceptions to both of these generalizations, which we will forego here.

If only participant roles had to be cared for in the linguistic representation of a situation, then central participants would always appear as complements and peripheral participants as non-complements. However, the fundamental syntactic functions, viz. subject – direct object and ergative – absolutive, are not only reserved for central participants, but are also the goal of operations of promotion which serve functional sentence perspective. The passive is a simple example:

E5. a. Linda solved the problem.
b. The problem was solved by Linda.

In E5.a, Linda is represented by the subject; in b, she is represented in a prepositional phrase. From a structural point of view, she is thus central in E5.a but peripheral in b. However, she is clearly the agent in both cases. From this it follows that the extent of involvement of a particular participant is tertiary with respect to the parameters of empathy and control. The involvement value in T2 refers to basic manifestations of the participant. It may be overridden by processes of promotion and demotion without changing the essential nature of the participant.

A **macrorole** is a type of central participant function that is the goal of the neutralization of peripheral roles and that is situated at the typological level.[5] There are three macroroles, actor, undergoer and indirectus:

- The **actor** is the macrorole of a central participant that has more control than the other participants in the situation. Its prototype is the agent.
- The **undergoer** is the macrorole of a central participant that is more controlled than the other participants in the situation. Its prototype is the patient.
- The **indirectus** is the macrorole of a central participant that is empathic but neither marked for control nor for affectedness. Structurally, it corresponds to the indirect object of those languages that have it. Its prototype is the recipient.

As is well known and illustrated once more by E5, English-style subjects are indifferent to the thematic role associated with them. This is not quite so with direct objects. In German, for

[5] On the concept of macroroles, cf. Foley & Van Valin 1984:59 et pass., Van Valin & La Polla 1997, ch. 4.

instance, the direct object function can only be taken, with a few lexical exceptions, by undergoers. The **undergoer**, however, subsumes a variety of different participant roles. One operation that brings this about is the **applicative**. It equips the verb with the prefix *be-* and with a direct object slot which is occupied by a participant with a peripheral role. The applicative is thus an operation of promotion of a participant to a central position. If the base already had a direct object, this is demoted. E6 is a typical example:

E6. a. Paul kocht für die Kinder.
GER Paul cooks for the:PL children
'Paul cooks for the children.'

b. Paul bekocht die Kinder.
Paul APPL:cooks the:PL children (ditto)

The children bear the participant role of the beneficiary both in E6.a and b. However, only in E6.a is this role mapped iconically onto an adjunct. In E6.b the participant is promoted to direct object function. This does not change its participant role as a beneficiary, but at the typological level, this role is mapped onto the undergoer role. The latter neutralizes the specificities of the peripheral roles and only marks its carrier as being controlled in the situation.

At the level of linguistic structure, a peripheral role can only be posited if it is expressed by a case relator joining the dependent in question, like the benefactive preposition *for*. It cannot be posited if the dependent in question is directly governed by the verb. This is equally true in two cases:

a) The verb is **morphologically elementary**, as e.g. Engl. *use*. Its direct object has the participant role of instrument, but neither at the typological nor at the language-specific level is it represented as an instrument, i.e. as an instrumental adjunct. Its participant role is structurally neutralized in the undergoer role. At the cognitive-referential level, we can identify the instrument role on the basis of the lexical meaning of *use*.

b) The verb is **derived** in such a way that the base combines with a case relator which equips the verb with an actant slot to be occupied by a dependent that bears the participant role in question. This is so with applicative derivations such as German *be*-prefixation in E6. Its direct object is an undergoer; the fact that it bears a specific peripheral role is not expressed at the level of syntactic relations. It can be inferred on the basis of the function of the *be*-prefix and of the paradigmatic relation between constructions such as those of E6.

Let us look at another example of neutralization of a participant role in the undergoer macrorole. This time the participant role is the **comitative**. Yidiṇ (Pama-Nyungan) has a comitative case which appears in the a-versions of the otherwise parallel examples E7 and E8 and which directly represents this participant role.

E7. a. wagu:dja buṇa-:y gali-ŋ
YID man(ABS) woman-COMIT go-PRS
'The man is going with the woman' (Dixon 1977:109)

b. wagudja-ŋgu buṇa gali:-ŋa-l
man-ERG woman(ABS) go-TRR-PRS
'The man is going with / taking the woman.' (Dixon 1977:109, 293)

E8. a. ŋayu djana-ŋ djugi:
YID I(NOM) stand-PRS stick:COMIT
'I am standing with a stick (in my hand)' (Dixon 1977:303)

b. ŋayu djugi djana:-ŋa-l
I(NOM) stick(ABS) stand-TRR-PRS
'I am standing with a stick (in my hand) / holding a stick' (Dixon 1977:303)

Yidiņ also has a derivation similar to the applicative which provides an intransitive base with a suffix *-ŋa*, thus transitivizing it and enabling it to take the comitative in the absolutive function, i.e. as an undergoer. This is illustrated by the b-versions of E7f. The a- and b-versions are, thus, in a transformational relationship. What is of importance here is that, again, the same participant role is present in all of the examples independently of its structural manifestation, but only the a-versions exhibit a comitative at the level of linguistic structure.

The **indirectus** is illustrated by E9f. In E9, the son is a recipient in both versions. The b-version represents him by an indirect object, thus as an indirectus, the a-version by a directional adjunct.

E9. a. Linda schickte ein Päckchen an ihren Sohn.
GERM Linda sent a packet to her:ACC son
'Linda sent a packet to her son.'

b. Linda schickte ihrem Sohn ein Päckchen.
Linda sent her:DAT son a packet
'Linda sent her son a packet.'

E10. a. Linda machte für ihren Sohn die Hausaufgaben.
GERM Linda made for her:ACC son the:PL homework
'Linda solved the homework assignment for her son.'

b. Linda machte ihrem Sohn die Hausaufgaben.
Linda made her:DAT son the:PL homework (ditto)

In E10, the son is a beneficiary of Linda's action. He is represented by a benefactive adjunct in E10.a, but is promoted to indirectus function in b. The indirectus covers participant roles that may also be covered by the actor or the undergoer. Therefore its locus is in three-participant situations where actor and undergoer are already occupied.

3.5. Participant role accumulation

The mapping of participant roles onto thematic roles and of these onto semantosyntactic and grammatical functions of a particular language is, in a sense, a process of abstraction. Situations are mental constructs with a rich structure. The speaker cannot represent all of their aspects by linguistic signs. Linguistic signs with their significata can only hint at what the speaker has in mind. The speaker therefore has two related tasks:

a) He has to make a choice as to which of all the features of the situation he wants to code and which he wants to leave to inference.
b) He has to typify those aspects that he wants to code by subsuming them under significata available in his language.

In what follows, we will be concerned with the former of these two tasks.[6]

Participant roles are themselves already abstractions over many diverse relations. We speak of an agent in the situations designated by verbs such as *run, repair, insult, calculate*, to name but a few. In reality, however, the precise way that the agent engages in the situation differs enormously from one situation to the other. All of these specificities are brought on the common denominator of the participant that has intention and control of a situation. The same goes for the other participant roles. One consequence of this is that several of the roles share their values for the constitutive features of empathy, involvement and control. In other words, such roles are compatible with each other, the more so as basic involvement may be overridden by processes of promotion and demotion.

Let us compare E1 and E2 again. The strategy used in English represents the boy in the role of possessor of the bike. The strategy used in German represents him as a beneficiary of the act. If we concede that the sentences are translation equivalents, it follows that at that level of representation where the situation is a mental construct – the cognitive-referential level –, the boy bears both roles. This is not a problem logically since both possessors and beneficiaries are prototypically highly empathic and indifferent to control.[7]

Languages generally opt for the expression of one or the other of these roles. The typological strategy employed in English consists in expressing the possessive role to the detriment of the benefactive role. The strategy employed in German has it the other way around. The role which is not coded linguistically is left to inference. In the case of E1, the fact that the boy benefits from Linda's action is inferred on the basis of world knowledge; and so is the fact that the bike belongs to the boy in E2. Such inferences are, of course, defeasible. The level #2 in T1 permits us to identify types in the structures that languages use to code the designatum.

The dative adjunct in E2 is an instantiation of the macrorole of the indirectus. The indirectus, in turn, is an instantiation of the participant role of the beneficiary. However, it neutralizes a couple of different participant roles. E11 has the boy in the same structural position.

E11.	Linda	setzte	dem	Jungen	das	Baby	auf	den Schoß.
GERM	Linda	placed	the:DAT	boy:DAT	the	baby	on	the:ACC lap

'Linda put the baby on the boy's lap.'

At the cognitive-referential level, however, the boy is not a beneficiary in E11 since, contrary to E2, the action is not done for his benefit. Instead he is what we call a **sympatheticus**, which is the role of an empathic patient that is affected if its part is affected. Thus, the boy in E11 is simultaneously the possessor of the lap and the sympatheticus of the action.[8]

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[6] The task is, of course, not specific to the coding of participant roles in a situation. The same goes, for instance, for interpropositional relations, where two propositions may, at the same time, be related temporally and causally, but only one of these relations is coded.

[7] The conception of one participant in a situation / one argument of a predicate bearing more than one role appears to go back to Gruber 1976 and Cook 1979, ch. 6. See Van Valin & La Polla 1997:157 et pass. for a recent discussion.

[8] Lest it be thought that the indirectus has been posited ad hoc for German: the same construction occurs in Australian languages. Here is a Yidiņ example:

guli gamba-ŋ buṇa:-nda dungu-:
louse crawl-PRS woman-DAT head-LOC
'A louse is crawling on a woman's head.' (Dixon 1977:266f)

For Mayali see Lehmann & Verhoeven 2003, § 3.4.3.1.

We are now ready to look at a more complex example:

E12. Linda wäscht dem Jungen die Haare.
GERM Linda washes the:DAT boy:DAT the:PL hair:PL
'Linda washes the boy's hair.'

Superficially, E12 resembles E2. Here, however, the boy's accumulation of roles goes even farther. As in all the relevant examples, he is possessor of the patient. Since the patient is his proper part, as in E11, he is also sympatheticus. And as in E2, and contrary to E11, he is also the beneficiary of the action. All of these participant roles are merged in the indirectus. This complex picture is visualized in S3.

S3. ***Multiple participant roles of a participant***

example	*Linda*	*wäscht*	*dem Jungen*	*die Haare.*
macrorole	actor		indirectus	undergoer
participant	agent		sympatheticus	patient
role	benefactor		beneficiary	benefactum
			possessor	possessum

In traditional grammar, the chapter on the use of cases provides for such functions of the dative as 'dativus sympatheticus', 'dativus commodi' and 'dativus possessivus'. They have often proved difficult to tell apart. We now see why. A given participant may bear several of these roles at the same time. Moreover, in most languages,[9] the 'possessive dative' is not really a function of the dative, since the possessive relation itself is not expressed. Instead, it is inferred, this time on semantic grounds, since 'hair' is a relational concept so there must be a possessor in the situation. By the same token, the so-called 'external possessor' (König & Haspelmath 1998) is not, structurally, a possessor, but a sympatheticus whose possessor role is inferred.

4. Causation and benefaction

Another case of multiple participant roles being represented by a single role at the linguistic level may be seen in causative and benefactive constructions.[10] A benefactive and a causative situation are both based on a simpler situation and produced by adding a participant in a particular role. On the basis of a simple situation, a benefactive situation is derived by the addition of a beneficiary, while a causative situation is formed by the addition of a causer.

In Japanese, a variant of the **benefactive construction** is formed on the basis of a simple clause by means of the benefactive function verb *morau* 'receive'.[11] E13.b represents a benefactive situation, based on the simple situation represented by E13.a.

[9] Things may be different in extreme cases like the one mentioned in fn. 15.
[10] Examples and analysis from Nishina 2003.
[11] This is, in fact, one of at least two benefactive constructions in Japanese. See Shibatani 1994 for another one involving the function verb *yaru/kureru* 'give'.

E13. a. Hanako-wa hon-o yon-da
JAP Hanako-TOP book-ACC read-PST
'Hanako read (out) the book.'

b. Taroo-ga Hanako-ni hon-o yon-de morat-ta.
Taro-NOM [Hanako-DAT book-ACC read-CONV] get-PST[12]
'Taro got the book read by Hanoko / Hanako read the book for Taro.'

As is to be seen, the benefactive construction involves a complex sentence, consisting of a matrix clause whose predicate is the benefactive function verb and whose subject is the beneficiary, while the lexical verb of the embedded clause passes into a non-finite form called converb, and its actor, now the benefactor, becomes some kind of dative-locative dependent. The effect of promoting the beneficiary to the actor macrorole is an **autobenefactive** construction.

A **causative construction** is formed on the basis of a simple clause by means of the causative suffix *–sase*, attached to the verb of the base situation. E14.b represents a causative situation, based on the simple situation represented by E14.a.

E14. a. Hanako-wa kuruma-kara ori-ru.
JAP Hanako-TOP car-ABL get.out-PRS
'Hanako gets out of the car.'

b. Taroo-ga Hanako-o kuruma-kara ori-sase-ru.
Taro-NOM [Hanako-ACC car-ABL get.out]-CAUS-PRS
'Taro has Hanako get out of the car.'

As is to be seen, the causative suffix converts the base verb into a causative verb, the causer becomes the subject of the complex verb, while the actor of the base verb, now the causee, becomes the direct object of the causative verb.

We may already note that the causative construction is structurally rather similar to the benefactive construction. Apart from the case frames appearing in the examples, the main difference lies in the degree of grammaticalization of the verb complex. Namely, where the benefactive function verb operates on the full verb in the converb form, the causative morpheme directly operates on the base verb stem.[13]

Now, as is well known, one of the parameters along which causative constructions differ is the degree of control that the causee retains. In E14.b, the causer shares none of the overall control of the situation with the causee. This is, thus, a **coercitive causative**. E15 differs minimally from E14.b in that the causee NP is in the dative instead of the accusative. The meaning differs accordingly, since this construction expresses that the causee does retain some of its basic control. This is, thus, a **permissive causative**.

[12] The brackets in the Japanese examples include the basic clause. They do not, however, correspond to syntactic boundaries in the complex sentence. On the contrary, in sentences like E13.b, *yonde moratta* is a periphrastic verb form.

[13] There is, in fact, a grammaticalization continuum starting from the syntactically free combination of a non-finite subordinate clause with a following matrix verb, passing via constructions like E13.b, where the main verb has become a function verb and its combination with the subordinate verb form is becoming a periphrastic verb form, and leading to E14.b, where it has become a suffix of the erstwhile dependent verb form.

E15. Taroo-ga Hanako-ni kuruma-kara ori-sase-ru.
JAP Taro-NOM [Hanako-DAT car-ABL get.out]-CAUS-PRS
'Taro allows Hanako to get out of the car.'

So far, we abide within the realm of causative constructions. However, E15 must also be compared with E16.

E16. Taroo-ga Hanako-ni kuruma-kara ori-te mora-u.
JAP Taro-NOM [Hanako-DAT car-ABL get.out-CONV] get-PRS
'Taro gets Hanako out of the car.'

E16 is a benefactive construction on the basis of E14.a just as E13.b is one on the basis of E13.a. As is apparent, E16 differs from E15 only by replacement of the causative suffix by the benefactive function verb plus the converb suffix on the base verb. Since the case frames are the same, there is considerable formal similarity between a causer and a beneficiary, and between a causee and a benefactor.

The participant structure of E16 may be described as follows: In an **autobenefactive** situation like E16, one participant (*Taro*) bears both of the participant roles of causer and beneficiary, while another participant (*Hanako*) bears both of the participant roles of causee and benefactor. The Japanese language opts for representing the causative roles in the benefactive construction, shaping it on the model of the causative construction and leaving the benefactive roles to the semantics of the function verb *morau* 'get'.[14] On the other hand, the strategy employed in the alternate English translation of E13.b only codes the benefactive roles and leaves the issue of the causativity of the situation to pragmatically-based inference.

5. Possession and participation

We have already seen some cases (E1f, E11f) where a participant bears some relation to the situation core and is, in addition, possessor of another participant. We shall now look at this constellation a bit more systematically. We will compare two languages, Yucatec Maya and German, as to the strategies they employ in representing a participant that accumulates two roles. One of these will always be the possessor of another participant, the undergoer. The other role will shift through various peripheral roles that are compatible with the possessor role. The brackets appearing in the Yucatec glosses enclose an NP.

In E17f, one participant – the speaker – is both the **experiencer** of the process and the possessor of the theme. Yucatec Maya expresses the possessor role in an adnominal possessive construction, German (E18) merges the experiencer role into the indirectus, on the model of the indirect object.

E17. yah in nak'
YM sore [POSS.1.SG belly]
'my belly hurts'

[14] The Japanese benefactive construction thus manifests awareness of the criminological principle 'cui bono' at the level of linguistic structure.

E18. Der Bauch tut mir weh.
GERM the belly does me pain (ditto)

In E19f, one participant – the man – is both the **sympatheticus** of the act and – in a whole-part relationship – the possessor of the patient. Yucatec Maya expresses the possessor role, German (E20) merges the sympatheticus role into the indirectus.[15]

E19. T-in k'op-ah u ho'l le máak-o'.
YM PST-SBJ.1.SG hit-CMPL [POSS.3 head DEF person-D2]
'I hit the man on the head.'

E20. Ich habe dem Mann auf den Kopf geschlagen.
GERM I have the:DAT man on the:ACC head beaten (ditto)

In E21f, one participant – St. Anthony – is both **beneficiary** of the act and future established possessor of the patient. Yucatec Maya expresses the possessor role, German (E22) merges the beneficiary role into the indirectus.[16]

E21. Máantats' táan u t'ab-ik u kib kili'ch Anton.
YM constantly PROG SBJ.3 lighten-INCMPL [POSS.3 candle saint Anton]
'Regularly he lightens candles for St. Anthony.'

E22. Regelmäßig zündet er dem Hl. Antonius Kerzen an.
GERM regularly lightens he the:DAT St. Anthony candles at (ditto)

In E23f, one participant – the son – is simultaneously the **recipient** of the transfer and the future established possessor of the undergoer. Yucatec Maya expresses the possessor role, German (E24) merges the recipient role into the indirectus.

E23. káa t-u máan-s-ah
YM CNJ PST-SBJ.3$_j$ pass-CAUS-CMPL

u éerèensyah u ìihoh-e'
[POSS.3$_i$ inheritance [POSS.3$_j$ son]$_i$]-CNTR
'but he handed over the inheritance to his son'

E24. aber er händigte seinem Sohn die Erbschaft aus
GERM but he handed his:DAT son the heritage out (ditto)

In E25f, one participant – the people – is both **emitter** of the transfer and possessor of the patient. Yucatec Maya expresses the possessor role, German (E26) merges the emitter role into the indirectus.

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[15] Variants of this construction are relatively common in the world's languages. It is the more natural the more the whole is affected by the impact on the part, as in E19f; and it gets the more restricted the less the undergoer is affected. For instance, Portuguese uses the dativus sympatheticus construction even in such sentences as *descobri-lhe os defeitos* (discover:PST.SBJ.1.SG-IO.3.SG DEF.M.PL defect(M):PL) 'I discovered his defects', where most languages – including, in this case, English and German – would rather side with Yucatec Maya in preferring the adnominal construction.

[16] The structural relations between possessive and benefactive are manifold. Certain Oceanic languages are like Yucatec Maya in a) having no basic construction that would contain the beneficiary as a verbal adjunct and b) having possessive classifiers (not illustrated above). In those Oceanic languages, the possessive construction may be grammaticalized to a benefactive construction (Song 1998).

E25. K-u lu'-s-ik u sahkil-il máak-o'b.
YM IMPF-SBJ.3 leave:CAUS-INCMPL [POSS.3 afraid:ABSTR-REL person-PL]
'He takes the fear from the people.'

E26. Er nimmt den Leuten die Angst.
GERM he takes the:DAT people:DAT the fear (ditto)

In E27f, one participant – the youngest brother – is both **goal** of the transfer and possessor of the undergoer. Yucatec Maya expresses the possessor role, German (E28) merges the goal role into the indirectus.

E27. káa t-u ts'a'-ah-o'b t-u ho'l h-t'ùup
YM CNJ PST-SBJ.3 put-CMPL-3.PL LOC-[POSS.3 head M-youngest.sibling]
'and they placed it [the crown] on the head of the youngest brother'

E28. und sie setzten sie dem jüngsten Bruder auf den Kopf
GERM and they placed:PL it the:DAT youngest brother on the:ACC head (ditto)

In E29f, one participant is both the (animate) **place** of the situation and possessor of the theme. Yucatec Maya expresses the possessor role, German (E30) merges the place role into the indirectus.

E29. ma' t-u hóok'-ol u me'x-i'
YM NEG IMPF-SBJ.3 get.out-INCMPL [POSS.3 beard]-NEGF
'he does not grow a beard'

E30. Ihm wächst kein Bart.[17]
GERM he.DAT grows no beard (ditto)

We can stop the comparison here. The upshot is quite clear: Yucatec Maya consistently opts for coding the possessor role in linguistic structure while leaving the various participant roles to inference. German consistently opts for coding the participant roles by merging them into the indirectus macrorole, leaving the possessive relationship to inference.

The **functional locus** of a strategy is that cognitive or communicative subdomain in which it is functionally – mostly, iconically – motivated. For instance, the locus of the possessive construction is in situations like E17, where possession is inherent and the affectedness of the experiencer is a safe inference. It is functionally much less well motivated in E23, where the recipient role of the participant in question is inherent in the predicate, while its possessive relation is pending and established, and also in E21, where a possessive relation to the beneficiary may only be construed by analogy to similar situations. Again, the locus of the indirectus is precisely in situations like E21 and E23, where the most salient role of the participant in question is being third-most central in the situation. The indirectus is functionally less well motivated in E28 and E30 (and much less is the subject appearing in the English translation; cf. also fn. 15).

In applying a strategy in a uniform way over a functionally articulated area, a language extends the domain of application of a strategy beyond its locus.[18] Thus, a language may be

[17] The example is due to Jóhanna Barðdal. E29 is a translation into Yucatec on the analogy of a very similar example contained in my corpus.

characterized at the typological level as taking recourse to one particular strategy instead of available alternatives and beyond its functional locus. For instance, Yucatec Maya may be characterized as relying on adnominal possessive constructions in many situations where the majority of the languages of the world use verbal dependents.

6. Incorporation of body parts

The relation that a participant contracts directly – i.e not mediated by the situation core – with another participant may be called an **interparticipant relation**. We saw in the preceding section that whenever three (or more) participants are to be accommodated in clause structure, Yucatec Maya consistently opts for expressing the interparticipant relation of the third participant instead of its participant role. However, it can only do that if the participant possessed by the third participant is actually represented by an NP. This is not the case if the possessum is incorporated in the verb. One kind of noun is incorporated with particular frequency in Yucatec Maya as in many other languages: body-part terms. These are relational terms, so that a possessor is needed in the context. In this section, we investigate the principles which identify the possessor of an incorporated body-part term among the participants represented in a clause.

In Yucatec Maya, body-part terms are incorporated in two participant roles, as an instrument and as an undergoer. E31 shows how an instrumental adjunct can be transformed into an incorporated noun.

E31.	a.	in	lom-ik-ech	yéetel	in	k'ab
YM		SBJ.3	poke-INCMPL-ABS.2.SG	with	POSS.1.SG	hand
		'I poke you with my finger'				
	b.	in	lom-k'ab-t-ik-ech			
		SBJ.3	poke-hand-TRR-INCMPL-ABS.2.SG	(ditto)		

E32 illustrates the same process with other body-part terms.

E32.	t-u	t'ées-tsèem/nak'-t-ah
YM	PST-SBJ.3	push-chest/belly-TRR-CMPL
	'he pushed it with his chest/belly'	

If we ask whose hand it is in E31.b and whose chest or belly it is in E32, the answer is clear: the possessor of the body part is the actor. This is so without exception for body-part terms that are incorporated in instrument function.

We now come to the other semantic type of incorporation, where the body part has undergoer (normally patient) function. This is so in E33, where the incorporative verb of E33.b is lexicalized.

E33.	a.	t-u	t'in-ah	y-ich	ti'	tèen
YM		PST-SBJ.3	spread.out-CMPL	POSS.3-eye	LOC	me
		'he raised his brows towards me'				

[18] Cf. the conception of a (construction) schema that matches a (represented) situation to some extent, as put forward in Shibatani 1996:165ff.

b. t-u t'in-ich-t-ah-en
PST-SBJ.3 spread.out-eye-TRR-CMPL-ABS.1.SG
'he saluted me with his eyes / raising his brows'

E34 shows the same syntactic configuration.

E34. he'l túun bin k-u t'on-ho'l-o'b-o'
YM PRSV then QUOT IMPF-SBJ.3 bend-head-ABS.3.PL-D2
'this is where they bowed and bowed'

In these examples, the possessor of the incorporated body-part term is obviously the actor. Things are different in E35f.

E35. t-in tsol-xikin-t-ah in pàal
YM PST-SBJ.1.SG line.up-ear-TRR-CMPL POSS.3 child
'I advised my child'

E36. ts'o'k in chuk-pach-t-ik-ech
YM TERM SBJ.1.SG catch-back-TRR-INCMPL-ABS.2.SG
'I have caught you (by following you)'

Here the possessor of the body part is the undergoer. At the same time, these incorporatives are lexicalized, too.

While the incorporation of body-part terms in instrument function is productive and highly compositional in its semantics, body-part incorporation in undergoer function is less frequent and often highly lexicalized. So the only general principle to be detected in the latter is the limitation of the possessor of the body part to actor and undergoer.

Contrariwise, the rule by which a body part incorporated in instrument function belongs to the actor is semantically well motivated, as it is just another reflex of the principle that an instrument in a situation presupposes an actor that uses it. Since the different semantic types of incorporative constructions in Yucatec Maya are structurally uniform, it is clear that we are dealing with semantic, not with syntactic principles here. Body-part incorporation in Yucatec Maya thus emerges as a coding strategy which provides a partial principle by which speaker and hearer may construe the network of participant and interparticipant relations in a situation.

7. Conclusion

We have reviewed a variety of subfields of participation. We have seen that a participant cannot be analyzed in isolation. It is always part of a complex network of relations between participants and the situation core, where a given participant may bear one or more relations to the situation core and on top a direct relation to another participant. In coding such a network by means of clause structure, a language cannot represent all of these relations at the level of clause structure. Languages fall into types that differ by the choice made in this respect. A language may be characterized by using one typological strategy to the detriment of available alternatives and by extending it beyond its functional locus to semantic configurations where it is not iconically motivated.

Abbreviations in glosses

1, 2, 3	1st, 2nd, 3rd person	LOC	locative
ABL	ablative	M	masculine
ABS	absolutive	NEG	negator
ABSTR	abstract	NEGF	final negator
ACC	accusative	NOM	nominative
APPL	applicative	PERF	perfective
CAUS	causative	PL	plural
CMPL	completive	POSS	possessive
CNJ	conjunction	PROG	progressive
CNTR	continuer	PRS	present
COMIT	comitative	PRSV	presentative
CONV	converb	PST	past
D2	deictic of 2nd person	QUOT	quotative
DAT	dative	REL	relational
DEF	definite	SBJ	subject
ERG	ergative	SG	singular
IMPF	imperfective	TERM	terminative
INCMPL	incompletive	TOP	topic
IO	indirect object	TRR	transitivizer

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