Typological studies in participation

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## Contents

CHRISTIAN LEHMANN  
Preface 7

CHRISTIAN LEHMANN & YONG-MIN SHIN  
The functional domain of concomitance.  
A typological study of instrumental and comitative relations  9

CHRISTIAN LEHMANN & ELISABETH VERHOEVEN  
Noun incorporation and participation.  
A typological study on participant association  
with particular reference to Yucatec Maya  103
Preface

The research project ‘Lexical and grammatical typology of Yucatec Maya’ was run by the research associates Yong-Min Shin and Elisabeth Verhoeven and directed by me. From December 1995 to December 2002, it was funded by the Deutsche Forschungsgemeinschaft in its priority area ‘Linguistic typology’ (grant Le 358/12). This perennial support is gratefully acknowledged.

The general aim of the project was mutual fertilization of general linguistic typology and grammatical and lexical description of Yucatec Maya. Work centered around the coding of semantic relations by syntactic relations and the grammatical reflection of the arrangement of participants in a situation, called participation. The general orientation of the linguistic description is a combination of the functional and structural approach. The principal methods employed are informant work (partly fieldwork in Yucatan) and utilization of text corpora and published descriptions, on the one hand, and typological comparison as a method to find out about the principles underlying the functioning of a language system and of language in general, on the other hand.

The first project phase was devoted to syntactic constructions which in Yucatec Maya are impersonal or otherwise contain animate participants in relatively low syntactic functions, while they are personal or have the animate participant in a more prominent syntactic function in other, especially modern Indo-European languages. The functional denominator that we gave to this typological contrast is resumed in the book title Person prominence and relation prominence. The second phase of the project turned to a comparison of the syntactic accommodation of peripheral participants which tend to be coded in the form of verb adjuncts in modern European and many other languages, but are coded as a possessive attribute of a more central participant in Yucatec Maya. Again, our conception of what is going on here in functional terms is mirrored in the book title Direkte und indirekte Partizipation (direct and indirect participation). Revised editions of these two books were published in the ‘Arbeiten des Seminars für Sprachwissenschaft der Universität Erfurt’ (ASSidUE) and are downloadable for free from the series website.

The outcome of the third project phase is published here. The functional domain researched is still participation. The leading question was how Yucatec Maya compensates for the limitations in accommodating peripheral participants in clause structure that we found in the first phases. The work by Yong-Min Shin and myself takes the onomasiological perspective and focuses on a particular participant role, the concomitant, which is in some respects converse to the possessor. It turns out that while Yucatec Maya invests much of its grammatical complexity into possession, its treatment of concomitance is exceedingly poor in
typological perspective. Taking the semasiological perspective instead, the work by Lisa Verhoeven and myself contrasts noun incorporation in Yucatec Maya with the same process in a couple of other languages. It turns out that Yucatec does exploit this process for the purpose of rearranging participants to a much greater extent than other languages.

The object of the fourth and last project phase were applicative constructions. We found that the concept of the applicative construction must be complemented by the concept of extraversion. While the applicative is a syntactic process promoting a peripheral participant to undergoer function, extraversion is a lexical process installing an undergoer slot on a verb stem for a participant that often comes out of the blue.— References to publications of the various project phases are in the bibliographies of the present volume.

We cannot here thank all of our informants individually, but I think it fair to single out the contribution of our chief Maya consultants Ramón May Cupul and Ernesto May Balam, without whose unfailing support our work would have been impossible.

Erfurt, June 2005 Christian Lehmann
The functional domain of concomitance

A typological study of instrumental and comitative relations

Abstract

The present work is a typological study of the linguistic representation of diverse instrumental and comitative relations. A functional framework is developed that distinguishes between a set of participant relations relevant in the domain of concomitance, viz. PARTNER, COMPANION, VEHICLE, TOOL, MATERIAL, MANNER, and CIRCUMSTANCE. These participant roles are called concomitants. They form a continuum with respect to the empathy hierarchy as well as to the control hierarchy.

Concomitants vary in their syntactic coding according to the specific type of concomitant function and their absolute properties. We distinguish seven types of coding strategies, viz. concomitant predication, adpositional phrase, case marking, verb derivation, incorporation, conversion, and lexical fusion. In a given language, there are often finer distinctions having to do, for instance, with degrees of grammaticalization and lexicalization of these strategies. With respect to the distribution of the structural devices in the domain of concomitance, the SAE strategy of using a case relator appears as a neutralization of a number of differentiating strategies used in other languages.¹

¹ Thanks for helpful discussion are due to the members of the Dipartimento di Linguistica dell’Università Roma III, in particular to Raffaele Simone e Edoardo Lombardi Vallauri.
Contents

1. Introduction..............................................................................................................................11
   1.1. Overview..........................................................................................................................11
   1.2. Language sample............................................................................................................12

2. Theoretical bases......................................................................................................................14
   2.1. Levels of analysis............................................................................................................14
   2.2. Participant features and roles........................................................................................15

3. Outline of the functional domain of concomitance..............................................................17
   3.1. Introductory....................................................................................................................17
   3.2. The notion of concomitance.........................................................................................18
   3.3. Classification of concomitant relations.......................................................................19
   3.4. Features and abstract predicates of concomitants......................................................24
   3.5. Concomitance and related domains.............................................................................26

4. Linguistic representation of concomitant functions..........................................................35
   4.1. Coding strategies...........................................................................................................35
   4.2. Partner..........................................................................................................................38
   4.3. Companion....................................................................................................................43
   4.4. Vehicle..........................................................................................................................55
   4.5. Tool...............................................................................................................................65
   4.6. Material..........................................................................................................................78
   4.7. Manner..........................................................................................................................83
   4.8. Circumstance................................................................................................................88

5. Results......................................................................................................................................94
   5.1. The cognitive domain of concomitance.......................................................................96
   5.2. Typology of Yucatec Maya.........................................................................................96

Indices.......................................................................................................................................105
   Abbreviations.......................................................................................................................105
   Bibliographical references.................................................................................................107
1. Introduction

1.1. Overview

In earlier work (Lehmann & Shin & Verhoeven 2000 [D] and 2000 [U]), we analyzed diverse grammatical strategies of coding peripheral participants of a situation. Besides the well-known Standard-Average-European (SAE) strategy of linking such participants as adjuncts to the verb, those studies investigated their adnominal coding and their coding in a subordinate clause, both recurrent in such languages as Yucatec Maya and Samoan. The present study extends our previous work in two directions. First, we investigate a set of participant relations hitherto neglected, viz. some relations assembled around the comitative and the instrumental relation. Second, we specifically include the contribution of complex sentences to the association of peripheral participants. The general purpose of this contribution is to clarify the nature of semantic roles in the domain of concomitance.

In a ground-breaking article, Hansjakob Seiler (1974) posits a principle of concomitance that includes instrumental, comitative and collective. Building on this, we set up a functional domain of concomitance that comprises different concomitants — PARTNER, COMPANION, VEHICLE, TOOL, MATERIAL, MANNER, and CIRCUMSTANCE — positioned at different levels of the empathy hierarchy (see § 3.3). Therewith, we develop a functional framework of description which provides the relevant parameters for the different strategies of coding instrumental and comitative roles. In doing this, we take a functional or onomasiological approach to linguistic representations of different concomitant functions. This approach serves two methodological purposes. First, it stipulates a tertium comparationis for the typological comparison of languages. Second, it provides us with a descriptive framework that may be applied to other languages. The tertium comparationis itself is, of course, arrived at by empirical investigation, so that the overall procedure is circular or — in less provocative terms — both deductive and inductive.

In the remainder of § 1, some general information about the languages investigated is provided. Section 2 lays the general theoretical foundations for the analysis of participation, while section 3 is specifically devoted to the functional domain of concomitance. In the main section of the contribution (§ 4), the strategies of coding different concomitant functions are set out and examples from various languages are provided. Sections 3 and 4 obey a structure that can be applied, as an onomasiological framework of description, to the domain of concomitance in other languages. Finally, § 5 summarizes the findings of our investigation and offers a general typological outlook.
1.2. Language sample

We have taken a convenience sample consisting of the following sixteen languages: English, German, Hmong, Japanese, Kambera, Kayardild, Khmer, Kolyma Yukaghir, Korean, Lezgian, Mandarin Chinese, Thai, Turkish, Vietnamese, Yidi, and Yucatec Maya. The data of German, Japanese, Turkish and some Chinese examples have been checked by native speakers. The data and analyses for the other languages are taken from published sources; interlinear morphemic glosses and translations of examples have been adapted. Some of these sources do not provide data on all of the concomitant subroles.

Hmong, also called Hmong Njua, is a member of the Miao-Yao language family spoken by over 1 million people in China, Laos, Thailand, and Myanmar. Hmong is an isolating language, the basic word order is rigid SVO. Clause and sentence structure is rather flat, with extensive verb serialization. There are 8 distinctive tones, which the orthography represents by a final consonant. The data and analyses are taken from Bisang 1992 and Harriehausen 1990.

Japanese is spoken by over 120 million people. The genetic affiliation of Japanese is not very clear, it may be related to Korean. Japanese has a rich suffixing agglutinative morphology. It is consistently dependent-marking, the system of fundamental relations is accusative and the word order consistently left-branching. As in Korean, the linguistic manifestation of honorification is very important. The data has been provided by the native speaker Yoko Nishina (YN).

Kambera belongs to the Malayo-Polynesian language family and is spoken by about 150,000 people in the eastern region of the island of Sumba in Eastern Indonesia. Kambera is a head-marking language with rich morphological marking on the (verbal, nominal, locational) predicate. Definite arguments in different syntactic functions are cross-referenced on the predicate for person and number. The basic word order is SVO. The data is taken from Klamer 1998.

Kayardild, a member of the Tangkic language family of Australia, is an endangered language that has no fully fluent speakers under fifty. The morphology is agglutinative and entirely suffixing. Dependent-marking is employed in grammatical relations. The language has a rich system of case marking of the accusative type and free word order. The data is taken from Evans 1995.

Khmer, like Vietnamese, belongs to the Mon-Khmer group of the Austro-Asiatic language family. It is spoken by over 6 million people in Cambodia, Vietnam, and Northeastern Thailand. Khmer is an isolating language, but not tonal like Chinese, Thai or Vietnamese. Word order is consistent with the SVO pattern. The data is taken from Bisang 1992.

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2 Thanks are due to Truong Nhu Cuong for the Vietnamese data, to Yoko Nishina for the Japanese data, to Gerd Jendraschek and Yasar Toraman for the Turkish data, and to Shèngcha ¤ Li, Peter Merker and Ya¥fa Qí for the Chinese data.

Korean is spoken by more than 70 million people in North- and South-Korea as well as in northeastern China. The genetic affiliation of Korean is not clear; traditionally a relationship with the Ural-Altaic languages has been claimed. Korean has a rich suffixing agglutinative morphology. The verb inflects for tense and aspect, but not for person and number. Honorificity of participants of the situation as well as of speech act participants is marked on the verb. The language is also rich in non-finite verb forms that are specialized for adverbial subordination. The system of fundamental relations is accusative and the word order consistently left-branching. The data is from one of the authors.

Lezgian is a member of the Nakho-Daghestanian language family. It is spoken by more than 400,000 people in southern Dagestan and northern Azerbaijan, in the northeastern Caucasus. The morphology is mainly agglutinative and suffixing. There is a rich case system consisting of 18 cases, most of which are locative (in origin). Lezgian is also rich in converbs that are specialized for adverbial subordination. The syntax is consistently left-branching. Data and analyses are taken from Haspelmath 1993 and 1995.

Mandarin is the major dialect family recognized as the standard language of China. It is a partly isolating, partly agglutinative language and has four tones. Mandarin is not easy to classify in terms of word order, but it may be undergoing a change from SVO to SOV order. It may be characterized as a topic-prominent rather than a subject-prominent language. Our data is taken from Li & Thompson 1981, Paul 1982, Bisang 1992, Luo 1999, and additionally gathered through consultation with Shèngchāo Li (SL), Peter Merker (PM), and Yāfāng Qǐ (YQ).

Thai (formerly Siamese) is the official language of Thailand and spoken by over 25 million people. It is also spoken by people of the Long Son (Austro-Thai) cultures of Northern Thailand, Laos, Burma, and Vietnam. Thai is an isolating language and has five distinctive tones. Words are predominantly monosyllabic. Main constituent order is quite rigid SVO. The data and analyses are taken from Bisang 1992 and from Udom Warotamasikkhadit 1972.

Turkish, spoken by about 50 million people, belongs to the Turkic language family. The morphology is agglutinative. The system of fundamental relations is accusative; the verb agrees with the subject in person and number. Word order in Turkish is determined by discourse considerations, but in general left-branching. Our data is taken from Kornfilt 1997 and gathered through consultant work with Gerd Jendraschek (GJ) and Yasar Toraman (YT).

Vietnamese, spoken by 65 million people in Vietnam and Cambodia, is a very consistent isolating language. Vietnamese has six distinctive tones. The syntax is right-branching, the main constituent order being SVO. The data is taken from Bisang 1992 and gathered by elicitation with the native speaker, Truong Nhu Cuong (TNC).

The extinct language Yidipi was originally spoken by members of the Yidipi, Gungapa and Marampi tribes in North Queensland, Australia. Yidipi is a Pama-Nyungan language and genetically closest to its neighbour Dyapayu. It is basically agglutinative and almost exclusively suffixing. Clause structure is dependent-marking. There is a system of ten cases for nominal word classes. Pronouns inflect in an accusative paradigm, whereas

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4 The transliteration system involves the symbols <ω> = [x] and <u> = [u].
nouns show an ergative pattern. Verbs show a two-term tense system (past versus non-past). Word order is free; the unmarked order appears to be left-branching. Data and analyses are taken from Dixon 1977.

**Yucatec Maya** is the Mayan language of the Yucatan peninsula in the southeast of Mexico and the neighbouring areas of Belize and Guatemala. The language spoken by about 600,000 people is only rarely used for written communication. Tense and aspect are coded by a preverbal auxiliary. The clause structure is head-marking; there is no case. Word order is right-branching. While verbal agreement works partly according to the ergative system, the clause structure is accusative. Subject and direct object are both cross-referenced on the verb; other complements are marked by a multifunctional grammatical preposition with a basically local meaning. The examples of Yucatec Maya stem from our field work in Yucatan and from available texts.

Kolyma and Tundra **Yukaghir** are the two existing Yukaghir languages. Kolyma Yukaghir is spoken by about 50 people in the settlements of Nelemnoye and Zyryanka of the Verkhnekolymskiy district of Yakutia (Saha) Republic as well as the Seymchan and Balygychan Magadan region of Russia. Yukaghir is a highly synthetic and agglutinative language. Nouns are inflected for number, case, and possession. The verb inflects for the usual categories and agrees with the subject in person and number. The system of fundamental relations is accusative. Word order patterns are predominantly left-branching. The data is taken from Maslova 1998.5

### 2. Theoretical bases

#### 2.1. Levels of analysis

As in our earlier work (Lehmann & Shin & Verhoeven 2000 [Z]), we assume three semantic levels. The cognitive level is independent of language and its structure and comprises concepts and operations that correspond to cognitive and communicative functions of language. In the domain of participation, the cognitive level comprises mental representations of situations in which participants bear very specific roles. This is the level at which the key in E1 is an instrument.

E1. Der Schlüssel öffnete die Tür.

**GERM** ‘The key opened the door.’

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5 In the Yukaghir examples, a postconsonantal apostrophe marks palatal articulation of that consonant.
The interlingual or typological level comprises participant roles that are grammatical types, i.e. of which generic semantic and structural properties recur in a set of languages. This is the level at which the key of E1 is an actor. Finally, there is the level of the signified, which is strictly language-specific. At this level, Schlüssel in E1 is a German-style subject.

Human language is concerned with the coding of representations of the cognitive level by entities of the linguistic, i.e. the language-specific, level. The generation of representations of an interlingual level is not an integral step in this operation. This level has a methodological status in language typology rather than the status of an independent and necessary component of language activity. It involves certain perspectives of different language types on representations of the cognitive level. In this regard, the participant roles of instrument and comitative can be defined as interlingual concepts, and they can be used as tertia comparationis in language comparison.

Functional domains such as those of participation, concomitance, possession, spatial orientation etc. comprise such sets of concepts and operations of the cognitive level which bear a principled mapping relation to techniques and strategies at the interlingual level. Thus, when we speak of the functional domain of concomitance, we are referring to a set of concepts and operations situated at the cognitive level which are manifested in the structure of particular languages via such typological concepts as comitative, instrumental etc. The distinctive feature of each functional domain is a set of functional principles that will be discussed, for concomitance, in § 3. Functional domains are adjacent in cognitive space, they may overlap, and a given concept such as the circumstance may be shared by two functional domains (cf. § 4.8). Thus, a functional domain is, in the first place, a principle organizing a functionally-based linguistic description.

2.2. Participant features and roles

Concomitance is a subdomain of the functional domain of participation. The latter concerns the internal linguistic structure of situations: They are constituted by a set of entities, called participants, which are assembled around an immaterial center called the situation core. The entities in question differ crucially both in their absolute properties, which will be reviewed in § 2.2.1, and in their relations to the situation core, which will be reviewed in § 2.2.2.

2.2.1. Participant features

A participant possesses certain properties such as [+/HUMAN], [+/ANIMATE], [+/MASS] and [+/CONCRETE] etc. that are independent of its role in a situation. These are arranged in

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6 We refrain from adapting the gender of participants.
a hierarchy that reflects the degree of empathy the speaker feels for the entities on the different levels. This hierarchy, called animacy hierarchy (Comrie 1981, Ch. 9) or empathy hierarchy (Kuno 1987), is represented in F1.

F1. Empathy hierarchy

<table>
<thead>
<tr>
<th>Participant features</th>
</tr>
</thead>
<tbody>
<tr>
<td>animate</td>
</tr>
<tr>
<td>individual object</td>
</tr>
<tr>
<td>object</td>
</tr>
<tr>
<td>entity</td>
</tr>
</tbody>
</table>

Participant features are distinct from participant roles, but they interdepend with these to a great extent. Different kinds of entities have different kinds of roles in situations. For example, agent, recipient and experiencer have the feature [+ ANIMATE]. The distinction between comitative and instrument is often made in terms of [+/- ANIMATE].

2.2.2. 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 unthinkable without this participant, and the pole of maximum distance is reached if the presence or absence of the participant does not matter for the nature of the situation and 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. Participants such as actor and undergoer are central. Instruments, on the other hand, only occur in situations with an actor and, possibly, another central participant, the undergoer; and comitatives, too, presuppose a more central participant. This means that they have peripheral involvement. Syntactically, strong involvement of participants correlates with the valency dependence of the nominals representing them: central participants are represented by complements. Pe-
Peripheral participants like comitative, instrument, or beneficiary, which can be added to many situations and presuppose the existence of central participants, require additional apparatus: they are coded as adjuncts, in oblique cases or adpositional phrases, or as dependents of additional verbs.\footnote{Operations of promotion and demotion partly counteract the correlation between centrality and valence dependency. Cf. Lehmann & Verhoeven 2005 for an analysis.}

The most important parameter distinguishing central participants is \textit{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 relatively more control is the \textit{actor}, the other one is the \textit{undergoer}. 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.

\section*{3. Outline of the functional domain of concomitance}

\subsection*{3.1. Introductory}

Instrumental and comitative are traditional notions in linguistics, stemming from the morphological analysis of languages with a rich case paradigm. When semantic theory started to incorporate an account of semantic roles, these two were among them from the very beginning. Since then, the problem of the level of analysis at which these notions abide has persisted in linguistics.

Starting from case relators (cases or adpositions) like English \textit{with} or \textit{by} and their meanings, the instrumental may be characterized as a relator joining \(X\) and \(Y\) where \(X\) is an instrument in the action \(Y\). Similarly, the comitative can be characterized as a relator joining \(X\) and \(Y\), where \(X\) is a participant that accompanies or associates with \(Y\), which is another participant, usually the actor.

Instrumental and comitative are often expressed by the same case relator. English \textit{with} is a case in point. Lakoff & Johnson (1980:135) claim: “With few exceptions, the following principle holds in all languages of the world: the word or grammatical device that indicates Accompaniment also indicates Instrumentality.”

Since the publication of the ‘Lakoff-Johnson-Universal’, a great deal of linguistic research has concentrated on this particular syncretism. Extensive work by Stolz (e.g. 1994, 1996[K], 1996b, 2001) has revealed that the syncretism between instrumental and comitative seems to be an areal feature of European languages and is certainly far from being universal.
The concepts of instrumental and comitative are situated at the typological level (cf. § 2.1) and defined prototypically by reference to such well-known examples as E2 and E3, respectively.

E2. Er zerschlug das Fenster mit einem Hammer.
GERM ‘He broke the window with a hammer.’

E3. Er kam mit Julia nach Hause.
GERM ‘He came home with Julia.’

By concentrating on such cases, linguists have altogether neglected a couple of relations which are cognate but distinct (and which SAE languages tend to express by different prepositions). We are referring to such relations as are expressed in E4 and E5.

GERM ‘Peter came by train.’

E5. Peter bastelte ein Schiff aus Papier.
GERM ‘Peter made a ship of paper.’

While the instrument in E2 is manipulated by the actor, this cannot be said of the instrument in E4, which is rather a means of locomotion. In E5, finally, we have neither of both, but rather a material serving for the production of something. The picture of concomitance is only complete if such relations are included.

Languages differ in the extent to which they conflate these relations in expression. Some can use a generic concomitance relator that covers all of them. Most are like English and German in having multifunctional relators that express a subset of the relations in question. Yet other languages make fine distinctions among almost all of the concomitance relations. Methodologically, these are the ones that justify the distinction of these relations at the cognitive level.

3.2. The notion of concomitance

The idea of a functional domain of concomitance goes back to Coseriu 1970 and Seiler 1974. Coseriu (1970:218-220) suggests that the general meaning of a construction of the form mit C ‘with C’ would be something like ‘und C ist dabei’ (‘and C is there, too’) or ‘unter Dabeisein von C’ (‘C being present, too’). This paraphrase contains, in a nutshell, a number of crucial features of concomitance which may be made explicit as in F2:

<table>
<thead>
<tr>
<th>Diagnostic properties of concomitance</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. There is a situation S with its set of central participants.</td>
</tr>
<tr>
<td>2. There is an additional participant C whose nature may vary.</td>
</tr>
<tr>
<td>3. C is peripheral to S.</td>
</tr>
<tr>
<td>4. C’s participation in S is in some way oriented towards some central participant.</td>
</tr>
</tbody>
</table>
The functional domain of concomitance

The relation of C to S may be captured by an additional predicate; ultimately, C may be in a situation that is 'co-present'.

The participant C will be called a concomitant. We can form subtypes of the concept of concomitance by varying the class of the concomitant (property 2 of F2) and the way in which it is involved in the situation (properties 3 – 5). Classes of participants are constituted by the levels of the empathy hierarchy as shown in § 2.2.1 (F1). Differences in the involvement of the concomitant in the situation result chiefly from the fact that it may share in the control of the actor to different degrees. The following sections represent the subtypes of the relation of concomittance formed in this way.

3.3. Classification of concomitant functions

3.3.1. Partner and companion

Simply speaking, a reciprocal situation is one which has the following properties:
- There are at least two participants A and C, from the same level, or at any rate adjacent levels, of the empathy hierarchy, and prototypically from its top.
- At the cognitive level, the relation R (A, C) and its mirror-image R (C, A) hold simultaneously. This means that a reciprocal situation may be expressed by ‘A R C and C R A’, where R is twice the same verb. A and C have equal control in the situation. At the cognitive level, the roles of reciprocal partners are symmetric. At the linguistic level, a reciprocal situation may be symmetric, as in E6.a, or asymmetric, as in E6.b.

   b. John met with Sylvia.

Only asymmetric reciprocal situations are ones of concomittance. In E6.b, A (John) is the actor, and C (Sylvia) is the concomitant. The concomitant of a reciprocal situation will be called PARTNER, and the one of a (non-reciprocal) comitative situation as in E3 will be called COMPANION. PARTNER and COMPANION may be distinguished by the reversibility of the roles of the PARTNERS of a reciprocal situation, as opposed to the irreversibility of the roles of the COMPANION and the respective central participant (cf. Paul 1982:79).

A situation may be conceived as inherently reciprocal. This includes situations designated by such verbs as ‘kiss’, ‘marry’, ‘meet’, ‘join’, ‘fight’, ‘quarrel’, ‘make love’, ‘converse’ etc. The expression of such situations varies among languages. Apart from the possibility of a symmetric representation, asymmetry may manifest itself in various ways. Often, there is a bivalent verb taking an actor, which appears as a subject or ergative, and a complement functioning as the concomitant. This complement may take the form of a direct

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8 For more precision in the definition of reciprocity, see Maslova 2000.
object, as in English *kiss, marry, meet*, or be marked by the comitative case or adposition (as in E6.b) and then be called an **associative object** (cf. Givón 1984, ch. 4.2.5.2.5).

Whether a situation is conceived as reciprocal may be culture-dependent and accordingly be coded in the lexicon. Thus, for X to marry Y is symmetric in English and Yucatec Maya, but not in Latin. It may be seen that this criterion is independent from the structural manifestation of the situation. That is, a situation may be conceived as reciprocal but may nevertheless be expressed by a syntactically asymmetric construction. The Yucatec construction in E7 is highly asymmetric.

E7.  bin ts’o’k-ok u bèeh-il yéetel in pàalil-tsíil

YM  FUT finish-SUBJ POSS.3 way-REL [with POSS.1.SG slave-ABSOL]

‘she will get married to my slave’ (HK’AN 0294.2)

While the partners of a reciprocal situation are usually of the same empathy class, the companion of a comitative situation may be of a lower class. An inanimate companion as in E8 is called **confective** (cf. Stolz 1994).

E8.  Sie kam mit einer Tasse Kaffee zurück.

GERM ‘She came back with a cup of coffee.’

In fact, as E9 shows, the empathy classes of a participant and its companion may be chosen rather freely (a similar example is E63 below).

E9.  bulmba Gira:y

YID place(ABS) twig:COM

‘there are [lots of] twigs in [this] place’ (Dixon 1977:295)

It is possible for the companion to be associated with the undergoer instead of the actor, as in E10.

E10.  Ken brought his daughter with her boy-friend.

In such cases, there is a tendency for the functional association to manifest at the structural level in that the comitative phrase becomes a constituent of the undergoer NP. More on this in § 3.4.2.

In reciprocal situations, both partners have equal control. In comitative situations, the companion shares some of the control of the actor; or, in case it is a companion of the undergoer, it shares its affectedness.

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9 *Nubo* ‘I marry (a man)’ vs. *in matrimonium duco* ‘I marry (a woman)’

10 Brackets will be used in the interlinear gloss to enclose a concomitant construction or a paradigmatically related construction.
3.3.2. Vehicle

In the following situations, the control of the concomitant decreases gradually. While coordinative constructions are possible for reciprocal and comitative situations, they are excluded for the following situations.

A situation of **locomotion** by some means has the following structure: ‘actor A uses means C in moving’. An example of a means of locomotion has been seen in E4. The main verb of a situation of locomotion is intransitive, but may be transitive if we include situations of **transport**, as in E11.

E11. Peter holte eine Kiste Bier mit/auf dem Fahrrad.
**GERM** ‘Peter fetched a box of beer on the bicycle.’

For animate beings, the prototypical means of locomotion are their legs, feet, wings and fins. If these are used, they are not explicitly mentioned. Other means of locomotion depend on cultural habits. They may be animate or inanimate. In the former case, they are typically higher animals (e.g. a donkey); in the latter, they are typically artifacts (e.g. a bike). The former case is closer to accompaniment, the latter is closer to manipulation of an instrument. Therefore, the means of locomotion is positioned between companion and instrument in the functional domain of concomitance and the corresponding hierarchy of control features of concomitants (F3). This kind of concomitant will be called **VEHICLE**, independently of its specific properties.

The means of locomotion has generally been excluded from studies of concomitance. It is true that in some languages or constructions, it is rather treated as a location than as an instrument. E12 illustrates this for English.

E12. a. Ken drove his mother in/*with the car. (Nilsen 1973:79)
   b. We came the whole way in a car. (o.c. 84)

However, as will become plausible below, most languages treat the means of locomotion as a concomitant; and many languages distinguish a means of locomotion from a means of transport.

3.3.3. Tool

A situation of manipulation by a tool has the following structure: ‘actor A uses instrument C in manipulating undergoer U’. A controls both C and U, but it controls U via C. Thus C partakes in the control exerted by A, transmitting it to U (cf. Jackendoff 1987:401). An example has been seen in E2. C is typically an inanimate individual object, whereas U may be any entity in the empathy hierarchy. In general, there is a strong tendency for control to correlate with empathy. The special status of the tool results from the fact that, although an inanimate being, it does have some control over U.

Given that instruments are used to manipulate objects, the prototypical instrumental situation – where the instrument is a tool proper – contains the undergoer mentioned. There
are, to be sure, intransitive sentences such as *John works with a chisel*; but even here an undergoer is implicit.

Just as in locomotion, the primary instrument for manipulation is a body part, more specifically, the hand. If this is used, it normally remains unexpressed. It may be part of the meaning of a verb or it may be inferred on pragmatic grounds (cf. Nilsen 1973:57f).

Not only in evolution, but also in linguistic structure, artefacts are secondary instruments. Artefacts used as tools are normally manipulated by a body part of the agent; consequently, there is a primary and a secondary instrument at the cognitive level. Since the use of an artefact implies a body part that manipulates it, the expression of the secondary instrument normally overrides the expression of the primary one. As a matter of course, a body-part instrument may be expressed or highlighted in the structure if no secondary instrument is used. And finally, syntagmatic co-occurrence of the primary and the secondary instrument expression is not excluded either, as in E129 below.

Among the less prototypical tools, masses must be mentioned, as when an axle is smeared with grease. This kind of tool leads us over to the next concomitant role.

### 3.3.4. Material

The situation relevant here has the structure ‘actor A uses material C in creating undergoer U’. An example has been presented in E5. The material used is further down in the empathy hierarchy (F1): it is some mass, a composite or plural object. Like a means of manipulation, it is controlled by an actor, but unlike the former, it is not a controller of undergoers.

The undergoer in this situation is normally an inanimate being. Its relation to the material is ‘U is made of C’. Therefore, verbs in this context typically indicate an act of creating, fabricating or producing, and U is typically an effected object.

### 3.3.5. Manner and circumstance

Manner and circumstance may both be conceived as abstract concomitants. There is no categorical distinction between them. Their difference may be explained as follows:

A **manner** is a property or a state of the (primary) situation. For instance, in E13.a, the manner adverb is semantically a predicate applied to Linda’s walking (‘Linda’s walking was slow’) (cf. Bartsch 1972). Similarly, E13.b has the semantic structure of ‘Linda’s opening the door was by force’.

E13.  
  a. Linda walked slowly.  
  b. Linda opened the door by force.

The manner is, in principle, a manner of the whole situation represented by the proposition. Specific manners differ in applying directly to either the actor of the situation (‘Linda was
slow’) or to the situation core (‘the opening was by force’). In no case, however, does a manner involve additional participants that might constitute a (secondary) situation of its own.

The prototypical manner is conceptually dependent, i.e. it cannot exist but as a manner of the (primary) situation. There are, however, less prototypical cases such as ‘Linda convinced me with a smile/by smiling’, where it is, in fact, possible for someone to smile without doing anything else.

The predicate that constitutes the manner may be hypostatized to the status of an (abstract) entity, as illustrated by E14.

E14.  
   a. Linda approached the problem very clumsily.  
   b. Linda approached the problem with great clumsiness.

This abstract entity may then acquire the status of a participant of the situation, viz. a concomitant. If this is conceived as something that the actor controls in doing the action, then this concomitant can be conceptualized as an abstract instrument. This is why manners are in one functional domain with instruments proper.

A circumstance is a secondary situation that occurs simultaneously with the primary situation. It could occur independently of the primary situation and, in this sense, does not conceptually depend on it. It bears an interpropositional relation to the primary situation which is like that of an instrument. This distinguishes a circumstance clause (E15.a) from a (simultaneous) temporal clause (E15.b).

E15.  
   a. Linda solved the problem by listening to the radio.  
   b. Linda solved the problem while listening to the radio.

In principle, a circumstance is a complete situation with a set of participants of its own. However, given its instrumental relation to the main situation, the default is for the two situations to share their actor, as in E16.b and c. If the circumstance is expressed by a finite clause, identity of subjects may trigger or permit the use of different conjunctions (E16.a vs. b). If subjects are identical, the circumstance clause may be desententialized to varying degrees. Same subject marking, as illustrated in § 4.8.5 for Yukaghir, represents a relatively low degree, while nominalization of the dependent proposition, as in E16.c, is full desententialization.

E16.  
   a. Erwin löste das Problem dadurch, daß / *indem Erwin den Kommissionsvorsitzenden bestach.  
   b. Erwin löste das Problem dadurch, daß / indem er den Kommissionsvorsitzenden bestach.  
   c. Erwin löste das Problem durch Bestechung des Kommissionsvorsitzenden.

11 In this case, Givón’s (1984:77f) observation applies: “Manner adverbs tend to modify, in some way, the meaning of the verb itself. In other words, they have the verb alone under their semantic scope.”
‘Irvin solved the problem by bribing the committee chairman.’

It is examples like E16.c which are on the borderline between manner and circumstance constructions and render the distinction problematic.

Both manners and circumstances are marginal to the functional domain of concomitance. Both are involved only to the extent that they are hypostatized to the status of abstract entities and thus represented by nominal expressions that are constituents of the (main) clause. By their very nature, they do not select specific kinds of situation (apart from preferring dynamic situations) and are therefore compatible with the same situations as the other concomitants. Sometimes, and typically in SAE languages, the same adposition is used for propositional and for concrete concomitants, see § 4.7 and § 4.8.

3.3.6. Features and abstract predicates of concomitants

We may now systematize what we said about the features of different kinds of concomitants and about their way of involvement in the situation. We start by taking up the participant features of § 2.2.1. The empathy hierarchy introduced there is partly relevant for the distinction of kinds of concomitants. On the one hand, an animate being may function not only as a partner or a companion, but also as a means of locomotion, and an inanimate individual object can be a companion, a means of locomotion, or a tool. On the other hand, the categories of propositional entity, mass and individual object do distinguish among circumstance, material used and means of locomotion or manipulation. Moreover, the partner of a reciprocal situation typically has the feature [+ ANIMATE].

The distribution of participant features over different concomitants is illustrated in T1, where typical associations of properties are shaded more darkly.
The involvement of the concomitant in the situation has two relevant aspects, the first of which is its control. We will specify this by a feature [+/− CONTROL]. Disregarding comitatives associated with the undergoer, the following may be said. The actor of a situation has the feature [+] CONTROL, while the undergoer has [− CONTROL]. In addition to actors in general, agents have [+] INTENTION. Partners have the same control as the actor, and companions have only slightly less. Instruments share some of the agent’s control. Consequently, comitative and instrument may both be marked [+] CONTROL, although the degree of their control differs. Comitatives may function as co-agents, instruments cannot. Accordingly, comitatives may share the feature [+] INTENTION with the agent, while instruments are always marked [− INTENTION]. This expresses that comitatives have more control than instruments. Among the instruments, a means of locomotion has more control than a means of manipulation. Finally, none of the agent’s control is transferred to the material of a patient. Manner and circumstance, being abstract entities, never have any control of their own. The gradience of control of different concomitants is summarized in F3.
More essentially, however, the seven kinds of concomitant that we have distinguished differ in the way they are involved in the situation. We have defined these situations with the help of abstract predicates. In T2, the variable C represents the concomitant throughout, while A represents the actor,\(^\text{12}\) U the undergoer and S the situation.

**T2. Subcategories and abstract predicates of concomitant relations**

<table>
<thead>
<tr>
<th>cognitive role</th>
<th>subdole</th>
<th>abstract predicate</th>
</tr>
</thead>
<tbody>
<tr>
<td>C is \textit{COMPITATIVE} of A</td>
<td>C is \textit{PARTNER} of A in S</td>
<td>C associates with A in S</td>
</tr>
<tr>
<td></td>
<td>C is \textit{COMPANION} of A in S</td>
<td>C accompanies A in S</td>
</tr>
<tr>
<td>C is \textit{INSTRUMENT} in S</td>
<td>C is \textit{VEHICLE} in S</td>
<td>A uses C for locomotion</td>
</tr>
<tr>
<td></td>
<td>C is \textit{TOOL} in S</td>
<td>A uses C in manipulating U</td>
</tr>
<tr>
<td></td>
<td>C is \textit{MATERIAL} of U in S</td>
<td>A uses C in creating U</td>
</tr>
<tr>
<td></td>
<td>C is \textit{MANNER} of S</td>
<td>C applies to S(^\text{13})</td>
</tr>
<tr>
<td></td>
<td>S’ is \textit{CIRCUMSTANCE} of S</td>
<td>A uses S’ in S</td>
</tr>
</tbody>
</table>

T2 calls attention to the fact that situations of concomitance differ not only gradually along the parameters of empathy and control as discussed before; they differ substantially by the nature of the concomitance relation, as expressed by property 5 of F2.

\(^{12}\) We neglect here the association of the partner or the companion with a non-actor.

\(^{13}\) Technically: X(S), i.e. ‘X’ is a predicate applied to S.
3.4. Concomitance and related domains

Our study is primarily oriented in an onomasiological perspective. That means that we take F2 as our point of departure, vary the parameters constituting it in a systematic way and assemble the strategies by which languages represent the various constellations. This is necessary in order to capture the object of our investigation in a systematic way. There is, however, an alternative perspective on the facts, which is the semasiological one. In investigating the polysemy and polyfunctionality of the various devices employed to express concomitant relations, one discovers related functions and functional domains. It is not so important to delimit the functional domain of concomitance against its neighbors. What is important is to specify how exactly these domains are related and how they differ.\(^{14}\)

3.4.1. Concomitant relation and copredication

The more peripheral a participant is, the more it gets involved in a situation of its own which is distinct from and accessory to the main situation. The two situations can then bear some interpropositional relation such as coordinative, conditional, causal, concessive, purposive etc. In addition to the various symptoms of the relative independence of the concomitant that will occupy us below, there is one that will just be mentioned here: the concomitant relation is one of the few participant relations that have a negative counterpart. Various languages possess a device expressing the concept ‘without’ (see Stolz 1996[1]). As elsewhere, independent negatability presupposes some degree of independence.

The specificity of a concomitant relation (property 5 of F2) may be viewed in two perspectives. First, instruments and comitatives are often coded as a dependent of an additional predicate (e.g. ‘use’, ‘take’, ‘accompany’ etc.) which more or less explicitly renders the kind of involvement of the concomitant according to the last column of T2. We will call such a verb a concomitant predicate (cf. Seiler 1974:22). The syntactic relations between the main predication and the concomitant predication follow from the possibilities of clause linkage: either the latter is subordinate to the former (E17.a), or vice versa (E17.b), or the two are coordinate.

E17. a. Linda opened the door using/with a key.
    b. Linda used a key to open the door.

The first is the default case for the domain of concomitance. In the second case, the concomitant predicate appears as the main predicate superordinate to a purpose clause. Here, the roles of main and concomitant predication are reversed in the syntax, and the functional domain of concomitance shades over into the neighboring domain of interpropositional relations.

\(^{14}\) To mention just one example: a semasiological analysis of the Russian instrumental case would show an affinity between the concomitant relations and the essive relation.
The syntactic relation between the main predication and the concomitant predication is closer to coordination in such Chinese constructions as E18.

E18.  wǒ yòng kuàizi zhūō càngyíng.
CHIN  I [use chopstick] catch fly
    ‘I catch flies with chopsticks.’ / ‘I use chopsticks to catch flies.’

The interpropositional relation between yòng and zhūō is not expressed in E18, and different interpretations are possible. The most common interpretation is that the two clauses are in an instrument-purpose relation, which allows for the two alternative translations provided. Other possible translations of E18 include ‘I use chopsticks and then I catch flies’ (consecutive actions), ‘I use chopsticks and catch flies at the same time’ (simultaneous actions), and ‘I use chopsticks and I catch flies’ (alternating actions) (Li & Thompson 1974a:267). The syntactic relation of the concomitant predicate yòng to the main predicate zhūō is not clearly one of either coordination or subordination. However, Chao (1968:325) argues: “Verbal expressions in series (V-V series) form an intermediate type between coordinate and subordinate constructions, but are nearer the latter than the former.” And further (o.c. 326): “A V-V series is like a subordinative construction in that the second expression has approximately the same function as the whole and is thus the center to which the first verbal expression is a modifier, often translatable by a prepositional phrase.” This would allow us to consider the concomitant predicate, viz. the first verb in a construction of the form ‘V (NP) V (NP)’, as a coverb.

The second perspective that is relevant here concerns the internal complexity of situations. A situation that is complex at the cognitive level may be viewed in a language as composed of a couple of elementary situations. For instance, if the situation contains a beneficiary or certain local roles, then various languages tend to unfold it into a set of component situations each of which is ideally constituted by just one participant relation (cf. Lehmann & Shin & Verhoeven 2000 [U], § 2.3). These languages, then, tend to represent by a complex sentence, a verb series or a clause chain what appears as a single though complex clause in SAE languages. Such languages often provide a separate clause for the concomitant, too, as does Managalasi, a language of the New Guinea Highlands, in E19.

E19. Naumijaho apeju-jine ‘aiju nunijaho ape-n va-‘e.
MANAG  [string get-PST]-when [knife my get]-and go-SS
        Ijí ‘osa tua-ma i-ne.
        then sugarcane break-and eat-SS
    ‘I took the string and I took my knife and went. And then I broke some sugar-
cane and ate it.’ (Thompson & Longacre 1985:176)

A language in our sample which is characterized by the decomposition of complex situations is Hmong. Cf. E140.a below as a typical example.
3.4.2. Concomitance in reference and predication

Given the definition of participation provided in § 2.2, the primary semantic function of a peripheral participant at the level of the proposition is as a modifier of the central predicate. However, there are three propositional operations, reference, predication and modification (cf. Croft 1991); and peripheral participants have peculiar relationships to each of them. Besides its primary semantic function, a peripheral participant can also constitute the core of a (non-verbal) predicate; and it can serve as a modifier of the concept of another participant. These functions are systematized in T3.

### T3. Propositional functions of peripheral participants

<table>
<thead>
<tr>
<th>function</th>
<th>level</th>
</tr>
</thead>
<tbody>
<tr>
<td>semantics</td>
<td>syntax</td>
</tr>
<tr>
<td>a) core of predicate</td>
<td>adverbial predicate</td>
</tr>
<tr>
<td>b) modifier of concept of another participant</td>
<td>attribute</td>
</tr>
<tr>
<td>c) modifier of predicate</td>
<td>adjunct</td>
</tr>
</tbody>
</table>

Since participation as well as its subdomains such as concomitance are chiefly concerned with relations of direct participation between participants and non-empty situation cores, our focus here is on row c) in T3. However, the distinction between cases a) and c) is gradual, since if the semantic specificity of the predicate of case c) is reduced to zero, case a) results. And on the other hand, the definition of concomitance provided in F2 embodies as condition 4 an especial closeness to a more central participant. At this point we shall therefore briefly look at the role of concomitance in reference.

E20 shows a concomitant in a prepositional phrase introduced by *with* in various syntactic functions.

**E20.**

a. A soldier came with a horse.

b. A soldier with a horse came.

c. Linda spoke to a soldier with a horse.

d. Linda drank (the) coffee with milk.

The meaning difference between E20.a and b is minimal, which shows how the companion may be construed as part of a complex participant rather than a participant of its own.\(^{15}\) The host participant is typically the actor, as in E20.b, but may be another participant, as in E20.c and d. Finally, E20.d shows that the same applies to confectives.

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\(^{15}\) The Yidi examples E88f below are similar.
Operation b) above is even clearer if the concomitant attribute is in a definite NP, as in E21.

E21. Linda spoke to the soldier with the horse.

This function is, of course, not limited to concomitants. Thus, the hill in E22 has the role of a place, and its PrepP is either an adverbial to spoke or an attribute to man. In the latter case, it serves the reference to the man.

E22. Linda spoke to soldier on the hill.

Thus, instead of contributing to a complex situation, different participants may be used as points of reference for the identification of another participant. They are then not employed in predication, but in reference. The only participant whose primary use is in reference instead of in predication is the possessor. We now turn to the special relationship between concomitance and possession.

3.4.3. Concomitance and possession

The relations holding in a situation may be divided into participant and interparticipant relations. A participant relation is a direct relation between a participant and the main predicate. An interparticipant relation is a direct relation between two participants, i.e. one that is not mediated by the main predicate. A given participant may be connected, at the same time, both to the situation core by a participant relation and to another participant by an interparticipant relation; and then languages differ in which of the two relations they lend priority in coding. In Lehmann & Shin & Verhoeven 2000 [D], we concentrated on possessive and local interparticipant relationships. Participants that may be directly related to the undergoer by such an interparticipant relation include agent, experiencer, recipient, sympatheticus, beneficiary etc. These share the feature [+ANIMATE] with each other and with the possessor.

In concomitance, interparticipant relations work differently. The alternative of construing a concomitant as the possessor of the undergoer is not available; first, because the concomitant is peripheral to the situation and, thus, not directly related to the undergoer, and second, because most of the concomitants are low in empathy and therefore not suitable as possessors of another participant.

Instead, it is the control gradient between the actor and the concomitant that may be likened to the control incline between possessor and possessum. Just as the possessor is prototypically highly empathic while the possessum may be of any entity class, so the actor is prototypically highly empathic, while the concomitant may be of any entity class. Consequently, the possessum of another participant may be coded as the latter’s concomitant. Expressions such as the man with the hat, which have the possessum in a comitative phrase,
are wide-spread. They will be taken up in the next section. The proprietive\textsuperscript{16}, which we are going to see in § 4.5.3, is a case essentially dedicated to this function.

In the following, we compare the possessive relation with the relation of concomitance. We posit a situation involving two participants, dubbed Empathic and Neutral. As their names suggest, Empathic is high on the empathy hierarchy. Neutral may have any position on it, but is generally lower than Empathic. Empathic has control in the situation, Neutral is controlled. The roles are not necessarily more specific than that, i.e. they are essentially constituted by the control cline. If each of them were directly related to a specific situation core, then Empathic would be actor, Neutral would be undergoer. However, we will assume that at least one of them is not directly related to a specific situation core so that we are dealing more with an interparticipant relation than with participant relations. Such a constellation may be coded in a number of ways which we systematize as follows:

In a construction – a clause or a phrase – such a constellation necessarily becomes asymmetric: depending on the perspective taken, one of the two participants is characterized by its relation to the other. The former is then taken as syntactically \textit{basic} while the role of the latter is coded by a specific case relator that expresses its relation in the situation, i.e. primarily its interparticipant relation. Thus, the participant not taken as basic gets into some \textit{oblique} function. The first criterion in classifying relevant constructions is therefore the perspective taken. The second subdivision is by the nature of the construction. We will consider the three construction types introduced in T3. Cross-classification of our elementary constellation by these two criteria yields the six constructions displayed in T4.

<table>
<thead>
<tr>
<th>perspective</th>
<th>construction</th>
<th>1) Neutral = basic, Empathic = Oblique</th>
<th>2) Empathic = basic, Neutral = Oblique</th>
</tr>
</thead>
</table>
| a) non-verbal clause | [Neutral$_{subject}$ COP Empathic$_{possessive}$ ]$S$
Neutral is related to Empathic | [Empathic$_{subject}$ COP Neutral$_{concomitant}$ ]$S$
Empathic is related to Neutral |
| b) noun phrase | [Neutral Empathic$_{possessive}$ ]$NP$
Neutral related to Empathic | [Empathic Neutral$_{concomitant}$ ]$NP$
Empathic related to Neutral |
| c) verbal clause | [X$_{actor}$ V Neutral$_{undergoer}$
Empathic$_{possessive}$ ]$S$
X affects Neutral related to Empathic | [Empathic$_{actor}$ V X$_{undergoer}$
Neutral$_{concomitant}$ ]$S$
Empathic affects X related to Neutral |

In T4, the indices (other than NP and S) refer to syntactic and semantic functions of NPs in a clause. This once,\textsuperscript{17} ‘possessive’ is used as a cover term for cases with a possessive function, esp. genitive and dative. In row a), the presence or absence of a copula is inessential, as is the presence or absence of an additional participant X in row c). The latter is only needed to make sure that the two central macroroles of actor and undergoer are, ex hypothesi, not both taken by our two protagonists Empathic and Neutral. The bottom line in

\textsuperscript{16} For the general functions of the proprietive, cf. Evans 1995, ch. 4.3.5, Maslova 1998, ch. 5.5.5.1, Stolz 2001[X].

\textsuperscript{17} Canonically, possessive is a feature of a possessed nominal that cross-references the possessor.
each row serves as a generic paraphrase of the particular construction. In row c), the phrase ‘related to Z’ leaves its first relatum open.

We start our illustration of this schematic presentation with column 1) of T4. The three constructions are illustrated by the Latin examples of E23.

E23.  a. equus est militis / militi
LAT horse(M):NOM.SG COP:3.SG soldier(M):GEN.SG / DAT.SG
‘the horse is the soldier’s / belongs to a soldier’

b. equus militis
horse(M):NOM.SG soldier(M):GEN.SG
‘soldier’s horse’

c. militi equum cecidi
soldier(M):DAT.SG horse(M):ACC.SG PRF:beat:1.SG
‘I beat the soldier’s horse’

A non-verbal clause with the properties stipulated above is a kind of predication of belonging (cf. Lehmann 2002, ch. 4.2). Since the situation core is empty by definition, it is at most represented by a copula. The role of the empathic possessor is coded by some possessive case, which in this Latin construction may be the dative or the genitive. The NP in E23.b features Empathic as a genitive attribute. In construction c), finally, we do have a specific situation core, but it does not define the relation of our two protagonists: Empathic keeps bearing an interparticipant relation to Neutral whose coding is at stake. In Latin, this may be done by a dative adjunct (a possessive dative or dativus incommodi).

Next we illustrate the three constructions of column 2) of T4 by the Yukaghir examples of E24.

E24.  a. tiŋ amde-l marqil’ köj-n’e-l’el.
KOLYUK this die-ANR girl boy-COM-INFR(INTR.3.SG)
‘This girl that died used to have a boy-friend.’ (Maslova 1999:150)

b. alme n’aln’ulben-n’e
shaman devil-COM
‘a shaman and a devil’ (title of a fairy tale) (Maslova 1999:126)

c. met emd’ie-n’e pon’o-jo:n-pe o:-d’e.
my younger.sibling-COM remain-SBNR-PL COP-INTR.1.SG
‘I remained there with my younger sister.’ (Maslova 1999:384)

A non-verbal clause with the properties stipulated above is a kind of ascription of possession (cf. Lehmann 2002, ch. 4.3). Since the situation core is empty by definition, the comitative NP is verbalized and thus constitutes the predicate. The role of Neutral is coded by the comitative case, which in this language is indistinguishable from the proprietive (Maslova 1999:150). The NP in E24.b features Neutral as a comitative attribute. In construction c), we again drop the requirement that the situation core be empty while retaining the requirement
that Neutral bear an interparticipant relation to Empathic, which is to be coded. This is a comitative adjunct, again coded by the same case.

The upshot of this comparison is that under the conditions posed initially, a concomitant is somehow converse to a possessor (see Stolz 2001[X]). Just as the possessive dependent neutralizes a set of more specific roles that an empathic, controlling participant may bear, the concomitant neutralizes the roles introduced in § 3.3, born by a neutral, controlled participant. A possessive case may be an associative case; and a comitative case may be a proprietive case. To that extent, the two types of case relators illustrated by E23 and E24 are converse. That is, a genitive appears on a possessor (Empathic) and relates this to its possessum (Neutral); a proprietive appears on a possessum (Neutral) and relates this to its possessor (Empathic).

The two perspectives of T4 have their bases in functional sentence perspective (alias information structure) and are, in principle, not reducible to each other. That is, there is no language that, instead of saying ‘the horse belongs to a soldier’ (cf. E23.a), has to say ‘the soldier has a horse’ (cf. E24.a), or vice versa. However, there are workarounds. Instead of construction T4 2.a) (E24.a), there is the alternative of making Neutral the complement of a predicate of existence and to relate Empathic to this predication by a (local or dative) case relator, as in E25.a. The role of Empathic here is as in E23.a; i.e. E25.a is essentially a possessive construction.

E25. a. yàan tsǐimin ti’ le h k’a’tun-o’
YM EXIST horse LOC DEF M soldier-D2
‘the soldier has a horse’

b. le h k’a’tun yàan tsǐimin ti’-o’
[ DEF M soldier [ EXIST horse LOC ] ] _nom 
‘the soldier with a horse’ (cf. Lehmann 2002, ch. 3.3.1)

In the same way, the attribute of construction T4 2.b) can be inverted by turning an existence predication like the one of E25.a into a relative clause and using this as an attribute to Empathic, as in E25.b. (Inverted alternatives to T4 2.c) are not so easy to come by.)

The foregoing thus serves to highlight the intimate connection between concomitance and possession and to render the delimitation of our object more difficult. Since we have just shown that the distinction between possession and concomitance is partly a matter of perspective, we will take this up at the methodological level and simply stick to the perspective of concomitance. i.e. we exclude constructions of the kind of T4, column 1 and focus on column 2.

3.4.4. Concomitance and coordination

Semasiological analysis of concomitance relators appearing in constructions like, e.g., E24.b reveals that they also function as coordinators in various languages. We will find this below for some case affixes and prepositions of our sample. The characterization of concomitance
given in F2 allows us to see how it can pass over into coordination: Suppose we drop condition 5 of F2 and strengthen condition 4 by saying that the two participants in question are parallel in category and function. The latter move would be to the detriment of condition 3, which balances #4 in F2. These changes amount to transforming a comitative construction as in E26.a into a coordinative construction like E26.b.

E26.  a. I saw John with Mary.
   b. I saw John and Mary.

Coordination is functionally so close to concomitance that the structural means of the latter domain are deployed in many languages instead of developing coordination as a functional domain of its own. In our treatment, we will pay attention to coordination where it is inevitable, which is chiefly in the discussion of the subroles of partner and companion. A satisfactory account of the relationship between concomitance and coordination would require complementing our study of concomitance with one of coordination. 18

3.4.5. Concomitance and demotion

If an argument bearing a fundamental relation is demoted by a diathesis, it may become an adjunct very much like those characterized in F2. In passivization, the actor may appear in an agent phrase joined by a case relator that may be identical to a concomitance relator. As a familiar example, consider the English preposition by, which not only marks some concomitants, viz. vehicles, but also passive agents. In Russian and other languages, the instrumental case marks the passive agent. Grammaticalization of such a construction has led to a situation found in various ergative languages in which the ergative function is marked by the same morpheme as the instrumental. The latter construction does not meet condition 3 of F2.

On the other hand, antipassivization and related operations of detransitivization may demote the undergoer to an adjunct that appears in an instrumental case. Here is a less familiar example from German: in E27.a, the undergoer is direct object; in E27.b, it is an instrumental adjunct.

E27.  a. Erna warf Steine (gegen das Fenster).
    ‘Erna threw stones (at the window).’

   b. Erna warf mit Steinen.
    ‘Erna was throwing stones.’

The adjuncts resulting from the demotion of actors and undergoers in diathetic operations have very much in common with concomitants. Again, they may be distinguished from them since they do not meet condition 3 of F2. As long as they are produced by such grammatical operations, they do not meet condition 5 either. It is true that the relation of a pas-

18 On this matter, see Stassen 2000 and Stolz 1998.
The functional domain of concomitance

An agent as in by X may be expanded by such circumlocutions as through the intervention of X; but this leads beyond the regular syntactic paradigms created by diathetic operations. These differences between concomitants and adjuncts created by demotion are due to the fact that the latter bear a grammatical paradigmatic relationship to central dependents governed by the verb. Concomitants never do this; they are by nature peripheral.

4. Linguistic representation of concomitant functions

4.1. Coding strategies

Concomitants may be coded by a variety of strategies. We have identified the following types in the existing variation:

Concomitant predication: The concomitant relation is expressed by an additional verb, a concomitant predicate, which constitutes, together with the participant, a clause of its own. The Chinese E28 represents the concomitant predicate strategy. Here, the concomitant predicate is péi or gên.

E28. Lisi péi gé̄n  tàitài qu  yìyuàn.
CHN  Lisi [accompany/follow wife] go hospital
      ‘Lisi accompanies his wife to the hospital / Lisi goes to the hospital with his wife.’ (Luo 1999:4)

This strategy comprises two varieties. If the concomitant predicate is marked morphologically for its non-finite subordinate function in the sentence, it is a converb, sometimes also called gerund; otherwise, as in E28, it is a coverb. Certainly in the latter case and, depending on one’s terminology, also in the former case, concomitant predication is an instance of clause chaining. This will come up as a separate strategy in § 4.8.1.

Adpositional marking: There is a concomitant case relator at the structural level of an adposition, e.g. mit in E29. The relator mit forms an adpositional phrase with the concomitant NP, viz. mit ihr in E29.

GERM ‘Peter goes to the seaside with her.’

Case marking: The concomitant NP bears a case marker – generally a suffix – which signals its function. E30 illustrates this strategy for Turkish. The concomitant relator is the case suffix -la that forms a cased NP with the concomitant NP.

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19 In Haspelmath & König 1995 (eds.), the term ‘converb’ is used. For the terminology of ‘gerund’ and ‘converb’, cf. Haspelmath 1995[c], § 7.
Verb derivation: The main verb is derived in such a way as to take a concomitant as a direct complement. In E31, the intransitive verb meaning ‘go’ has become an applicative verb by affixing \(-gal\), which renders it transitive. The concomitant construction is the derived verb plus its complement.

E31. \(\text{wagufəŋaŋ gu yabut gal-ŋal-pu}\)
\(\text{YID man-ERG [girl(ABS) go-TRR-PST]}\)
‘The man went with the girl’ (= The man took the girl) (Dixon 1977:431)

Incorporation: The main verb contains an incorporated concomitant noun, as in E32. In this case, there is no concomitant relator, and the concomitant construction is the incorporative verb.

E32. \(\text{t-u pech’-k’ab/chek’t-ah le ch’ik-o’}\)
\(\text{YM PST-SBJ.3 crush-hand/foot-TRR-CMPL DEF flea-D2}\)
‘he crushed the flea with his hand/foot’ (Lehmann 1998:116)

Conversion: The main verb is converted from a noun stem \(N\) and designates an action to which \(N\) is a concomitant, as the English verb \textit{iron} in E33 (see § 4.4.6 and § 4.5.6).

E33. He has been ironing shirts all day long.

Lexical fusion: The main verb contains a specific concomitant as a feature of its meaning (cf. Dixon 1977, ch. 5.4.1). Thus, the instrument need not be specified in syntactic structure (see § 4.4.7 and § 4.5.7). For instance, Engl. \textit{kick} may be analyzed semantically as ‘strike with one’s foot’.

The above strategies are seven positions on a scale of variation. Inside a given language, there may, of course, be finer variation having to do, for instance, with degrees of grammaticalization and lexicalization of these strategies. Moreover, within each of the strategies, a given language may have a paradigm of markers available. However, for the present purposes, the degree of detail attained by the seven strategies is sufficient.

Some of the strategies are systematically connected by grammaticalization. Thus, coverbs and converbs alike evolve into adpositions. Postpositions grammaticalize into case suffixes. A case relator may also evolve into a verb derivational affix. Often a given marker is halfway between two of the levels or has allomorphs that belong to adjacent levels. For instance, several of the Mandarin coverbs are on their way from a concomitant predicate to a preposition. There are a number of well-known criteria to classify the variants, among them the possibility of marking the coverb for negation or aspect. If the word in question can never be independently negated or aspect-marked, then it is an adposition. But often there is variation in a construction involving a coverb and a following full verb in the sense that aspect may be marked either on the coverb or on the verb. In the former case, the coverb behaves like a full verb; in the latter case, it behaves like an adposition. E34f below is the first in a set of relevant examples which will follow. Criteria for an unambiguous
The functional domain of concomitance

Assignment of a given marker to one of the strategies are often not easy to come by. To this extent, some of the descriptive statements made below must be viewed with some caution.

The variation among the strategies may be systematized along two parameters:

• The concomitant relation is expressed more or less explicitly;
• the nominal expression representing the concomitant is more or less independent vis-à-vis the main verb.

These two criteria, in their turn, are related to grammaticalization and therefore yield compatible orders. This means there is a unique ordering of the strategies by decreasing explicitness. By this criterion, we get an arrangement as in T5.

T5. Strategies of concomitance

<table>
<thead>
<tr>
<th>strategy</th>
<th>construction</th>
<th>relator</th>
<th>concomitant</th>
</tr>
</thead>
<tbody>
<tr>
<td>concomitant predication</td>
<td>clause of complex sentence</td>
<td>coverb/converb</td>
<td>NP</td>
</tr>
<tr>
<td>adpositional marking</td>
<td>adpositional phrase</td>
<td>adposition</td>
<td>NP</td>
</tr>
<tr>
<td>case marking</td>
<td>cased NP</td>
<td>case</td>
<td>NP</td>
</tr>
<tr>
<td>verb derivation</td>
<td>derived verb with its complement</td>
<td>derivational affix</td>
<td>NP</td>
</tr>
<tr>
<td>incorporation</td>
<td>incorporative verb</td>
<td>(morphological slot)</td>
<td>noun stem</td>
</tr>
<tr>
<td>conversion</td>
<td>denominal verb</td>
<td>(morphological slot)</td>
<td>noun stem</td>
</tr>
<tr>
<td>lexical fusion</td>
<td>verb</td>
<td>(semantic feature)</td>
<td>(semantic feature)</td>
</tr>
</tbody>
</table>

Each of the following sections is devoted to one concomitant type. Within each section, we review the coding strategies in the above order and adduce examples from the languages of our sample.
4.2. **Partner**

4.2.1. **Concomitant predication**

Mandarin Chinese and Hmong use coverbs\(^{20}\) to associate the reciprocal partner. The relevant Chinese verb is *gèn* ‘follow, accompany, with’, as in E35.

E35. a. Tā gèn dírén zuò dōuzhèng.

*Mandarin Chinese*  he [follow opponent] do fight

‘He fights with the opponent.’ (Bisang 1992:181)

b. Wǒ gèn tā shuōhuà.

*I* [follow *he*] talk

‘I talk with him.’ (Paul 1982:79)

While *gèn* may function as a coordinate conjunction in constructions with a companion such as E68.b below, in E35 it marks the partner of a reciprocal relation. Verbs that appear in reciprocal constructions include *dàjiù* ‘trash’, *shàngliàng* ‘debate’, *tāolùn* ‘discuss’, *támán* ‘talk, discuss’, *cháo* ‘quarrel’ etc. In constructions in which *gèn* precedes one of these verbs, it functions as a coverb, which means it must not be followed by a tense/aspect/mood marker of its own. For example, if the reciprocal verb *shuōhuà* of E35.b is suffixed by the aspect marker `-zhe`, then the whole sentence becomes past. If, however, the suffix is attached only to the first verb, as in E36, then we get a construction consisting of two independent clauses, and the meaning changes accordingly (cf. Paul 1982:79-80, Bisang 1992, II.3.4.5).

E36. Wǒ gèn-zhe tā shuōhuà.

*Mandarin Chinese*  I [follow-DUR *he*] talk

‘I speak after he has spoken.’ (Paul 1982:80)

Similarly, Hmong uses the coverb *nrog* ‘be with, accompany, follow’ as a concomitant predicate, as in E37.\(^{21}\) The coverb takes an animate complement and, together with it, may either precede or follow the main verb.

E37. Npawg hlob nrog Yawm Pus kam kam txog siav.

*Hmong*  brother old [with Yau Pu] fight fight arrive breath

‘The elder brother fought with Yau Pu until his breath came to the end.’ (Bisang 1992:259)

Lezgian adjoins the partner by the concomitant predicate *galaz*. This is the converbal form of the local copula\(^{22}\) *gala* ‘be behind’, which takes its argument in the postessive case.

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\(^{21}\) According to Bisang 1992:258, *nrog* is no longer used as a full verb and may therefore be regarded as having been grammaticalized to a preposition.

\(^{22}\) Properly speaking, a local existence verb.
It is being grammaticalized to a mere postposition meaning ‘with’, as in E38 (Haskelmath 1993, ch. 12.2.3).

E38. Ča-z kwe-q\(^b\) galaz k’wal-er degišar-iz k’an-zawa.

LEZ we-DAT [you.all.POESS with house-PL change-INF] want-IPFV
‘We want to exchange apartments with you-all.’ (Haskelmath 1993:225)

In the other languages that employ the strategy of concomitant predication at all, viz. Korean and Japanese, partners of reciprocal situations cannot be so expressed.

4.2.2. Adpositional marking

English, German (E40) and Yucatec Maya (E41) use prepositions to join the reciprocal partner (see § 5.1.10 for details on the Yucatec Maya preposition). E39 is ambiguous between a reciprocal reading (‘against her mother’) and a comitative reading (‘together with her mother’).

E39. She fought with her mother.

E40. Max streitet mit Moritz.

GERM ‘Max quarrels with Moritz.’

E41. xump’at a tsikbal yéetel le we’ch máak-o’

YM stop SBJ.2 chat [with DEF scabies person-D2]
‘stop chatting with that scabby man’ (HK’AN 0266.2)

The adpositional phrase strategy is also used in Thai and Vietnamese. In E42, the reciprocal partner is joined by the preposition kàb ‘with, together with’, and in E43, by the preposition võ’i ‘along with, in company of’.

E42. Căn lên pày kàb nỏnì.

THAI I play card [with brother]
‘I play cards with my brother.’ (Warotamasikoadit 1972:42)

E43. Cô áy thích nhaỹ võ’i bó.

VIET she like dance [COM father]
‘She likes to dance with her father.’ (TNC)

In Turkish, the postposition ile ‘with’ marks the reciprocal partner (E44).

E44. Elif ile görüş-tü.

TURK [Elif with] meet-PST(3.SG)
‘He met with Elif.’ (GJ & YT)

There is also a grammaticalized variant of this postposition, the comitative-instrumental suffix seen in E50 below.
4.2.3. Case marking

Korean and Japanese mark the reciprocal partner by case suffixes. Their function may be characterized as ‘additive’. Korean has three largely synonymous morphemes, -(k)wa, -hako and -(i)lang, to express a comitative relation. They are used in two constructions: They may be combined with the concomitant NP and are then equivalent to English ‘with’, as in E45.a. Or else they may follow non-last members in a series of coordinated NPs, in which case they have a coordinative function like English ‘and’, as in E45.b (cf. Sohn 1994, ch. 2.1.1.4.4).

E45. a. Toli-nun Suni-wa/-hako/-lang maennal ssau-n-ta.
   KOR Toli-TOP [Suni-ADD/-ADD/-ADD] every day wrangle-PRS-DECL
   ‘Toli wrangles with Suni every day.’

   b. Toli-wa/-hako/-lang Suni-nun maennal ssau-n-ta.
      [Toli-ADD/-ADD/-ADD Suni-TOP] every day wrangle-PRS-DECL
      ‘Toli and Suni wrangle every day.’

Japanese uses similar strategies to express a reciprocal situation. The first two versions of E46 are structurally equivalent to E45.a and b. In the case of ‘meet’, the concomitant NP may, alternatively, be marked by the dative -ni (E46.c). The semantic difference between the additive and the dative versions in E46 is that the actor in the former case meets the concomitant intentionally whereas in the latter case he meets her accidentally.

E46. a. Taro-wa kinou Hanako-to at-ta.
   JAP Taro-TOP yesterday [Hanako-ADD] meet-PST
   ‘Taro met with Hanako yesterday.’

   b. Taro-to Hanako-wa kinou at-ta.
      [Taro-ADD Hanako-TOP] yesterday meet-PST
      ‘Taro and Hanako met yesterday.’

   c. Taro-wa kinou Hanako-ni at-ta.
      Taro-TOP yesterday [Hanako-DAT] meet-PST
      ‘Taro met Hanako yesterday.’

If reciprocal partners are of different empathy classes, variation decreases. In both languages, the coordinative strategy becomes less acceptable if, for instance, the partners are a human and an animal, as in E47f.

E47. a. Toli-nun kae-hako cal non-ta.
   KOR Toli-TOP [dog-ADD] often/well play: PRS-DECL
   ‘Toli likes to play with the dog.’

---

b. 'Kae-hako toli-nun cal non-ta.
   [dog-ADD Toli-TOP] often/well play:PRS-DECL
   ‘The dog and Toli play often/well together.’

E48. a. Taro-wa inu-to yoku asob-u.
   JAP Taro-TOP [dog-ADD] often play-PRS
   ‘Taro often plays with the dog.’

b. 'inu-to Taro-wa yoku asob-u.
   [dog-ADD Taro-TOP] often play-PRS
   ‘The dog and Taro often play together.’

A similar distinction as is made in Korean and Japanese by word order may be made in
Yukaghir by number agreement of the verb with the subject. Namely, if the concomitant is
associated with the subject participant, the verb agreement can be either singular (comitative
reading) or plural (coordinative reading), as in E49 (Maslova 1998:383f).

E49. met irk-in paipe-ùn’ê juode-je.
   KOLYU I [one-AT woman-child-COM] play-INTR.1PL
   ‘I played with a girl.’ (Maslova 1998:384)

In Turkish, the construction of E50.a may be used as a colloquial alternative to E44. If
the complement of the comitative-instrumental suffix -(i)le/-(i)la
is a pronoun, as in E50.b,
then it is in the genitive (cf. Kornfilt 1997, ch. 2.1.2.1.18.1).

E50. a. Elif-le görüş-tü.
   TURK [Elif-with] meet-PST(3.SG)
   ‘He/she met Elif.’

b. O-nun-la savaş-ti.
   ‘He/she fought with him/her.’ (GJ & YT)

4.2.4. Verb derivation

Several languages have a reciprocal verb derivation that may or may not be morphologically
identical to a reflexive derivation. E51 is an example from Yukaghir.

E51. ta:t n’ê-kimd’ej-l’el-qi.
   KOLYU CAL RECP-fight-INFR-3.PL.INTR
   ‘They fought (with each other).’ (Maslova 1998:280)

However, we do not need to examine this more closely since it generally presupposes a
composite (coordinate, collective or plural) subject and not a concomitant construction.24

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24 For the reciprocal verb derivation in Kayardild, cf. Evans 1995, ch. 7.4.3. and 9.3.1.
4.2.5. Incorporation

No cases of incorporation of a reciprocal partner into the verb have been found.

4.2.6. Conversion

German has such verbs as *sich verbrüdern* ‘make brothers’, *sich befreunden/ anfreunden* ‘make friends’, etc. A *verbrüdert sich mit C* may be explicated as ‘A starts treating C as a brother and vice versa’. It may be seen that the denominal verb is not really based on the noun representing the reciprocal partner, but instead on a predicate nominal complementing this.

4.2.7. Lexical fusion

For other kinds of concomitants, we are going to see verbs that include a specific concomitant in their meaning. Reciprocal partners, however, are never coded in this way. What may be found, instead, is a verb whose meaning implies reciprocity. E52-E53 illustrate this for German and Yucatec Maya.

E52. a. Maria hat einen alten Mann geheiratet.
   *GERM* ‘Mary married an old man.’
   b. In der Stadt bin ich meinem Freund begegnet.
      ‘Downtown I met my friend.’

E53. t-in nùup’-táan-t-ah Hwàan
   *YM* PST-SBJ.1.SG join-front-TRR-CMPL John
   ‘I met John.’ (Bricker et al. 1998, s.v. táan)

In English and related languages, there are two alternatives of coding the reciprocal partner as a verb complement. Reciprocal verbs like *meet, fight, join* etc. are labile. In their transitive use, reciprocal partners are coded as direct object (E54.a/b/c); in the intransitive use, they are coded as a prepositional object (E54.a’/b’/c’).

E54. a. He met Sylvia.   a’. He met with Sylvia.
    b. She fought him.    b’. She fought with him.
    c. They joined the group. c’. They joined with the group.

The version with the associative object implies partial control on the part of the concomitant, while the transitive version implies absence of control on its part.
4.2.8. Summary

Apart from reciprocal verb derivation, which however, as we said, does not count as a strategy of concomitance, none of the languages investigated has a special grammatical marking for the reciprocal partner. Generally, the strategy of coding it does not differ from the strategies used for other concomitant functions, in particular the companion (see the following sections).

There are two main techniques of coding the reciprocal partner. The first alternative may be seen in Turkish, where it is coded as a concomitant, more specifically with a comitative relation, as in E54.a'/b'/c'. The second alternative occurs in German and English, where it may be treated as an associated undergoer and coded as a direct complement of a transitive verb that implies a reciprocal situation, as in E54.a/b/c. The first is the majority technique in our sample. It may take the form of any of the coding strategies from concomitant predication down to verb derivation.

No language in our sample uses a comitative adverb (meaning 'together') to express the relation of reciprocal partner.25

4.3. Companion

4.3.1. Concomitant predication

The idea that another being is co-present in a given situation is not grammaticalized in all languages. In some languages, the specific relation of such a being to the situation at hand has to be specified. This leads to the construction of a complex sentence with an additional embedded clause where other languages abide by one clause that contains a comitative adjunct.

Korean makes a principal distinction between comitatives at the same level of empathy as the actor and comitatives at lower levels. If they are at the same level, then the same construction as for reciprocal partners is admissible, viz. the additive case marker treated in § 4.3.3. Alternatively, a special non-finite verb form, a gerund, may be introduced as a concomitant predicate that expresses the relation of the companion to the main situation. The verb to be chosen varies according to the empathy class of the companion. For human comitatives, the form teliko, as in E55, is most common. It is a gerund of a stem teli- ‘company’, which is no longer used as an independent verb.

KOR 3.SG-TOP [son-ACC accompany-GER] party-LOC go-PST-DECL
‘He went to the party with his son.’

25 Substandard German has expressions like wir müssen mal zusammen sprechen ‘we have to talk to each other (on occasion)’, where zusammen ‘together’ is the only mark of reciprocity.
Comparing E55.b with E47.a, we find that the coding strategy – additive case vs. concomitant predicate – overrides empathy and also determines a reciprocal vs. comitative reading. While the additive case allows for symmetry of involvement of the actor and the concomitant even if they differ in empathy, the concomitant predicate implies some asymmetry, i.e. sensibly more control on the part of the actor. In E55.b, for instance, this might mean that Toli takes care of Suni.

If the comitative is lower in empathy than the actor – in the simplest case it is an animal or a thing –, then the concomitant predicate strategy is the rule. Teliko may again be used, but also molko ‘leading, driving’. Molko cannot be used to add a human companion, but it is compatible with an animate companion or with a vehicle. Like E56.a and unlike E47.a, E56.b only has a non-reciprocal, i.e. a comitative, reading.

  ‘He went to the park with the dog.’

b. Toli-nun kae-lul teli-ko cal non-ta.
  Toli-TOP [dog-ACC accompany-GER] well/often play: PRS-DECL
  ‘Toli plays well/often with the dog.’

In the case of a confective comitative, the additive case -hako, -(k)wa, or -(i)lang cannot be used (E57.b). Instead, the concomitant predicate strategy rules alone. A suitable verb meaning ‘carry’, ‘take’ or ‘have’ must be chosen, as in E57.a. The additive case may only be used to coordinate more than one inanimate companion. This proves once more that this case is not sensitive to the absolute empathy class of its NP, but instead to the latter’s empathy relative to the reference NP, as in E57.c.

E57. a. ku-nun kkochtabal-ul (hana) tul-ko/kaci-ko wass-ta.
  3.SG-TOP [flower:bundle-ACC one carry-GER/have-GER] come:PST-DECL
  ‘He/she came with a bunch of flowers.’

b. *ku-nun kkochtabal-kwa/-hako/-ilang wass-ta.
  ‘He/she came with a bunch of flowers.’

c. ku-nun kkochtabal-kwa/-hako/-ilang sonmul-ul
  3.SG-TOP [flower:bundle-ADD/-ADD/-ADD present-ACC
  tul-ko wa-ss-ta.
  carry-GER] come:PST-DECL
  ‘He/she came with a bunch of flowers and a present.’

The Japanese strategy is again similar to the Korean one. Comitatives are generally joined to the main predication by a gerund of one of a paradigm of verbs that specify the
kind of concomitance. If actor and companion are of the same empathy level, as in E58, the verb *ture* ‘lead’ is generally used. Confectives are joined by verbs meaning ‘have’ or ‘carry’, as in E59.a. The additive case is excluded (E59.b).

E58.  Taro-wa Hanako-o ture-te kaimono-ni it-ta.

\[\text{JAP} \text{Taro-TOP} \text{[Hanako-ACC lead-GER] shopping-LOC go-PST}\]

‘Taro went shopping with Hanako.’

E59.  a. kare-wa kookhii-o mot-te kaet-ta.

\[\text{JAP} \text{3.SG.M-TOP [coffee-ACC carry-GER] return-PST}\]

‘He came back with coffee.’

b. *kare-wa kookhii-to kaet-ta.

\[\text{JAP} \text{3.SG.M-TOP [coffee-ADD] return-PST}\]

‘He came back with coffee.’

In Lezgian, the concomitant predicate *galaz* already introduced in § 4.2.1 is chiefly used to code a human companion (E60). There is another concomitant predicate *gwaz* for the coding of an animate (E61) or inanimate companion (E62). The latter is the converbal form of the local copula *gwa* ‘be at’ and takes an absolutive argument (Haspelmath 1993, ch. 12.2.3).

E60.  I kolkhoz-r-a lezgi-jr.i-q\textsuperscript{b} galaz azerbajz\textsuperscript{r.i},

\[\text{LEZ} \text{this kolkhoz-PL-INESS [Lezgian-PL-POESS with] Azerbajj\textsuperscript{an}-PL(ERG)}\]

ermeni-jr.i stxawil.e-ldi zehmet ĕugwa-zwa.

‘Azerbaijanis and Armenians work fraternally together with the Lezgians in these collective farms.’ (Haspelmath 1993:225)

E61.  Gada g\textsuperscript{ürc}-äj sa q\textsuperscript{izil.din} k’ek gwaz xta-na.

\[\text{LEZ} \text{boy hunt-INEL [one gold-GEN rooster with] return-AOR}\]

‘The boy returned from hunting with a golden rooster.’ (Haspelmath 1993:226)

E62.  VIII asir.d-a lezgi ėil-er.a-l arab-ar

\[\text{LEZ} \text{8 century-INESS Lezgian land-PL-SRESS Arab-PL}\]

tur-ni zur gwaz ata-na.

\[\text{[sword-and violence with] come-AOR}\]

‘In the 8\textsuperscript{th} century, the Arabs came to the Lezgian lands with sword and violence.’ (l.c.)

Finally, the concomitant predicate *awa-j*, as in E63, may code companions to places (cf. E9 above). *Awa-j* is a participle of the local copula *awa* ‘be in/with’ (also appearing in E99 below).
While the postpositional galaz in E60 literally means something like ‘being behind C’ and thus positions the situation with respect to the human companion, a non-human companion may be conceived as a participant that is under the temporary possessive control of the actor. Thus, it is not rare for a non-human companion to be joined by a possessive verb, especially by a verb expressing a temporary possessive relation. The stems gwa and awa appearing in E61 – E63 are such verbs (cf. Haspelmath 1993, ch. 17.6.2). The verb forms kaciko ‘take, have’ in E57.a and motte ‘carry, have, take’ in E59.a illustrate the same for Korean and Japanese.

Khmer, too, uses the concomitant predicate strategy for comitative relations. On the basis of the verb cì: ‘be’, a complex coverb cì: -mù: ‘be-one-tight, forming a unit with’ is formed to express the sense ‘together with’. It appears in E64 (Bisang 1992:427).

In Vietnamese, too, the coverb strategy is available for the coding of a comitative relation. The verb theo ‘follow, accompany’ may be used for a human companion, as in E66, while the verb cám ‘take’ specifies a confective relation, as in E67. However, Vietnamese prefers the adpositional phrase strategy (see E81f).
The functional domain of concomitance

E67. Anh ấy đến trên tay cầm (một) bó hoa.
   'He came with a bunch of flowers in his hands.' (TNC)

Mandarin again uses the verb *gēn* ‘follow, accompany’. The alternative constructions of E68.a and b are due to the differential symmetry between the actor and comitative roles in the situation. In E68.a, the comitative subconstruction is close to the main verb, so that the actor alone controls the main situation. In E68.b, the comitative subconstruction is close to the actor, so both actor and companion share in the overall control. This version approximates a coordinate construction.

E68. a. Wǒ xiǎng míngtiān gēn tā yīkuàir chuqù.
   'Tomorrow, I would like to go out together with him.' (Bisang 1992:181)

b. Wǒ gēn tā xiǎng míngtiān yīkuàir chuqù.
   'Tomorrow, he and I would like to go out together.' (Bisang 1992:181)

Instead of *gēn*, other coverbs may be used. In situations of motion, this is the coverb *péi* as already illustrated in E28. Otherwise, the coverb *hé* ‘mix > with’ (Li & Thompson 1981:368) is available, as in E69 and E70.b.

E69. Bìé hé wǒ kāiwǎnxǐào.
   ‘Don’t joke with me.’ (Li & Thompson 1981:364)

The constructions in E70 show confective situations. In this case, the use of *gēn* or *hé* is excluded. Instead, verbs like *nà* ‘take’, *dài* ‘bring’ (E70.a), *duān* ‘carry’, *jià* ‘add’ (E70.b) etc. are commonly used to specify the concomitant relation of a thing to the actor.²⁶

E70. a. Tā dài le yī bēi kāfēi huílái.
   'He came back with a cup of coffee.' (SL)

b. Tā hē kāfēi jiā táng hé/gēn niúnáí.
   'He drinks coffee with sugar and milk.' (SL, PM, YQ)

The coverbs *gēn* and *hé* have it in common that they associate participants which are at the same level of empathy (E68.b and E70.b), so that they can function in coordination.

²⁶ From the fact that *dài* is immediately followed by the aspect particle in E70.a, it must be concluded that it is the main verb in this example, as would be brought out by a translation like ‘he brought a cup of coffee back’.
4.3.2. Adpositional marking

Yucatec Maya uses its preposition *éetel* to add a comitative. By its etymology, it is primarily a comitative preposition (see § 5.1.10). However, as we shall see, it covers all of concomitance.

E71. táan u tääl-o’b yéetel a wilib-o’b
YM PROG SBJ.3 come-3.PL [with POSS.2 daughter-in-law-PL]
‘They are coming with your daughters-in-law’ (MUUCH 269)

E72. he’ u páah-tal a bis-ik-en-e’x xàan
YM DEF.FUT SBJ.3 possible-PROC SBJ.2 carry-INCMPL-ABS.1.SG-2.PL also
t-a wéetel-e’x-e’ ?
[LOC-POSS.2 with-2.PL-D3]
‘Could you take me with you, too?’ (BVS 11.01.32)

The preposition *éetel* is insensitive to the class of the companion. It is also used for a confective, as in E73.

E73. k-u tääl le mèen-o’ yéetel hun-lùuch balche’
YM IMPF-SBJ.3 come DEF curer-D2 [with one-cup balche]
‘the priest comes with a gourd of balche’ (CHAAK 036)

Khmer, too, uses a comitative preposition *nità*', which has somehow been clipped from the complex *ći:ə-mù:ʃ-y-nità’* ‘be-one-tight’ seen in § 4.3.1 and appears in E74.

E74. yùp nìh mìt(r)ɔməlap nù nìt nhɛm.
KHMER night DEM friend dwell [with I]
‘Tonight, my friend stays with me.’ (Bisang 1992:431)

Thai is another language to use a comitative preposition, *kàb*. This preposition is highly multifunctional and expresses not only comitative, but also, among other things, dative, benefactive, locative and instrumental relations.

E75. phôm paj duu nàŋ kàb phýan phôm.
THAI I go see film [with friend I]
‘I go to the movies with my friend.’ (Bisang 1992:371)

Kambera has a comitative preposition *dàngu* ‘with, and’, which appears in E76.

E76. hi na-ngangu dàngu nyungga.
KAM CNJ 3.SG.NOM-eat [with I]
‘so he’ll eat with me.’ (Klamer 1998:297)

---

27 The morpheme *nìt* may also be used as a locative marker meaning ‘in, on’, and may also have the function ‘for’ (cf. Bisang 1992:431).
German like Yucatec Maya and English has a catch-all preposition *mit*, which is used both in stative (E77.a) and in dynamic (E77.b) situations, both with empathic (E77.a/b) and anempathic (E77.c/d) comitatives, both in concomitance with the actor (E77.a/b/c) and with the undergoer (E77.d).

E77.  

a. So etwas wird es mit uns nicht geben.  
GERM  ‘This is not going to happen as long as we are there.’

b. Max fängt die Katze mit Moritz.  
   ‘Max catches the cat with Moritz.’

c. Er kam mit Kaffee zurück.  
   ‘He came back with coffee.’

d. Er trinkt Kaffee mit Zucker und Milch.  
   ‘He drinks coffee with milk and sugar.’

This preposition may be used without a complement, in the sense of ‘along’, as in E78 (cf. Zifonun 1999). The companion then remains implicit and has to be inferred from the context. In an intransitive construction, as in E78.a, the unfilled argument slot of *mit* relates to someone accompanying the actor, and the sentence means ‘John goes to the dentist with someone identifiable from the context’. E78.b supports this analysis, as the elliptically missing complement of the preposition can only be the Henry appearing in the immediately preceding context. Again, in a transitive construction, the unfilled argument slot of *mit* refers to someone/something accompanying the undergoer, as in E79.

E78.  

a. Hans geht mit zum Zahnarzt.  
GERM  ‘John goes along (with someone) to the dentist.’

b. Heinrich verließ am nächsten Tag die Stadt. Luise reiste mit ihm.  
   ‘The next day, Henry left the city. Luise traveled with him.’ (o.c.)

e. Eva packt den Kuchen mit in das Paket.  
   ‘Eva packs the cake into the package along with the rest.’ (o.c.)

In E80.a, the unfilled argument slot of *mit* once more implies that the elliptical companion accompanies the undergoer, i.e. Elise. This time, however, the implicit anaphora is reflexive, so the companion is identical with the actor (cf. Zifonun 1999). This analysis is supported by the non-elliptic variant construction of E80.b.

E80  

GERM  ‘John takes Elise along to the dentist.’

---

28 Cf. E86.c from Kayardild for this use of a comitative phrase.
b. Der Hund, den sie meistens mit (sich) auf Reisen nimmt, (…)
‘The dog that she takes mostly with herself on journeys, (…)’ (o.c.)

While the preposition *mit* ‘with’ in general has both comitative and instrumental function (see § 4.4 and § 4.5), only its comitative use permits this kind of ellipsis of its complement. Finally, Vietnamese uses the adpositional marking strategy, too. The preposition *vo’i* ‘along with, in company of’ is usable for a human companion, as in E81.a, as well as for an animate or an inanimate companion, as in E81.b/c.

E81. a. Tôi đi xem phim *vo’i* cô ấy.
VIET ‘I went to the movies with her.’ (TNC)

b. Cô ấy đi dạo *vo’i* con chó.
she go go walk [COM dog]
‘She walked with her dog.’ (TNC)

c. Anh ấy đến *vo’i* (một) bó hoa.
he come [COM one bundle flower]
‘He came with a bunch of flowers.’ (TNC)

As with German *mit*, the argument of the Vietnamese preposition *vo’i* is optional, as in E82. Thus, the referent of the unfilled argument slot of *vo’i* has to be inferred from the context. In E82, the elder brother addressed in the first clause is the companion of the speaker-agent in the following clause (Thompson 1987:272).

E82. Anh đi chơi’i, tôi cùng đi *vo’i*.
VIET elder-brother go do:for:pleasure I accompany go COM
‘[If] you’re going [off to] have a good time, I’m going along.’ (Thompson 1987:272)

4.3.3. Case marking

As an alternative to the complex sentence treated in § 4.3.1, Korean may use the additive case suffix *-hako, -(k)wa, or -(i)lang* on the companion NP. A comitative adverb such as *kati* ‘simultaneously, together’ or *hamkke* ‘together’ is optional in comitative expressions (E83.a). The coordinative version E83.b is not comitative as such; it is the adverb that forces a comitative meaning. *Kati* and *hamkke* are not normally used in reciprocal expressions and may therefore serve as an additional criterion to distinguish the two roles.

E83. a. Suni-nun Minsu-hako (kati) phathi-e oass-ta.
KOR Suni-TOP [Minsu-ADD] (together) party-LOC come:PST-DECL
‘Suni came to the party with Minsu.’
b. Tongsu-hako Minsu-nun kati phathi-e ka-ss-ta.
   [Tongsu-ADD Minsu-TOP] together party-LOC go-PST-DECL
   ‘Tongsu and Minsu went together to the party.’

c. ku-nun kae-hako kongwon-e kass-ta.
   3.SG-TOP [dog-ADD] park-LOC go:PST-DECL
   ‘He went to the park with the dog.’

Again, E83.c has the same structure as E47.a, and here it is the lexical meaning of the verb that determines a comitative reading for the former and a reciprocal reading for the latter.

In Japanese, too, the additive case -to appears in comitative expressions. As there is no adverb meaning ‘together’, the coordinative version E84.b is ambiguous between a collective and a distributive reading (Hinds 1988: 201-202).

E84.  a. Taro-wa Hanako-to kaimono-ni it-ta.
   JAP Taro-TOP [Hanako-ADD] shopping-LOC go-PST
   ‘Taro went shopping with Hanako.’ (YN)

   b. Taro-to Hanako-wa kaimono-ni it-ta.
   [Taro-ADD] Hanako-TOP shopping-LOC go-PST
   ‘Taro and Hanako went shopping.’ (YN)

Yukaghir has a dedicated comitative case, which appears in E85.

E85.  kie, met-n’e qon met numö-jin.
   KOLYU friend [me-COM] go(IMP.2SG) my house-DAT
   ‘Friend, come with me to my place.’ (Maslova 1998:127)

There is also an adverb n’aha: ‘together’, which is optional in such constructions. The suffix -n’e is insensitive to the empathy of its host, appearing also with confectives.

Kayardild has an associative case -nurru which is used in a variety of situations where two entities are temporarily in the same place: temporary location, transient possession and temporary use. E86 illustrates the functional variation.

E86.  a. ngijin-urru thabuju-nurru niya warra-j.
   KAY [my-ASSOC elder brother-ASSOC] 3.SG.NOM go-ACT
   ‘She’s going (there) with my big brother.’

   b. ngakuluwan-urru bi-l-da wirrka-ju.
      [1.INCL.PL-ASSOC] 3-PL-NOM dance-POT
      ‘They’ll dance with us (i.e. when we get there).’

   c. ngumban-urru mala-diya-jarri.
      2.SG-ASSOC beer-drink-NEG.NR
      ‘As long as you’re here (she’s) off the grog.’ (Evans 1995:155)

The Turkish case suffix -(i)le/(i)la can be used to join a human, an animate and an inanimate companion. The construction with the comitative adverb beraber ‘together’ is preferred if the companion is a human being (E87.a). However, in the constructions that have a
non-human companion (E87.b) or an inanimate companion (E87.c), the use of the adverb beraber is excluded. This means that beraber is added if the actor and its companion are at the same level of empathy (cf. Kornfilt 1997, ch. 1.3.1.4. and ch. 2.1.1.4.4).

E87. a. Kardeş-iyle (beraber) dükkan-a git-ti.
   TURK [sibling-POSS.3-with] together store-ALL go-PST(3.SG)
   ‘He went to the store with his brother.’

   [dog-with] town-ALL/woods-ALL go-PST(3.SG)
   ‘He went to the park/woods with the dog.’

   [one cup coffee-with] return-PST(3.SG)
   ‘He returned with a cup of coffee.’ (GJ & YT)

Yidiŋ has a comitative case meaning ‘with, accompanied by, by means of, having’ (Dixon 1977:138). Its allomorphs are -ʃaŋ ~ -y ~ -y. This case may mark an empathic (E88) as well as an anempathic companion (E89). It is used both in dynamic (E88.a and E130 below) and in stative (E88.b and E89) situations. E88f show different allomorphs of the comitative suffix (Dixon 1977:77, 84 and ch. 3.3.4).

E88. a. wagu:ʃa buŋa:-y gali-ŋ
   YID man(ABS) [woman-COM] go-PRS
   ‘The man is going with the woman’ (Dixon 1977:109)

b. wagu:ʃa pina-ŋ waga:li:ɡi
   man(ABS) sit-PRS [wife-COM]
   ‘The man is sitting with his wife.’ (Dixon 1977:303)

E89. ɳayu ɡana-ŋ ɡugí:
   YID I(NOM) stand-PRS [stick:COM]
   ‘I am standing with a stick [in my hand]’ (Dixon 1977:303)

4.3.4. Verb derivation

The Kambera preposition dàŋgu ‘with/and’, which we have seen in § 4.3.2, is actually rarely used in comitative constructions. Instead, the derivational verb affix -da is found more often, which is evidently a more grammaticalized variant of this case relator and functions as a valency-increasing operator. The comitative participant is then a direct complement of the verb. If it is a pronoun, this is suffixed to the verb and need not be represented as a free pronoun, as may be seen in E90 (Klamer 1998 ch. 7.2.2).
E90. hi na-nga-dà-ngga (nyungga).
KAM CNJ 3.SG.NOM-eat-with-1.SG.DAT I
'so he’ll eat with me.' (Klamer 1998:298)

Yidi uses a transitivizing verb derivation to adjoin a variety of participants (Dixon 1977, ch. 3.8.5, 4.3.3 – 4.3.7). An intransitive base is transitivized with the suffix -\( \text{-ng} \) (or one of its allomorphs) and now governs an erstwhile peripheral participant in absolutive function. This covers the comitative function, as in E91, so that we get a transformational relation to the comitative case seen before (E88f).

E91. a. wagu\( \text{-a-ngu b} \text{\( \text{u} \text{na} \)) gali-\( \text{-n} \text{\( a \)) \text{-l} \}
YID man-ERG woman(ABS) go-TRR-PRS
'The man is going with / taking the woman.' (Dixon 1977:109, 293)

b. wagu\( \text{-a-ngu wagal \text{-n} \text{\( a \)) \text{-l} \}
man:ERG wife(ABS) sit-TRR-PRS
'The man is sitting with [his] wife.' (Dixon 1977:303)

c. \( \text{n} \text{\( a \)) yu \text{-a-ngu ugi \text{-n} \text{\( a \)) \text{-l} \}
I(NOM) stick(ABS) stand-TRR-PRS
'I am standing with a stick [in my hand]' (Dixon 1977:303)

This verb derivation strategy can be employed both with empathic (E91.a/b) and with anempathic (E91,c) companions, in dynamic (E91.a) as well as in stative (E91.b/c) situations.

### 4.3.5. Incorporation

Cross-linguistically, incorporability correlates negatively with agency and empathy. The most commonly incorporated participants are the patient and the instrument. Lehmann & Verhoeven, this vol., § 2.4.2.3, present a scale of incorporability of participants with different roles. In the order of increasing incorporability, it takes the form of S1:

S1. Incorporability of participant role

<table>
<thead>
<tr>
<th>control</th>
<th>agent</th>
<th>comitative</th>
<th>experiencer</th>
<th>local roles</th>
<th>instrument</th>
<th>theme</th>
<th>patient</th>
</tr>
</thead>
</table>

The comitative possesses a low degree of incorporability because it is most commonly empathic and taken as a co-agent.

No language in our sample incorporates a companion. In Mayali, however, a confactive may be incorporated, as in E92 (see Lehmann & Verhoeven, this vol., § 3.4.2.3).
4.3.6. Conversion

Again, there is no verb in our sample meaning ‘to do something together with C’, where C is the derivational base of the verb. Yukaghir does have proprietive derivations of nominal bases. There is a stative variant \([X]_{n}\text{-PROPR} \text{INTV}\) meaning ‘be (provided) with X, have X’ (illustrated by E24.a; see Maslova 1999:150f), and a dynamic variant \([X]_{n}\text{-PROPR.INCH} \text{INTV}\) meaning ‘get X’ (o.c. 259). In both cases, however, the function of X is one of a possessum rather than a confective.

4.3.7. Lexical fusion

We found no verb root meaning ‘to do something together with C’, where C is a specific companion.

4.3.8. Summary

Concomitant predication, adpositional and case marking as well as verb derivation are all well represented strategies to mark a companion. The lexical strategies incorporation, conversion and lexical fusion are not employed in the languages of the sample, but incorporation is known to be used elsewhere. The explicitness of the preferred strategies thus correlates well with the relative independence of the companion.

In some cases, the strategy or the particular markers are sensitive to the empathy class of the companion. In Japanese and Korean, the additive case marking strategy is only used if the companion is human or marginally an animal, whereas the concomitant predicate strategy may be used with a human, an animal or an inanimate companion. In Japanese, Korean, and Lezgian, a non-human companion is conceptualized as a participant that is under the temporary possessive control of the actor. Thus, those languages use a coverb or converb with possessive function to code a non-human or an inanimate companion. Other languages are insensitive to the empathy class of the companion. This is true, in particular, of German, English and Yucatec Maya prepositional marking.
4.4. Vehicle

A vehicle includes both means of locomotion and means of transport. In theory and in a few real cases, almost the whole gamut of entities arranged on the empathy hierarchy may function as means of locomotion. In actual practice, however, it suffices to consider animals, body parts and other individual objects including vehicles proper. As we will see, some languages do justify these distinctions by their structure.

4.4.1. Concomitant predication

Korean may use an additional verb to join the means of locomotion, as in E93, and certainly prefers this construction to the instrumental case if it is not a body part that is used. The verb may vary depending on the object involved.

E93.  ku-nun mok-pal-ul cip-ko (kol-o) ka-ss-ta.

kor 3.SG-TOP wood-ACC lean-GER walk-GER go-PST-DECL

‘He walked on crutches.’

An animate means of locomotion is always linked by the verb thako (E94.a); the instrumental is ruled out in this situation (cf. E122 below). The same verb is also used to specify a technical means of locomotion, as in E95.a/b, and is preferred to the instrumental variant to be discussed below.


kor Cheolsu-TOP horse-ACC ride-LOC go-PST-DECL

‘Cheolsu went to the park on horseback.’

E95. a. ku-nun kicha-lul tha-ko ka-ss-ta.

kor 3.SG-TOP train-ACC ride-GER go-PST-DECL

‘He went by train.’

b na-nun onal caconko-lul tha-ko wass-ta.

1.SG-TOP today bicycle-ACC ride-GER come-PST-DECL

‘Today I came by bicycle.’

Korean also uses different verbs to adjoin means of transport. The verb form sitko ‘loading’ may code both a technical and an animate means of transport, as in E96.a. If a body part is the means of transport, more specific verbs are employed, for example, the verb iko ‘load (on the head)’ in E96.b and meko ‘load (on the shoulder)’ in E96.c. These verbs govern their complement in the locative case.

E96. a. ku-nun cim-ul caconko-/mal-e sit-ko unpanhaess-ta.

kor 3.SG-TOP baggage-ACC bicycle-/horse-LOC load-GER transport:PST-DECL

‘He transported the baggage on the bicycle/horse.’
b. ku-nun cim-ui moli-e i-ko unpanhaess-ta.
   3.SG-TOP baggage-ACC [head-LOC load1-GER] transport:PST-DECL
   ‘He transported the baggage on his head.’

c. ku-nun cim-ui okke-e me-ko unpanhaess-ta.
   ‘He transported the baggage on his shoulder.’

Besides, the constructions with the instrumental case marking are also available in expressions of transport (see E123). In Korean, compared to the means of locomotion (E94f), a means of transport is conceived as a location.

In Japanese, too, if the means of locomotion is an animate being, as in E97.a, the use of the gerundive notte ‘riding’ is more common than the variant with an instrumental case (as in E124.a below). A technical means of locomotion can also be joined by notte, as in E97.b. In this case, however, the instrumental variant (E124.b) is preferred.

E97. a. kanozyo-wa uma-ni not-te siro-e it-ta.
   JAP 3.SG.F-TOP [horse-LOC ride-GER] castle-ALL go-PST
   ‘She went to the castle on horseback.’ (YN)

b. kanozyo-wa densya-ni not-te tokyoo-e it-ta.
   JAP 3.SG.F-TOP [train-LOC ride-GER] Tokyo-ALL go-PST
   ‘She went to Tokyo by train.’ (YN)

An animate or technical means of transport is expressed by the gerundive nosete ‘loading’, as in E98.

E98. kare-wa uma-ni / zitensya-ni nose-te mono-o hakon-ta.
   JAP 3.SG.M-TOP [horse-LOC / bicycle-LOC load-GER] thing-ACC transport-PST
   ‘He transported the things on the horse / bicycle.’ (YN)

Lezgian uses the concomitant predicate strategy, too. In E99, the verb awaz joins a technical means of locomotion.

E99. Ali-di-z balk’an ina tu-na mašind-a awa-z
   LEZ Ali-DAT horse here leave-AOC [car-INESS be.in-IMC]
   qũfi-n hič xus tuš-ir.
   go.back-MSD PT pleasant COP:NEG-PST
   ‘Having left his horses here, Ali did not like going back by car at all.’ (Haskelmath 1995[C]:423)

Awaz is the converb form of the generic local copula awa ‘be in/with’, which generally governs an NP in the inessive. Awa is also used as a possessive verb in the sense of ‘have’ (cf. Haskelmath 1993, ch. 17.6.1). We have seen similar Lezgian forms in § 4.3.1.
In Mandarin, the coverb *qí* ‘ride’ is used to join an animate (E100.a) or a technical means of locomotion (E100.b); but in the case of a body part, the coverb *yòng* ‘use’ is employed, as in E100.c.\(^\text{29}\)

**E100.**

a. Tā *qí-zhe* mā huílái le.  
he [ride-DUR horse] back:come PF  
‘He came back on horseback.’ (SL, PM, YQ)

b. Tā *qí* zìxíngchē qù dàxué le.  
he [ride bicycle] go university PF  
‘He went to the university by bicycle.’ (SL, PM, YQ)

c. Tā *yòng* shǒu zǒu lù.  
he [use hand] walk road  
‘He walks on his hands.’ (SL, PM, YQ)

The verb *yòng* may also be used to express an animate or a technical means of transport in a transitive situation, as in E101. In fact, the vehicles (*zìxíngchē* and *mǎ*) have to be joined by the verb *yòng* if they are employed as a means of transport, but with the verb *qí* if they are a means of locomotion, as in E100.a/b.

**E101.**

a. Nǐ néng *yòng* zìxíngchē bā dōngxi yùn guòlái ma?  
you can [use bicycle] ACC things transport VEN INT  
‘Can you fetch/get the things on the bicycle?’ (SL)

b. Nóngmín *yòng* mǎ yùn mùtou.  
farmer [use horse] transport lumber  
‘The farmer transported lumbers on the horse.’ (SL)

Khmer has a couple of coverbs that are used to express concomitance. One is *daoy* ‘follow, obey, have intercourse’, which may be used both for a technical means (E102.a) and for a body part used for locomotion (E102.b). Another such coverb is *cīh* ‘ride, get on’, as in E103.

**E102.**

a. òːpǔk khjom têu thuːː-kaː(r) daoy laːn.  
father I go work [follow car]  
‘My father goes to work by car.’ (Bisang 1992:428)

b. kɔːt daa(r) daoy cːŋ.  
he go [follow foot]  
‘He goes on foot.’ (Bisang 1992:428)

**E103.**

khjom cīh kɔŋ têu mːl srok-phùːːm(ː) cūːt-khaːŋ.  
I [ride bicycle] go see environs neighbouring  
‘I am taking the bike to see the neighboring areas.’ (Bisang 1992:429)

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\(^{29}\) In contrast to E100.b, E100.a again (cf. E70.a) shows the aspect marker appended to *qí*, which presupposes that it is here used as a full verb (‘he rode a horse back’).
Thai uses the coverb ้ก้ว ‘take’ for means of locomotion, as in E104.

E104. ้ก้ว ร้ดฟ้า ป้ก ้รุนที ‘He is taking the train to Bangkok.’ (Bisang 1992:375)

Vietnamese offers a choice of several instrumental relators for vehicles. E105 shows the motion verb ้กั้ ‘go’ in coverb function. Compared with this, the verb ้อง ‘use’ is the more general relator for vehicles. This verb may code both an animate (E106.a) and a technical means of locomotion (E106.b). With this coverb, the goal of locomotion always has to be mentioned (cf., on the contrary, E116).

E105. ้กิ xe ้กิ hoc.
‘I am taking the car to school.’ (Bisang 1992:317)

E106. a. Anh ้ย ้อง ้กั้ saigon.
‘He rode a horse to Saigon.’ (TNC)

b. Tôi ้ย ้อง xe ้กิ saigon.
‘I traveled to Saigon by bicycle.’ (TNC)

The verb ้อง may also be employed to join an animate or a technical means of transport, as can be seen in E107:

E107. ้ย ้อง xe ้กิ / ้กั้ ้กิ / ้กิ ng. 
‘He transported the drinks on the bicycle / horse.’ (TNC)

Alternatively, means of locomotion (or transport) may be marked by the generic instrumental preposition ้กิ ‘with’ (see § 4.4.2). Prepositional phrases are postverbal in vernacular Vietnamese. The preverbal position of the coverb phrase in the above examples may be a symptom of low grammaticalization or of Chinese influence.

4.4.2. Adpositional marking

German is one of the languages to use prepositions for means of locomotion. There is a considerable amount of idiomaticity involved in the choice of the preposition, especially if the means of transport is an animal, as in E108. A technical means of locomotion is generally expressed by use of the preposition ้กิ ‘with’, as in E109.

E108. a. Sie kam zu Pferde / auf dem Esel.
‘She came on horseback / on a donkey.’ (Nilson 1973:84)
b. Sie ritt auf dem Pferd/Esel.
   ‘She rode the horse/donkey.’

c. Sie transportierte es auf/mit dem Pferd/Esel.
   ‘She transported it on the horse/donkey.’

   GERM  ‘She uses a wheelchair / travels by train.’

   b. Sie fliegt mit dem Flugzeug.
   ‘She is going by airplane.’

   It is apparent that several of these means of locomotion are conceptualized as a location rather than as an instrument.

   A similar variation is observed if body parts are used for locomotion:

E110. Er läuft erstaunlich schnell zu Fuß / auf den Händen / mit seinem Holzbein.
   GERM  ‘He walks surprisingly fast on foot / on his hands / with his wooden leg.’

   Likewise in English, objects used for locomotion are viewed as instruments (E111), while vehicles are rather locations (E112).

E111. He walks with a cane. (Nilsen 1973:79)

E112. a. Ken drove his mother in the car.
   b. We came the whole way in a car.
   c. * Ken drove his mother with the car. (Nilsen 1973:79, 84)

   Yucatec Maya once more uses its generic instrumental preposition éetel to join both an animate means of locomotion (E113.a) and a technical vehicle (E113.b).

E113. a. Káa h máan-o’b-e’ káa h bin-o’b yéetel u tsíimin.
   YM  CNJ PST pass-3.PL-CNTR CNJ PST go-3.PL [with POSS.3 horse]
   ‘And they passed by and went away with their horses.’ (MUUCH 193)

   b. Táan u tāal yéetel hun-p’éel máquina.
   PROG SBJ.3 come [with one-CL.INAN machine]
   ‘He is coming in a vehicle.’ (MUUCH 227)

   The constructions in E114 represent a situation with a body part as means of transport. Here the preposition éetel may again be used, as in E114.a. However, such a relation is more naturally expressed by the locative preposition ti’/t-, as in E114.b.

E114. a. Pedroh-e’ t-u kóoch-ah hun-kùuch si’ yéetel u ho’l.
   YM Pedro-TOP PST-SBJ.3 load-CMPL one-load firewood [with POSS.3 head]
   ‘Peter loaded one load of firewood on his head.’ (SBM 0226)
b. le máak-o’ hun-kùuch si’ u k’óoch-mah
DEF person-D2 one-load firewood SBJ.3 carry-PART.PF
t-u ho’l pòol
[LOC-POSS.3 head skull]
‘that person is carrying one load of firewood on his head’ (RMC 0748)

Besides the coverb ığaw seen in E104, Thai may use the preposition dooj ‘by’ (E115) to
adjoin a means of locomotion. The two relators do not differ much with respect to gram-
maticalization.

E115. khài paj kunthéeb dooj ródfai.
THAI he go Bangkok [with train]
‘He is taking the train to Bangkok.’ (Bisang 1992:375)

For Vietnamese, E116 features the generic instrumental preposition băng ‘with’. It is
used both for animals (E116.a), for technical means of locomotion (E116.b) and for body
parts used as means of locomotion (E117.a).

E116. a. Anh ấy đi bằng ngựa (đến ướt ố n hoa).
VIET he go [INST horse] go.to park
‘He rode a horse (to the park).’ (TNC)

b. Tôi đi bằng máy-bay (đến Tokyo).
I go [INST airplane] go.to Tokyo
‘I went (to Tokyo) by plane.’ (TNC)

VIET he can go [INST hand]
‘He can walk on his hands.’ (TNC)

he can go [COM hand]

The instrumental preposition may also be employed to code a technical or an animates means
of transport, as in E118 (cf. E107).

E118. Anh ấy chở? nuố ighet c uống bằng xe đạp / ngựa.
VIET he transport drinks [INST bicycle/horse]
‘He transports the drinks on the bicycle / horse.’ (TNC)

Means of locomotion cannot be coded by the preposition với ‘i, which is used for comitative
relations (cf. E117.b with E81 and E156.b). Thus, in E119, the prepositional phrase với ?
ngựa does not express a means of locomotion but a companion of the actor.

E119. Anh ấy đến ướt ố n hoa với i ngựa.
VIET he go.to park [COM horse]
‘He went to the park with a horse.’ (TNC)
4.4.3. Case marking

A means of locomotion may, of course, appear in the instrumental. The Korean case suffix -lo is ambiguous between instrumental and allative function of an inanimate reference point. It is used for locomotion with body parts, as in E120. Compare the minimal pair E93 vs. E120, where the polysemous mokpal is first a technical instrument, then a body part.

\[
E120. \text{ku-nun mok-pal-lo chonchonhi kol-o ka-ss-ta.}
\]
\[
\text{KOR 3.SG-TOP [wood-leg-INST] slowly walk-GER go-PST-DECL}
\]

‘He walked slowly with his wooden leg.’

The same case may be used for vehicles, as in E121.

\[
E121. \text{ku-nun kicha-lo ka-ss-ta / wass-ta.}
\]
\[
\text{KOR 3.SG-TOP [train-INST/ALL] go-PST-DECL / come:PST-DECL}
\]

‘He went/came by/to the train.’

However, the construction with thako, as in E95.a, is more common than the instrumental variant. If the means of locomotion is animate, as in E122, the construction with thako, as in E94.a, is the only choice.

\[
E122. *\text{Cholsu-nun mal-lo kongw\-en-e ka-ss-ta.}
\]
\[
\text{KOR Cheolsu-TOP [horse-INST]  park-LOC  go-PST-DECL}
\]

‘Cheolsu went to the park on horseback.’

Situations of transport are similar. Again, the suffix -(\#)lo may code a vehicle (E123), but cannot be used for an animate means of transport, which usually requires the concomitant predicate strategy (cf. E96.a).

\[
E123. \text{ku-nun caonk\-o-lo umsik-ul unpan- / paetalhae-ss-ta.}
\]
\[
\text{KOR 3.SG-TOP [bicycle-INST] food-ACC transport-/cater-PST-DECL}
\]

‘He transported /catered the food on/by the bicycle.’

In Japanese, both animate and technical means of locomotion can be indicated by the instrumental case suffix -de, as in E124. However, in the former case the version with the verb notte ‘ride’ (see E97.a) is preferred and in the latter case the instrumental version (E124.b) is favored.

\[
E124. a. \text{kanozyo-wa uma-de siro-e it-ta.}
\]
\[
\text{JAP 3.SG.F-TOP [horse-INST] castle-ALL go-PST}
\]

‘She went to the castle on horseback.’ (YN)

\[
b. \text{kanozyo-wa densya-de tookyoo-e it-ta.}
\]
\[
\text{3.SG.F-TOP [train-INST ] Tokyo-ALL go-PST}
\]

‘She went to Tokyo by train.’ (YN)

The situation for transport is similar. The instrumental suffix may not naturally code the animate means of transport, as in E125.a; but it is the default in marking a technical means of transport, as in E125.b.
Instead of the case marking strategy in E124.a and E125.a, the concomitant predicate strategy is most commonly used if an animate being is used as a vehicle (cf. E98).

Another language making use of the instrumental case for both animate and inanimate means of locomotion is Yukaghir:

E126. šl’upke-le anusbaka-le kewe-s’i:l’i.
KOLYU [launch-INST dugout-INST] go-PFV.INTR.1PL
‘We went by launches and by dugout boats.’ (Maslova 1998:130)

Turkish once more uses the comitative-instrumental suffix to mark a means of locomotion. It goes with an animal (E127.a), a body part (E127.b), and a vehicle (E127.c) as a means of locomotion. In certain cases such as E128, the body part may also be marked by the locative.

E127. a. At-la gel-di.
TURK [horse-with] come-PST(3.SG)
‘He came on horseback.’ (GJ & YT)

[wood leg-POSS.3-with] quite speed-ADJR walk-DISP(3.SG)
‘He walks very fast with his wooden leg.’ (GJ & YT)

today Oktay [bicycle-with] university-ALL come-PST(3.SG)
‘Today Oktay came to the university by bicycle.’ (GJ & YT)

E128. El-ler-i-nin üzer-i-nde yürü-me-yi bil-ir.
TURK [hand-PL-POSS.3-GEN upside-POSS.3-LOC] walk-INF-ACC know-DISP(3.SG)
‘He can walk on his hands.’ (GJ & YT)

To indicate a means of locomotion, Yidiŋ may still use the comitative case mentioned in § 4.3.3, as in E129.

E129 Nayu gana guwa gali:-na mandi: ₿ubu-ːy
YID (NOM) try west go-PURP hand:INST [walking:stick-COM]
‘I tried to go west [i.e. uphill] with [the help of] a stick in my hand’ (Dixon 1977:297)

Moreover, Yidiŋ possesses an instrumental case whose allomorphs are -la ~ -da ~ -ːl ~ -ː, Its functions cover first the instrumental function proper including the means of locomotion, as in E130, second the undergoer of the antipassive, and third the local functions of
locative and allative (Dixon 1977, ch. 3.3.2, 4.3.2). It thus neutralizes precisely the contrasts and variations we have seen in vehicle expressions of several of the other languages.

E130. bama bangi:lan wařa:n-da gada:n bama:y
YID person(ABS) Bangilan(ABS) [canoe-INST] come:PST person-COM

‘Bangilan came in a canoe with [many] men’

For Kayardild, there are only examples of body parts used for locomotion and transport. In this language, if a transitive or intransitive sentence refers to an action executed with the help of a body part, the body-part term is generally marked by the nominative case (Evans 1995, ch. 9.4.2 and 9.4.3). This is also seen in the constructions of E131. E131.a features a body part used as means of locomotion, and the NP is in the nominative case. It may be paraphrased with the proprietive case -wuru, but this is less usual. Furthermore, the nominative case may code body parts used as means of transport (E131.b).

E131. a. dathin-a yarbud-a barri-ja bardak / bardaka-wuru
KAY that-NOM snake-NOM crawl-ACT [stomach:NOM / stomach-PROP]

‘That snake crawls on/with its stomach.’ (Evans 1995:364)

b. wajurra-a niya kurrka-th
[armpit-NOM] 3.SG.NOM take-ACT

‘She carried it around under her armpit.’ (Evans 1995:363)

4.4.4. Verb derivation

The transitivizing suffix of Yidip is relatively insensitive as to the participant role of the absolutive argument it creates. In E132, it is used to join a means of locomotion (cf. E129).

E132 ṇayu ḋubu gali:-ŋal mandi:
YID l(NOM) [walking.stick] go-TRR hand:INST

‘I’m going with a walking stick in [my] hand.’ (Dixon 1977:303)

There are no data on vehicles proper in Yidip.

4.4.5. Incorporation

Incorporation of a noun designating a vehicle occurs in such German verbs as radfahren ‘bicycle’. Yucatec Maya, which is otherwise so prominent in incorporation, does not seem to use it with means of locomotion. If, however, a body part is used as means of transport, the body-part noun is commonly incorporated in the verb, as illustrated in E133.
Both the verb kuch-pach-t (E133.a) and k’óoch-ho’l-t (E133.b) contain an incorporated body-part noun, viz. pach ‘back’ (E133.a) and ho’l ‘head’ (E133.b), referring to the means of transport. This construction is more common than the variant with the instrumental preposition (E114.b).

4.4.6. Conversion

The conversion strategy plays no great role in our sample. Here we find such verbs as German karren ‘cart, to transport in a car’. Some more German examples appear in E134.

E134. a. Wir sind zur nächsten Bahnstation geradelt.
   ‘We cycled to the next train station.’

   b. Er ist die Strecke in drei Stunden gesegelt.
      ‘He sailed the way in three hours.’

   c. Peter ist über den See gepaddelt.
      ‘Peter paddled across the lake.’

However, in such verbs as radeln ‘bicycle’, segeln ‘sail’, paddeln ‘canoe’, the nominal base actually designates an essential part of the vehicle.

4.4.7. Lexical fusion

Verbs of locomotion that contain the means in their meaning are frequent in Germanic languages. German has, among others, laufen ‘walk’ (legs), krabbeln ‘crawal’ (all fours), kriechen ‘crawl’ (belly), fliegen ‘fly’ (wings), fahren ‘drive’ (land or sea vehicle).

We have seen a similar case in E96 for Korean, viz. the verbs for transporting something with a body part: ita ‘load/carry on the head’, meta ‘load/carry on the shoulder’, tulta ‘take in the hand’.
4.4.8. Summary

The vehicle is the first concomitant on the gamut that may be marked by any of the strategies. Many languages, including English and Kayardild, employ a different marker accordingly as the means of locomotion is a body part or a vehicle properly speaking. Others such as Korean and Japanese differentiate according to the animacy of the vehicle. Where the concomitant predicate strategy is used, as in Chinese, Lezgian and Khmer, several predicates meaning ‘climb, follow, ride, use, get on, take, load etc.’ may be available which specify how the actor or the thing transported is related to the vehicle and whether locomotion or transport is involved. This is again a symptom of the low degree of grammaticalization of this strategy.

Body parts or animals for locomotion or transport are often conceived as a location and are marked by the corresponding locative case relators. In German, English, Korean and Yucatec Maya, means of transport (as opposed to means of locomotion) are conceptualized as a location rather than as an instrument.

4.5. Tool

As we said in § 3.3.3, the primary means of manipulation is a body part, especially the hand (as implied by the word manipulate ‘handle’ itself). Given a situation of manipulation, the need to mention the body part used will seldom arise. Consequently, if the default body part is used, the most implicit strategies of concomitance generally suffice. More explicit strategies are only employed if a non-standard body part is used, if there is something special about it or if an artefact is used instead of a body part.

4.5.1. Concomitant predication

Korean and Japanese have the most explicit strategies, adjoining the instrument by a concomitant predicate (a gerund or converb). In Korean, this strategy is available for instruments of manipulation (E135.b with the meaning ‘crutch’, E136), but not for body parts (E135.a and E135.b with the meaning ‘wooden leg’).

   KOR D3 man-TOP [foot-ACC take-GER] script-ACC well write-EVID
   ‘The man is said to write well with his foot.’

      ‘He banged against the door with a crutch.’
      *‘He kicked against the door with his wooden leg.’
E136. a. 7uli-nun cockalak-ul kaci-ko pap-ul mok-nun-ta.
    KOR  1.PL-TOP [chopstick-ACC take-GER] boiled. rice-ACC eat-PRS-DECL
    ‘We eat rice with chopsticks.’
    3.SG-TOP [hammer-ACC take-GER] car-ACC break-PST-DECL
    ‘He smashed the car with a hammer.’

In Japanese, the verb *tukat* ‘use’ may be employed in this construction. However, it is not very natural for body parts, as in E137, or for other default instruments, as in E138.a. It is more common if special emphasis is laid on the use of the particular instrument, as in E138.b.

E137. kanozyo-wa asi-o tukat-te e-ga kaker-u.
    JAP  3.SG.F-TOP [foot-ACC use-GER] picture-NOM paint:can-PRS
    ‘She can paint with her foot.’ (YN)

E138. a. 7wasitati-wa hasi-o tukat-te gohan-o tae-ru.
    JAP  we-TOP [chop.stick-ACC use-GER] boiled.rice-ACC eat-PRS
    ‘We eat rice with chop sticks.’ (YN)
    b. kare-wa kanaduti-o tukat-te kuruma-o kowasi-ta.
    3.SG.M-TOP [hammer-ACC use-GER] car-ACC break-PST
    ‘He smashed the car with a hammer.’ (YN)

In Hmong there are two coverbs that may be used in the present function, *muab* ‘take’ (E139) and *xuas* ‘use, employ, with’ (E140), the latter of which is more grammaticalized and consequently more common.

E139. koj muab tes tuav diav mas!
    HMONG you [take hand] hold spoon IMP:PEJ
    ‘Hold the spoon with your hands!’ (Bisang 1992:218)

E140. a. lawv mus xuas qhov ncauj tom rub rau tim ntug.
    HMONG they go [use mouth] bite pull to there bank
    ‘they grabbed/bit him with their mouths and pulled him onto the shore.’ (Bisang 1992:260)
    b. Lawv xuas hneev los tua noog.
    they [use crossbow] come shoot bird
    ‘They shoot birds with a crossbow.’ (Bisang 1992:260)
    c. xuas pheej tshav tshav ntoo.
    [use plane ] plane wood
    ‘to plane wood with a plane’ (Bisang 1992:260)

The corresponding coverbs in Mandarin are *yong* ‘use’ and *ná* ‘take’, as in E141f. They may be used both for body parts and for other instruments and are interchangeable in E141 and E142.
The functional domain of concomitance

E141. a. tām yòng shǒu chī-fán
   CHIN  they  [use  hand]  eat-food
   ‘They eat with their hands.’ (Li & Thompson 1981:597)

   b. Tā yòng kuàizi chī-fán.
   he  [use  chop.stick]  eat-food
   ‘He eats with chop sticks.’ (SL, Bisang 1992:184)

E142. Lisi ná dào qiè ròu.
   CHIN  Lisi  [take  knife]  cut meat
   ‘Lisi takes a knife to cut meat / Lisi cuts meat with a knife.’ (SL, Luo 1999:4)

Kambera, too, joins this group with a coverb wàngu ‘use, apply’, which appears in E143.

E143. a. Ku-taku uhu wàngu huru.
   KAM  1.SG.NOM-scoop rice  [use  spoon]
   ‘I scoop rice with a spoon.’ (Klamer 1998:287)

   b. Ku-palu-ha da ahu-mu nyumu wàngu ài.
   1.SG.NOM-hit-3.PL.ACC ART dog-2.SG.GEN you  [use  wood]
   ‘I hit your dogs with a stick.’ (Klamer 1998:291)

Khmer may use a verb pra ‘employ’, as in E144. The emphasis is on the use of the instrument, and there is a purposive relation between what should be the concomitant clause and the following clause.

E144. køøt pra kambvt kat sac-crü:k.
   KHMER  he  [use  knife]  cut pork
   ‘He cuts pork using a knife / He uses a knife to cut pork.’ (Bisang 1992:434)

Khmer has yet another concomitant predicate in situations of manipulation, y:kk ... (m:kk) ‘take... (VENITIVE)’, whose second part is optional (Bisang 1992:434f.) and which appears in E145.30

E145. køøt y:kk kambvt m:kk kat sac-crü:k.
   KHMER  he  [take  knife  VEN]  cut pork
   ‘He takes a knife to cut pork.’ (Bisang 1992:434)

Vietnamese has at least two instrumental relators at its disposal which differ in their degree of grammaticality. The verb lâ ‘take’ is still used as a full verb, as in E146.a. Here, the main clause and the purposive clause are linked by the conjunction dê (Bisang 1992:321-322). In E146.b, the same item functions as an instrumental coverb.

E146. a. Nó lâ cuc đê cuc vuôn.
   VIET  he  take  hoe  CNJ  hack  garden
   ‘He takes a hoe to hack the garden.’ (Bisang 1992:322)

30 Cf. Bavarian and Upper German er nimmt ein Messer her ‘he uses a knife’.
Furthermore, there is the coverb **đúng** 'use', which appears as an instrumental marker in sentences such as E147.

E147. a. Chúng tôi **đúng** dĩa ăn cơm.
   **VIET**
   ‘We eat rice with chop sticks.’ (Bisang 1992:317)

   b. Mỹ **đúng** máy bay ném bom **Việt Nam**.
   ‘America bombed Vietnam with bombers.’ (TNC)

Thai uses two verbs to join an instrument of manipulation, **cháj** 'employ, use' (E148) and **ʔaw** 'take' (E149). Only the latter is possible with body parts, as in E149.b.

E148. süдаa cháj phimdïid phim cõdmāaj.
   **THAI**
   ‘Sudaa uses the typewriter to type letters.’ (o.c. 374)

E149. a. phoʔaw mũid kháa kháw.
   **THAI**
   ‘I’ll kill him with a knife.’ (o.c. 373)

   b. naaj kháaw ʔaw hūa chon kamphẹŋ.
   Mr. Khaaw [take head] toss wall
   ‘Mr Khaaw bangs his head against the wall.’ (o.c. 373)

In Lezgian, the concomitant predicate strategy is excluded from the expression of instrumental relations.

In Korean and Japanese as illustrated in E135 – E138, the morphology of the concomitant predicate clearly marks it as syntactically subordinate, so that the structure here involves an interclausal relation in which the concomitant predicate bears an instrumental function to the final main verb. In Kambera, the syntax is essentially right-branching, the verb ‘use’ as it appears in sentences such as E143 is being grammaticalized to a coverb and further to a preposition; so here we can again assume that the instrumental expression is structurally subordinate to the main clause.

Things are more complicated in Hmong (E139f), Mandarin (E141f), Khmer (E144f), Vietnamese (E146f) and Thai (E148f). Just as the Chinese **yòng**-construction in E18, these examples feature two juxtaposed clauses none of which shows morphological symptoms of desententialization. The construction is ambiguous both at the structural and at the semantic level. At the structural level,

- it may be coordinative,
- or if the first verbs are grammaticalized to coverbs, the first clause may be asyndetically subordinate to the second one.
Semantically, the interclausal relation may be interpreted in two ways:

- either the second is a purposive clause to the first clause, which is semantically superordinate;
- or the first clause bears an instrumental function to the second, semantically superordinate clause.

At the cognitive level, the two interpretations amount to the same thing (cf. §5.2.3 with F4), but the functional sentence perspective differs. In terms of the latter, the second interpretation is textually much more likely in some examples like E149. This interpretation would be matched by the second of the structural analyses. This analysis would appear to be the correct one in at least those constructions that are structurally endocentric, with the second clause functioning as the head. The analysis, however, has the problem that some of these languages, including Hmong, Khmer, Thai and Vietnamese, are rather consistently right-branching. Given the main constituent order principles currently in vigor in these languages, one would expect the first in a series of verbs to grammaticalize to an auxiliary, but the second in a series to grammaticalize to a coverb and finally to a preposition. To the extent that the first verb in a series is actually being grammaticalized to a preposition, the language must be deviating from its traditional basic word order and changing towards left-branching order. In the specialized literature, this process has actually been advocated for at least one of these languages, viz. Mandarin.

4.5.2. Adpositional marking

As we already saw in E2, German uses the same preposition mit ‘with’ to mark the means of manipulation that we also met for the companion and the means of locomotion. Furthermore, a mass used as an instrument, as in E150, is again marked by the same preposition.

E150. a. Er hat sich das Gesicht mit Ruß beschmiert.
   GERM  ‘He dirtied his face with soot.’

   b. Er hat die Gäste mit Wasser besprengt.
   ‘He sprinkled the guests with water.’

Yucatec Maya uses its preposition éetel both for body parts, as in E151, and for other instruments, as in E152.

E151. a. Maria-e’ tuun bo’bôoh-t-ik höolmah yéetel u k’ab.
   YM   Mary-TOP PROG:SBJ.3 RED-knock-TRR-INCMPL door [with POSS.3 hand]
   ‘Mary is knocking at the door with her hand’ (EMB 0172)

   b. kem tuméen ma’k il-ik yéetel k ich
   although NEG SBJ.1.PL see-INCMPL [with POSS.1.PL eye]
   ‘although we don’t see him with our eyes.’ (FCP 141)
Thai uses a preposition *dûaj* for default instruments, both body parts, as in E153.a, and other objects, as in E153.b (cf. E148), and likewise for a mass used as an instrument, as in E153.c.

E153. a. Sùdaa mيمي dûaj taa.

Thai: Sudaa see [with eye]

‘Sudaa sees (sth.) with her eyes.’ (Bisang 1992:374)

b. Sùdaa phim códmâaj dûaj phim$$\text{did}.$$

Sudaa type letter [with typewriter]

‘Sudaa writes a letter with a typewriter.’ (Bisang 1992:374)

c. hôm khâa khon khon nân dûaj jaa-phíd.

I kill person CL DEM [with venom]

‘I kill him with poison.’ (Bisang 1992:374)

Similarly, Khmer uses a postverbal prepositional phrase with *nuỳg* for instruments that do not exceed expectations, as in E154.

E154. kêt kat sac-crù:k nùỳg kambýt.

Khmer: he cut pork [with knife]

‘He cuts pork with a knife.’ (Bisang 1992:434)

In Turkish, instruments of manipulation are marked by the same postposition *ile* ‘with’ that can also be used to join a comitative (cf. E44), as in E155.


Turk: man [one stick with] one wolf-ACC die-CAUS-PST(3.SG)

‘The man killed a wolf with a stick.’ (Erguvanlı 1984:31)

Vietnamese again uses the generic instrumental preposition *băng*, which appears in the variant E156.a of E147 and which we have already seen in E116. The preposition *băng* also marks body parts as a tool, as in E157. The preposition *vo’i*, on the other hand (cf. E81), is excluded from the expression of a means of manipulation, as in E156.b.

E156. a. Chúng tôi ăn cơm bằng đầu.

Viet: we eat rice [INST chop.stick]

‘We eat rice with chop sticks.’ (Bisang 1992:317)
4.5.3. Case marking

Korean may use its instrumental case in -(u)lo both for body parts, as in E158, and for other instruments, as in E159. Compare E158 with E135 and E159 with E136 (cf. Sohn 1994, ch. 2.1.1.4.3).

E158.  a. kō namca-nun pal-lo kul-ul cal ssu-n-te.
KOR D3 man-TOP [foot-INST ] script-ACC well write-PRS-EVID
‘The man is said to write well with his foot.’

‘He banged against the door with a crutch.’

‘He kicked against the door with his wooden leg.’

E159.  a. uli-nun cockalak-ulo pap-ul mok-nun-ta.
‘We eat rice with chop sticks.’

b. kō namca-nun pal-lo kul-ul cal ssu-n-te.
KOR D3 man-TOP [foot-INST ] script-ACC well write-PRS-EVID
‘The man is said to write well with his foot.’

‘He kicked against the door with his wooden leg.’

The situation in Japanese is again similar. The examples E137f, which were somewhat forced with gerunds, become quite natural with the instrumental case, which may be employed both for body parts, as in E160, and for other instruments, as in E161.

E160.  kanozo-wo asi-de e-ga kaker-u.
JAP 3.SG.F-TOP [foot-INST] picture-NOM paint:can-PRS
‘She can paint with her foot.’ (YN)

E161.  a. watasitati-wo hasi-de gohan-o tabe-ru.
JAP we-TOP [chop.stick-INST] boiled.rice-ACC eat-PRS
‘We eat rice with chop sticks.’ (YN)

b. kō namca-nun pal-lo kul-ul cal ssu-n-te.
KOR 3.SG-F-TOP [foot-INST ] script-ACC well write-PRS-EVID
‘The man is said to write well with his foot.’

‘He kicked against the door with a crutch.’

‘He bumped into the door with a crutch.’

‘He bumped into the door with a hammer.’ (YN)
Likewise in Yukaghir, the instrumental case -(l)e is normally employed in these situations, as shown in E162f.

E162. tude juko:-l  šašqu-ê  čaŋda-s.’
KOLYU [his little-ANR finger-INST] touch-PFV.INTR.3.SG
‘He touched it with his little finger.’ (Maslova 1998:130)

E163. a. ta:t  ša:l-e  čolha-j-de-ge,  el-u:žu:.
‘She touched him with a stick, but he did not move.’ (Maslova 1998:129)

b. ta:t  n’umud’i:-le  čine-j-m.
CA [axe-INST] chop-PFV-TR.3.SG
‘Then he chopped it with an axe.’ (Maslova 1998:129)

Kayardild uses three different cases for the manipulation of instruments, the proprietive, the instrumental and the associative. The proprietive, marked by the suffix -(w)uru, appears in E164.

E164. a. dathin-a  barrki-ja  wandawanda-wuru,  narra-wuru  kala-th
KAY that-NOM chop-IMP [stone axe-PROP] [shell knife-PROP] cut-IMP
thubul-uru  bijurr-uru  burukura-th.
[cockle sp.-PROP cockle sp.-PROP] scrape-IMP
‘Chop it with a stone axe, cut it with a shell knife, and scrape it with a thubulda or bijurra shell.’ (o.c. 146)

b. ngada  ja-wuru  ngawu-na  jambila-tharr
I.SG.NOM [foot-PROP] dog-MABL kick-PST
‘I kicked the dog with my foot.’ (Evans 1995:417)

The proprietive is employed both for tools (E164.a) and for body parts (E164.b) as instruments. If, however, the body part serves as a vehicle rather than as a tool, it is conceptualized as analogous to the actor marked by the nominative, as we saw in E131. Also, the proprietive does not really focus on the role of a participant as an instrument in a situation, but instead on the fact that the actor is ‘equipped’ with it (Evans 1995:146).

The instrumental case -nguni is often interchangeable with the proprietive, but unlike the latter it focuses on the relation of the instrument to the undergoer, as in E165. In E165.b, it is a mass that serves as an instrument.

E165. a. dangka-a  raa-ja  bijarrba-y  wumburu-nguni.
KAY man-NOM spear-ACT dugong-MLOC [spear-INST]
‘The man speared the dugong with a spear.’ (Evans 1995:1)

b. kari-ja  kuwan-d,  dunbu-wa-nharr,  wunkurr-nguni  kari-j!
cover-IMP firestick-NOM extinguished-INCH-APPR [grass-INST] cover-IMP
‘Cover the firestick lest it go out, cover it with grass.’ (Evans 1995:153)
The associative case -nurr was already seen to fulfill a comitative function (E86). It is also used if an instrument has a temporary, contingent relation to the situation.

E166. bi-rr-a yaluw-jarr yaku-ri-na mijil-nurr.

KAY 3.PL-DU-NOM catch-PST fish-MABL [net-ASSOC]

'They caught some fish with the net (temporarily using it).’ (Evans 1995:417)

In Lezgian, tools are marked by the superessive (E167.a), the inelative (E167.b) or the addirective case (E167.c).


LEZ dad(ERG) [ruler-SRESS] line-PL draw-AOR

'Dad drew lines with a ruler.’ (Haspelmath 1993:99)

b. wuna am tfeng.d-aj ja-na k’an-da-j!

you:ERG it(ABS) [rifle-INEL] hit-AOC must-FUT-PST

‘you should have shot it with a rifle!’ (o.c. 449)

c. Axpa ada wil.i-n naq-w-ar ġweč’i jaqlux.d-wid mič-na.

then she(ERG) eye-GEN tear-PL [little cloth-ADDIR] clean-AOR

'Then she wiped away the eye’s tears with a little handkerchief.’ (o.c. 92)

The addirective may also be used for a body part in instrument function, as in E168.

E168. Qadim.a cći.i-wdi ada-z acq-’un teklif-na.

LEZ Qadim(ERG) [hand-ADDIR] he-DAT sit-MSD propose-AOR

'Qadim offered him to sit down with his hand.’ (ibid.)

Alternatively, body-part nouns in instrument function may occur in the absolutive case, as in E169. The verbs in E169, ‘touch’ and ‘kick’, belong to a group which involve a default body part (hand and foot). If this is expressed, it is in the absolutive case and forms a constituent with the verb (o.c. 275-278).


LEZ Ada(ERG) I-SBESS [hand] touch-IMPF

'Ada is touching me with his hand.’ (o.c. 276)


Ali(ERG) dog-INESS [foot] kick-AOR

‘Ali kicked the dog with his foot.’ (o.c. 278)

Turkish consistently uses the comitative-instrumental case marker to indicate an instrument, no matter whether a body part (E170.a), an artefact (E170.b) or a mass (E170.c).


TÜRK [foot-PL-POSS.3-with] picture make-INF-ACC know-DISP(3.SG)

'He can paint with his feet.’ (GJ & YT)
b. Araba-yı cekić-le parçala-di.
car-ACC [hammer-INST] fragment-PST(3.SG)
‘He smashed the car with a hammer.’ (GJ & YT)

c. Yüz-ü-nü is-le kir-let-miş.
face-POSS.3-ACC [soot-INST] dirt-FACT-PERF(3.SG)
‘He dirtied his face with soot.’ (GJ & YT)

In Yidi, tools (E171.a) and body parts (E171.b) alike are marked by the instrumental case already introduced in § 4.4.3.

E171. a. bama-:l leafne ugi galba:n-da gunda:l
YID person-ERG tree(ABS) [axe-INST] cut:PST
‘The person cut the tree with an axe.’ (Dixon 1977:294)

b. ga ara-N gu N u N u buriburi wa «i: ba leafne a:l
alligator-ERG that(NOM) old.man(ABS) [mouth:INST] bite:PST
‘The alligator bit the old man with its mouth.’ (Dixon 1977:313)

4.5.4. Verb derivation

Just as the Kambera comitative preposition has a variant in a verb suffix, as we saw in § 4.3.4, the instrumental coverb wâng(u), which we saw in § 4.5.1, has a grammaticalized counterpart in a derivational verb suffix -wà which augments the valency by a direct object slot to be occupied by the instrument. At the same time, what was the direct object of the base verb is demoted and cross-referenced by an indirect-object suffix on the derived verb.

E172 is the counterpart to E143. The instrument NP may or may not follow the derived verb directly, and even if it follows, as in E172.b, it may be separated from the instrumental derivational suffix by the agreement suffix just mentioned, which refers to another NP in the clause. This countericonic order of elements points to an advanced degree of grammaticalization and/or lexicalization of this device (Klamer 1998, ch. 7.2.1).

E172. a Ku-taku-wà-nya uhu na huru-mu nyumu
KAM 1.SG.NOM-scoop-use-3.SG.DAT rice ART spoon-2.SG.GEN you
‘I scoop rice using your spoon.’ (Klamer 1998:292)

1.SG.NOM-hit-use-3.PL.DAT wood ART dog-2.SG.GEN you
‘I hit with a stick your dogs.’ (ibid.)

In Yidi, the transitivization seen in § 4.3.4 may also be employed to attract an instrument into verbal government. With instruments, however, the process is more complicated, since the base construction (e.g. E171.a) contains a transitive verb. This first has to be de-transitivized by the antipassive suffix -ç. This demotes the erstwhile undergoer of the verb, so that transitivization by -çu-l can now promote the instrument to absolutive function.
In this way, the construction in E171.a is transformed into E173 (Dixon 1977, ch. 4.3.6 - 4.3.8).

E173. bama-:l galban gunda\textsuperscript{f}ija:l gugi-:l
\textit{YID} person-ERG axe(ABS) cut:APASS.COM:PST tree-LOC

‘The person cut the tree with an axe’ [lit. ‘cut the axe on the tree’] (o.c. 294)

Yucatec Maya does not have an instrumental valency operation.\textsuperscript{31}

### 4.5.5. Incorporation

Instruments, preferably body parts, are incorporated in many languages.\textsuperscript{32} Yucatec Maya is one of them. E174 and E175 show incorporation of a body part and a tool, respectively.

E174. a. t-u yóot'-k'ab-t-ah le pàak'l-o'
\textit{YM} PST-SBJ.3 squeeze-hand-TRR-CMPL DEF orange-D2

‘he squeezed the orange’

b. káa t-u koh-chek'-t-ah le mùula-o'
\textit{CNJ} PST-SBJ.3 push-foot-TRR-CMPL DEF mule-D2

‘and he kicked the mule’ (HNAZ 0068.02)

\textit{K’ab} ‘hand’ is by far the most commonly incorporated noun, followed by \textit{chek’} (suppletive form of \textit{òok}) ‘foot’. In principle, all the inalienable body parts, which in the Yucatec system are the controllable ones (cf. Lehmann 1998[P], ch.5.3), may be incorporated.

Nouns referring to objects other than body parts may be freely incorporated in Yucatec Maya, but generally in undergoer function. Incorporation of nouns referring to non-body-parts in instrumental function is rare. However, with some frequency, the nouns \textit{che’} ‘stick’ and \textit{tunich} ‘stone’\textsuperscript{33} are found in an incorporative construction that implies an instrument, as in E175.

E175. a. káa k’eb-che’-t-ik yéetel x-bakche’
\textit{YM} CNJ:SBJ.2 half.open-tree-TRR-INCMP  with F-husking.tool

‘You rib it (e.g. an ear of corn) open with the husking tool.’ (Sullivan 1984:149)

\textsuperscript{31} There are two derivational processes with similar functions, the usative and the applicative derivation. The former indicates that the undergoer serves the actor as the object named by the base noun. The relation of the base noun to the object noun is a predicative one; no instrumental relation is involved. The latter indicates that the action extends towards the undergoer introduced by the operation. This undergoer can apparently be anything except an instrument. Cf. Lehmann & Verhoeven (this vol.) for details.

\textsuperscript{32} Cf. Seiler 1974:58-65 on an extensive system of body-part prefixes on verbs in Southern Paiute and related languages.

\textsuperscript{33} anthropologically probably the next most typical instruments after the body parts
b. péête'-tunich-eh !
press-stone-IMP
‘fix it by putting a stone (up)on it!’

What is remarkable about E175.a is the explicative relation between the incorporated classificatory noun and the more specific noun in the prepositional phrase.

While Lezgian does not have incorporation as such, the constructions of E169 above are the closest that it has to offer; and they certainly confirm the rule that if nouns in instrument function are incorporated at all, then those designating ‘hand’ and ‘foot’ will be among them.

4.5.6. Conversion

Derived verbs, so-called instrumentative verbs, which are based on a noun that functions as an instrument in the action, are common in Germanic languages. With body parts, German has köpfen ‘toss (ball) with head’ and füsseln ‘touch with feet’. Other instruments occur in such English verbs as iron, hammer, comb, saw, plow, brush, shear (scissors) and others. Some English and German examples appear in E176 and E177.

E176. a. He hammered the nail.
    b. They knifed him.
    c. She trapped coyotes.  (Givón 1984:97)

E177. a. Er hat den Ball (ins Tor) geköpft.
GERM
    ‘He headed the ball (into the goal).’
    ‘First you have to comb the dust out of your hair.’
    c. Er sägte den Balken in zwei Teile.
    ‘He sawed the timber into two parts.’

In the other languages of our sample, the conversion strategy is either unknown or at any rate not a productive pattern for means of manipulation.

4.5.7. Lexical fusion

In Germanic languages, many basic verbs contain an instrument in their meaning. The following verbs are generally understood with a default body part: paint, wink, pinch, slap (one hand), applaud (both hands), kick (one foot), trample (both feet), blow (mouth), bite (teeth).

If the default body part is used, mentioning it is redundant (E178.a vs. b). The instrument is normally only mentioned if there is something special about it (E178.c, d, e).
E178. a. Er malt (ein Bild).
   GERM  ‘He is painting (a picture).’

   b. Er malt (ein Bild) mit der Hand.
      ‘He is painting (a picture) with his hand.’

   c. Er malt (ein Bild) mit der linken Hand.
      ‘He is painting (a picture) with his left hand.’

   d. Er malt (ein Bild) mit dem Fuß.
      ‘He is painting (a picture) with his foot.’

   e. Er redet mit den Händen.
      ‘He is speaking with his hands.’

Similarly, verbs such as ‘sweep’, ‘cut’, ‘tie’, ‘shoot’ provide for a limited choice of default instruments; and if these are used, they are normally not mentioned. Compare the naturalness of E179.a and b:

E179. a. Shall I cut the salami with a knife?
   b. Shall I cut the salami with my pocket knife?

Yucatec Maya has such verbs, too, including lah ‘slap’, oxo’m ‘shell (corn by hand), náach ‘clamp the teeth on’, nes ‘gnaw’, net ‘peel with the teeth’, ch’ak ‘cut with axe or machete’, k’os ‘cut with scissors’, ts’on ‘shoot’, k’ax ‘tie’, p’o’ ‘wash’. E180 illustrates the minimal pair formed by ch’ak and k’os.

E180. a. muka’h-en    in     ch’ak
   YM    going.to-ABS.1.SG SBJ.1.SG cut(SUBJ)
   u   chi’che’-il     in      kùun-che’
       POSS.3 furrow:wood-REL  POSS.1.SG slat-wood
   ‘I am going to cut (trim) the slats for my corral’ (RMC 0301)

   b. táan in     K’os-ik   u    tso’ts-el  u    ho’l  le   máak-a’
      PROC SBJ.1.SG cut-INCMPL POSS.3 hair-REL  POSS.3 head DEF person-D1
      ‘I am cutting the hair of this person’ (RMC 0754)

### 4.5.8. Summary

The widest variety both of strategies and of particular markers is available to code the instrumental function proper. This is a hint at the central position of this function in the domain. Different means are applied according to such criteria as whether the instrument is a body part or a tool properly speaking (Korean and Japanese), or whether it is primarily related to the actor rather than to the undergoer (Kayardild).
4.6. Material

In fabricating an object, a certain material is used which may be a mass or some composite or plural object. This is clearly distinct from the instrument of manipulation, since the two may co-occur syntagmatically (one may make a boat of wood with an axe). However, a semasiological investigation of instrumental structures in different languages reveals that the material used is conceived as a kind of instrument in some of them. The functional bridge between a mass used as a tool and a material that something is made of is to be sought in situations like those of E190 and E200 below, where some material is used, but not exclusively, in the construction of something.

4.6.1. Concomitant predication

To indicate the material used, Korean may again form a complex sentence with the gerund kacjiko ‘taking’, as in E181. This is, however, only a secondary option.

‘He made a ship of paper.’

In Chinese, the coverb yòng marking a means of manipulation is also used to specify some material, as in E182. The same relation may be expressed by the verb ná ‘take’. Thus, no formal distinction is made between tool and material (cf. E141f).

E182. Tå yong/ná zhí zuò chuán.
CHIN he [use/take paper] make ship
‘He makes a ship of paper.’ (SL, PM, YQ)

Hmong uses the coverb muab ‘take’, as in E183.

E183. muab ntoo ua tsev.
HMONG [take wood] make house
‘build a house of wood’ (Bisang 1992:268)

In E182 and E183 just as in the earlier cases, the concomitant clauses are, at the same time, in a purposive relation to the clauses expressing an act of fabricating.

Surprisingly, Khmer may here use the same coverb dao which we found for locomotion, as represented in E184 (it may also use an ablative preposition, see E191) (Bisang 1992:428, 432f).

E184. tù nih thu: dao ch:.
KHMER cabinet DEM make [follow wood]
‘The cabinet is made of wood.’ (Bisang 1992:428)

Thai, too, has two relevant strategies, one of which is a specific coverb càag ‘leave, from’, which codes the use of a material in a production process, as in E185 (Bisang 1992:365, 375).
The functional domain of concomitance

This coverb shows up in the same functional context in which other languages use an ablative case relator as illustrated in § 4.6.2f.

Vietnamese again possesses two strategies to code the material relation. The constructions of E186 show the concomitant predicate strategy with the coverb ðùng.

E186. a. Anh ấy dùng tre làm nhà.
VIET he [use bamboo] make house
'He built a house of bamboo.' (TNC)

b. Tôi và con gái dùng giấy gấp (một) tàu dài.
I with daughter [use paper] fold one ship
'With my daughter, I made a ship of paper.' (TNC)

Besides, adpositional marking (E193) is available as a preferred alternative.

4.6.2. Adpositional marking

Yucatec Maya once more uses its instrumental preposition éetel. E187 is a prototypical example of a mass used as material. E188 shows a material which is not a mass.

E187. yéetel u lokok-il-e’
YM [with POSS.3 wax-REL]-TOP
 t-u mèent-ah hun-túul chan pèek’
PST-SBJ.3 do-CMPL one-CL.AN little dog
'With the wax (of the bees) he made a little dog.' (PEEK’ 026)

E188. peroh wáah a k’áat
YM but if POSS.2 wish
 a bëet u hòol túun le nah-o’ yéetel ñak’-e’
SBJ.2 do POSS.3 hole then DEF house-D2 [with lianas]-CNTR
'But if you want to make the door with lianas,' (NAH 117)

German differentiates between instrument and material. In E150, the mass is used as an instrument, while in E189 it is a material. The preposition switches from mit ‘with’ to aus ‘out of’.

E189. a. Er hat ein Haus aus Ziegelsteinen gebaut.
GERM 'He built a house from/out of bricks.'

b. Er hat ein Spielzeug aus Holz gebastelt.
'He fabricated a toy of wood.'
The comitative/instrumental preposition *mit* may also be used to adjoin a material for the production of something, as in E190. However, this construction differs semantically from the variant with the ablative preposition *aus* (E189.a). In E190, the prepositional phrase with *mit* implies that bricks are among the materials used for the building of the house. In this case, the preposition *mit* expresses a comitative relation in the sense of ‘the material C is there, too’.

E190. Er hat ein Haus mit Ziegelsteinen gebaut.

GERM ‘He built a house with bricks.’

Like German, Khmer may use the ablative preposition *ʔɔmpì* ‘from, of’ to express a material relation, as in E191 (cf. E184).

E191. tù: nìh thv: *ʔɔmpì*: ʔɔmpì: ch:.

KHMER cabinet DEM make [from wood]

‘The cabinet is made of wood.’ (Bisang 1992:433)

As an alternative to the coverb seen in E185 to express the material used, Thai may use all the instrumental prepositions we have seen in the other functions. E192 illustrates only the most common instrumental preposition *dûaj* ‘with’.

E192. dĕn tham khɔŋ-ːlɛn dûaj máaj.

THAI Deng make thing-play [with wood]

‘Deng made a toy of wood.’ (Bisang 1992:375)

In Vietnamese the preposition *băng* ‘with’ is generally used to express a material relation to the undergoer, as in E193. Vietnamese prefers this strategy to the concomitant predicate strategy with the coverb *dùng* ‘use’ seen in E186.

E193. a. Anh ấy làm nhà bằng tre.

VIET he make house [INST bamboo]

‘He built a house of bamboo.’ (TNC)

b. Tôi và con gái gấp cáiUDENT bằng giấy.

I and daughter fold ship [INST paper]

‘I and my daughter folded a ship of paper.’ (TNC)

### 4.6.3. Case marking

Korean (E194.a), Japanese (E195.a, E196.a) and Yukaghir (E197) may code the material used in the production of something by an instrumental noun phrase. In Korean, this strategy is preferred to the concomitant predication illustrated by E181 above. In Japanese, the instrumental would preferably be used to focus on the material. If this is not intended, a *genitivus materiae* may be used to background the material (E195.b, E196.b). Korean does not have this option, but instead a compound noun can be used (E194.b). At the level of syntax,
a relative clause would have to be formed to code the material as an attribute to the fabricated object, but this would involve too much apparatus to achieve backgrounding.

E194. a. ku-nun congilo pae-lul mantul-osst-ta.
‘He made a ship of paper.’

b. ku-nun cong-iae-lul mantul-osst-ta.
3.SG-TOP paper-ship-ACC make-PST-DECL
‘He made a paper ship.’

E195. a. kare-wa ki-de ie-o tate-ta.
JAP 3.SG.M-TOP [wood-INST] house-ACC build-PST
‘He built a house of wood.’

b. kare-wa ki-no ie-o tate-ta.
3.SG.M-TOP wood-GEN house-ACC build-PST
‘He built a house of wood.’

E196. a. kanozyo-wa kami-de hune-/omotya-o tukut-ta.
JAP 3.SG.F-TOP [paper-INST] ship-/toy-ACC make-PST
‘She made a ship/toy of paper.’

b. kanozyo-wa kami-no hune-/omotya-o tukut-ta.
3.SG.F-TOP paper-GEN ship-/toy-ACC make-PST
‘She made a ship/toy of paper.’ (YN)

E197. tet ennume tet qodo:-be a:-k śöjl-e.
KOLYU you at.first your lie-LOC.NR make-IMP.2SG [stone-INST]
‘At first, make your bed (place for lying) of stone.’ (Maslova 1998:426)

In Yidi, too, the instrumental case suffix is used to express a material of which something is made, as in E198.

E198. ēnagit diugur balgal śirgadā
YID we(NOM) house(ABS) make:PST [blady.grass:INST]
‘We made [thatched] a house with blady grass.’ (Dixon 1977:263)

Unlike the languages mentioned before, Turkish uses the ablative suffix -tan/-dan to join a material expression, as in E199.

E199. a. Kâgt-tan bir gemi yap-miş.
TURK [paper-ABL] one ship make-PERF(3.SG)
‘He has made a ship of paper.’

b. Tahta ve cam-dan bir yaz-lik ev inşa et-ti.
[wood and glass-ABL] one summer-ADJR house build AUX.TR-PST(3.SG)
‘He built a holiday house of wood and glass.’ (GJ & YT)

It is also possible to use the generic comitative/instrumental marker -(i)iA, as in E200.
E200. bu ev tuğla-yla yap-il-muş-tır
TURK this house [brick-with] make-PASS-PERF-EP.COP
‘this house is made with bricks’ (Kornfilt 1997:232)

There is, however, a semantic difference between E199 and E200 that equals the one observed for German in E189.a vs. E190: The ablative case relator marks the material that the product consists of, while the instrumental marks a material that has been used, *inter alia*, in the construction process (cf. Kornfilt 1997, ch. 2.1.1.4.10).

Finally, in Lezgian, a material used for the production of something may be expressed by the subelative case marker -kaj, as in E201, in one of its functions, viz. the ablative function (Haspelmath 1993, ch. 7.2.2.12).

E201. Werg-er.i-kaj awu-nwa-j čigirtma ajal-r.i-z gzaf k’an-da-j.
‘The children liked čigirtma, (a dish) made out of stinging nettles, a lot.’ (o.c. 97)

4.6.4. Verb derivation

The sample contains no data for the use of an instrumental valency derivation to adjoin a material NP. It seems, however, probable that the Yidi transitivizing operation (see § 4.5.4) comprises this function, too, since it otherwise bears a transformational relation to the instrumental case (see E198).

4.6.5. Other strategies

No language of the sample uses incorporation, conversion or lexical fusion to express the role of material.

4.6.6. Summary

A material used in the fabrication of something may be conceived, in the languages of our sample, in either of two ways. The first alternative may be seen in Thai, German, Khmer, Lezgian, and Turkish, in which the material is conceived as a source of the product. These languages use a morpheme with an ablative function to express the material relation. That is the coverb çàag in Thai, the prepositions aus in German and ព្រះ in Khmer, and the suffixes -dan/-tan in Turkish and -kaj in Lezgian.

The second alternative occurs in Korean, Japanese, Vietnamese, Yidi, and Yukaghir, in which the material is treated as an instrument and coded by an instrumental case marker. For
The functional domain of concomitance

Yucatec Maya, this is the instrumental preposition. Chinese and Hmong, which use a concomitant predicate meaning ‘use, take’, belong here, too, because Chinese yòng ‘use’ and Hmong muab ‘take’ are generic instrumental markers.

In the investigation of the material function, we have encountered two specific case relations that are absent from the rest of the functional domain of concomitance. The first of these is the ablative relation between the object produced (usually the undergoer) and the material. The ablative case relator apparently expresses a genetic relation of provenience which may ultimately be a temporal relation of posteriority of the product to the material. Here the functional domain of concomitance overlaps with the domain of temporal orientation.

The other case relation that appears in § 4.6 and is not genuine to concomitance is the genitive relation, where the material is coded as a possessive attribute to the noun expressing the product. This is true of such diverse languages as English and Japanese. As this is an adnominal construction, here also belongs the compound noun expressing both the material and the product, which may be encountered in Korean, German and doubtless in many other languages.

The ablative, the genitive and the determinans-determinatum relation in a nominal compound are on a grammaticalization cline. In moving along it, the material ceases to be a direct participant of the situation and instead gradually takes on an interparticipant relation to the product. The compound itself no longer expresses the particular relation between the two participants but instead iconically reflects the inseparability of form and matter.

4.7. Manner

Conceptually, a manner is like an abstract concomitant. It is a property or a state of the (primary) situation. The prototypical manner is conceptually dependent on the (primary) situation (see § 3.3.5). From a semasiological point of view, there is the simple fact that the same structural means may be used for manners as for other concomitants. This is, of course, not to deny that manners are different. In English, for instance, manner nouns like speed, care etc. may be adjectivized and then further adverbialized (speedily, carefully). This option is not available for instruments like hand or hammer. The difference is obviously related to the abstract nature of manner nouns. Treatment of manner as a concomitant presupposes its hypostatization.

4.7.1. Concomitant predication

Chinese again employs the generic instrumental coverb yòng ‘use’ to join a manner that may be conceived as an abstract instrument, as in E202.a/b. Otherwise, more specific verbs may

34 Cf. Lehmann & Shin & Verhoeven 2000 [D] for a typological study on this topic.
be employed instead of 用. In E202.c, e.g., the verb 费 is a suitable relator for the manner 大力.

E202.  

a. 我用暴力把他推到河里.

CHIN  I [use violence] ACC he push go.to river-interior

‘I pushed him into the river mightily.’ (Bisang 1992:185)

b. 威力用德语交流.

we [use German] communicate

‘We communicate in German.’ (SL)

c. 这件事他大力才办成.

this-CL thing he [overexert great power] only accomplish

‘He has only accomplished this with great effort.’ (SL, PM, YQ)

Vietnamese, too, may use the generic instrumental covert 用 to express a manner of a situation, as in E203 (see E208.b below for the adpositional alternative).

E203. 用在两个地方各处跳舞.

VIET [use connection] I execute work LOC office

‘By using a connection I handled the work at the authorities.’ (TNC)

In Korean, the same concomitant predicate for the tool and material, 伽, may be employed to join an abstract entity as a manner, as illustrated in E204. This is, however, less common than the instrumental case suffix (see E210).

E204. 伽-人 hang sang on gttunga-n saeng kak-ul kaci-ko ilha-n-ta.

KOR 3.SG-TOP always [bizarre-AT thought-ACC take-GER] work-PRS-DECL

‘He always works with a bizarre idea.’

4.7.2. Adpositional marking

As might be expected, Yucatec Maya uses once more its preposition éetel to join a manner to the main situation, as in E205f.

E205.  

Le bin káa h k’uch-o’b-e’ yéetel pàax

YM when QUOT CNJ PST arrive-ABS.3.PL-CNTR [with music]

yéetel k’aay yéetel óok’ot h k’a’m u bëeh-il-o’b.

with song with dance] PST receive\PASS POSS.3 way-REL-PL

‘When they arrived, they were welcomed with music, with singing, with dance.’

(HK’AN 0363)

E206.  

káa bin h ho’p’u nohoch-tal yéetel tóoh óol-al

YM CNJ QUOT PST begin SBJ.3 big-PROC [with straight mind-ABSTR]

‘and he started to grow in good health’ (HK’AN 0024)
German uses a variety of prepositions for manners, among them mit, unter, in, auf (cf. Lehmann 1998, esp. § 3). E207 presents some examples.

E207. a. Peter hat mit lauter Stimme ein Lied gesungen.
   \textit{GERM} ’Peter sang a song in a loud voice.’

b. Das hat er nur unter großen Mühen geschafft.
   ’He has only accomplished this with great effort.’

c. In großer Hast packte sie ihren Koffer.
   ’She packed her suitcase in great haste.’

d. Wir kommunizieren auf Deutsch.
   ’We communicate in German.’

In Vietnamese, both the comitative preposition \textit{vo} and the instrumental preposition \textit{bang} may be used to specify a manner of the situation, as in E208. Compared with the concomitant predicate strategy (E203), the variants with adpositional marking are more commonly used in modern Vietnamese.

E208. a. Chi hát \textit{vo/bang} niêm vui.
   \textit{VIET} ‘She sings cheerfully.’ (TNC)

b. \textit{vo/bang quen biết tôi đều \textit{c làm việc tại công quan nhà nước}}.
   [COM/INST connection ] I execute work LOC office
   ’I handled the work by a connection at the authorities.’ (TNC)

4.7.3. Case marking

In Japanese, the conversion of an abstract noun into a manner adverbial is marked by the instrumental case suffix -\textit{de}, as in E209 (Hinds 1988, ch. 2.1.1.4.11).

E209. a. kanozyo-wa \textit{ke-de} kaisya-ni hait-ta.
   \textit{JAP} 3.SG.F-TOP [relationship-INST] firm-LOC enter-PST
   ’She got the job in the company through pulls.’ (YN)

b. (watasitati-wa) doitugo-de komyunikeesyon-suru.
   1.PL-TOP [German-INSTR] communication-do:PRS
   ’We communicate in German.’ (YN)

Korean, too, uses the instrumental case suffix -(\textit{lo}) to mark an abstract noun expressing manner of a situation, especially in idiomatic expressions. Manner nouns are often modified by a relevant attribute, as in E210.
Yukaghir is again like Japanese and Korean in using the instrumental seen before to mark manner adverbials (Maslova 1999, ch. 9.3.1.2; there is no example). Kayardild may use the proprietary -\textit{wuru} ‘having’ to express an abstract entity as manner of a situation, as in E211. The instrumental and associative cases, although commonly used to express the other instrumental/comitative relations, are not employed here.

\textbf{E211.} ngaakawuru dahin-a kunawuna bakii-ja bayi-wuru-wa-th.
\textit{Kay} why that-NOM child:NOM altogether-ACT anger-PROP-INCH-ACT
\textit{‘Why is that child going completely wild?’} (Evans 1995:304)

In Turkish, a manner may be expressed by using the generic comitative/instrumental case marker -(\textit{i})\textit{la}, as in E212 (Kornfilt 1997, ch. 2.1.1.1.4.11).

\textbf{E212.} Hasan Ay\textit{ş}e-yi heyecan-la kucakla-di.
\textit{Turk} Hasan Ay\textit{ş}e-ACC [enthusiasm-with] embrace-PST(3.SG)
\textit{‘Hasan embraced Ay\textit{ş}e with enthusiasm.’} (o.c. 233)

In Lezgian, both the superdirective and the addirec tive cases are available for the expression of a manner, as exemplified in E213.

\textit{Lez} he(ERG) [firm voice-SRDIR] O mother say-AOR
\textit{‘He said with a firm voice: “O mother!”’} (Haspelmath 1993:101)

b. Čna jeke hewes.di-wdi Var\=svajanka mani luhu-z bašlamišt-na.
\textit{we:ERG} [great enthusiasm-ADDIR] Var\=svajanka song say-INF begin-AOR
\textit{‘We began to sing the “Var\=svajanka” with great enthusiasm.’} (o.c. 92)

The most common use of the superdirective case -\textit{ldi} ‘onto’ is the instrumental sense. This function is extended to the expression of a manner relation, as in E213.a. In E213.b, the manner phrase is marked by the addirec tive case -\textit{wdi} ‘in the direction of a location near/by’ (Haspelmath 1993, ch. 7.2.2.7. and 7.2.2.16).

\subsection*{4.7.4. Verb derivation}

None of the languages of our sample derives the main verb in such a way that it can govern a manner nominal.
4.7.5. Incorporation

No language of our sample can productively incorporate abstract manner nominals or adverbials into the main verb. Outside the sample, however, there are languages with an incorporation process ‘C-V’, where C is a noun, verb or adjective stem such that the complex means ‘to V in a C way’. E214 illustrates this strategy for Ute (Givón 1984, ch. 3.8.2).

E214. a. mamá-pa̱gá’wa-y
   UTE  woman-walk-IMM
   ‘(he) is walking like a woman’ (o.c. 80)

   b. piá-ápága-y
   sweet-talk-IMM
   ‘(she) is talking sweetly’ (ibid.)

4.7.6. Conversion

German has a couple of verbs such as eilen ‘hurry’, hasten ‘haste’, eifern ‘strive’ which are based on an abstract N and mean ‘to do something with N’. E215.a and b are in a paraphrase relationship.

E215. a. Er eilt nach Hause.
   GERM  ‘He hurries to get home.’

   b. Er geht in Eile nach Hause.
      ‘He goes home in a hurry.’

4.7.7. Lexical fusion

A manner is often part of the lexical meaning of a verb. Yucatec Maya will here be chosen as a representative of a phenomenon that could probably be illustrated from all of the languages of our sample. Verbs such as áalkab ‘run (walk with speed)’, awat ‘shout (speak loudly)’, chok’ ‘shove in (put in with force)’, ch’éeneb ‘peek (look with curiosity)’, k’ob ‘thump (beat with force)’, signify an act or action modified by some notion of manner.

4.7.8. Summary

In order to mark a manner, the languages of our sample employ all of the strategies except verb derivation and incorporation. The latter is, however, documented outside the sample.
Several languages, including Chinese, Vietnamese, Japanese, Korean, use exactly the same marker for manner as for tool and material, which is good semasiological evidence for the unity of the domain in this regard.

4.8. **Circumstance**

A circumstance is a situation that holds at the same time as the main situation and bears a concomitant, viz. essentially an instrumental relation to the latter. A circumstance is, thus, a secondary situation that is conceptualized as a propositional instrument used for the primary situation, as in E216.\(^35\) It is therefore one of the concomitant roles enumerated in T2.

E216. He got into the army by lying about his age. (Thompson & Longacre 1985:188)

E217. While (we were) eating, we heard a noise outside the window. (o.c. 189)

Repeating a point already made in § 3.3.5 with respect to E15, we distinguish the circumstance from the simultaneous situation as expressed by certain kinds of temporal clauses, e.g. in E217. The latter merely imply that the primary and the secondary situation take place in parallel, while a circumstance clause implies, in addition, that the secondary situation bears an instrumental relation to the primary one; and this rather than simultaneity is marked by the relevant interpropositional relators. Thus, while circumstances are marginal to the functional domain of concomitance, simultaneous temporal clauses may safely be excluded from it; they belong into the functional domains of nexion (interpropositional relations) and of temporal orientation. In the following, simultaneous temporal clauses are mentioned only to contrast them with circumstances.

Another paradigmatic relation of circumstance clauses should also be mentioned. A circumstance construction entails a purpose construction. Thus, E216 entails E218.

E218. He lied about his age in order to get into the army.

The close relationship between concomitant and purpose constructions has been seen repeatedly and will be systematized in § 5.2.3.

4.8.1. **Clause chaining**

In general, the strategy of clause chaining involves sequencing two or more clauses in a sentence without any relator that would code their interpropositional relation. In the present instance, this means that the circumstance relation is not coded. Two varieties of this construction are of relevance here, the **asyndetic clause chain** and the **same-subject clause chain**. The former may be illustrated from Chinese, as in E219. Just as in the earlier cases of

\(^35\) Hence, our notion of circumstance essentially includes König’s (1995:66) notion of ‘instrumental’.
concomitance (§§ 4.2 – 4.7), the interclausal relation is ambiguous between a concomitant and a purposive interpretation.

E219. a. Tā ūng shōuyūnǐ xué Yíngyǔ.
   CHIN he [hear radio] learn English
   'He learns English by listening to the radio.' or 'He listens to the radio to learn English.' (SL)

b. Tā qí chē jiān fēi he [ride vehicle] reduce fat
   'He loses weight by riding the bicycle.' or 'He rides the bicycle to reduce his weight.' (SL)

Disambiguation of this alternative requires a concomitant predication as shown in E222.a below.

Yukaghir has a category of dependent verb forms which are marked for same subject vs. different subject as illustrated in E220f. In E220, the subordinate clause clearly bears a circumstance relation to the following main clause.

E220. kimda:n’e-t mit end’o:n min-met
   KOLYU [lie-SS.IPFV] our animal take-TR.2.PL
   'You have taken our animals by deceit.' (Maslova 1998:473)

However, since the specific interpropositional relation is not coded, the construction is open to other interpretations, most prominently plain simultaneity. E221 features two consecutive same-subject clauses. For the first of these, an instrumental interpretation is inferrable, while no special interpropositional relation need be assumed for the second.

E221. ediŋ touke oji:-t ejre-š-u-t
   KOLYU this dog [bark-SS.IPFV] [walk-CAUS-0-SS.IPFV]
   mit a:s’e-pul-gele ediŋ čohos’e-pul-gen mer-ujii:-š-u-m.
   our deer-PL-ACC this hummock-PL-PERL fly-IPFV-CAUS-0-TR.3.SG
   'This dog has made our deer jump over these hummocks by barking and making them move.' (Maskova 1998:142)

The clause chaining strategy differs from the other strategies in that it involves no particular structural device to code the concomitant relation. Relevant constructions are therefore open to other interpretations. The strategy is nevertheless treated here, first because it is the most important or even only circumstance strategy in the languages in question and second because is is a less grammaticalized pre-stage to the concomitant predicate strategy.

The clause chaining strategy differs from the concomitant predicate strategy in that the dependent clause verb in the latter is chosen from a paradigm dedicated to code some kind of instrumental relation. Since grammaticalization is a matter of degree, the distinction between the two strategies is not clear-cut. There was, in fact, one example in § 4.7.1 which could also count for the clause chaining strategy, viz. E202.c. There may, thus, be reasons to introduce this strategy already for manner concomitants. Otherwise, the clause chaining strategy is peculiar to the circumstance. Since this is a self-standing situation, it contains its
own predicate. Consequently, there is no structural need for it to be related to the main clause. The functional difference between circumstance and the rest that we noted in § 3.3.5 is thus confirmed at the structural level.

### 4.8.2. Concomitant predication

It was noted in the preceding section that in the Chinese clause chaining strategy, subordination is not marked and examples such as E219 are therefore ambiguous. The circumstance relation of the first clause may be disambiguated by introducing it with the verb tōngguó ‘pass, go through, through’, as in E222.a. Here the circumstance clearly forms a subordinate clause. However, the same operation applied to E219.b does not yield a satisfactory result, as E222.b is questionable. All in all, the construction with the verb tōngguó is less common in the colloquial language than the juxtapositional version of E219.

E222. a. Tā tōngguó ūng shōuyīnji xuéxi Yīngyǔ.
CHIN he [pass hear radio] learn English
‘He learns English by listening to the radio.’ (SL)

b. ‘Tā tōngguó qí chē jiàn féi
he [pass ride vehicle] reduce fat
‘He loses weight by riding the bicycle.’ (SL)

On the other hand, simultaneity of two situations is expressed by the discontinuous reduplication of the noun biān ‘side’, as exemplified in E223.

E223. Tā biān ūng shōuyīnji biān xué Yīngyǔ.
CHIN he side hear radio side learn English
‘He learns English while listening to the radio.’ (SL)

E223 expresses no instrumental relation of the first to the second situation, but only their simultaneity. Such Chinese circumstance clauses are thus clearly distinct from simultaneous temporal clauses.

### 4.8.3. Adpositional marking

In German, a circumstance clause may be finite or nominalized. A nominalized circumstance is adjoined by the preposition durch, as in E224.a. The same preposition may be used in a complex conjunction to introduce the finite version E224.b, or else the conjunction indem may be used, as in E224.c. For simultaneous subordinate clauses, the conjunction is während ‘while’.

E224. a. Der Politiker bereicherte sich durch die Sammlung illegaler Spenden.
GERM ‘The politician enriched himself by collection of illegal donations.’
b. Der Politiker bereicherte sich dadurch, daß er illegale Spenden sammelte.
   ‘The politician enriched himself by collecting illegal donations.’

c. Der Politiker bereicherte sich, indem er illegale Spenden sammelte.
   ‘The politician enriched himself in that he collected illegal donations.’

In Vietnamese, the secondary situation (e.g. đĩ xẹ đáp in E225.a) is nominalized by preposing the noun cách ‘manner, way, means’. This nominalized clause is taken as a complement by the generic instrumental preposition bằng, which links it as a circumstance to the main clause, as in E225.

E225. a. Anh ấy gia’m cân bằng cách đi xe đạp.
   VIET he reduce weight [INST manner go bicycle]
   ‘He loses weight by riding the bicycle.’ (TNC)

b. Anh ấy học tiếng anh bằng (cách nghe) dải.
   he learn English [INST manner hear radio]
   ‘He learns English by listening to the radio.’ (TNC)

Just as in Chinese, simultaneity of two situations is expressed by the discontinuous reduction of the morpheme vì’a ‘and at the same time, just, right now (then)’, as in E226.

E226. Anh ấy vừa uống vừa đọc báo.
   VIET he just drink just read newspaper
   ‘He drinks (alcohol) while reading the newspaper.’ (TNC)

This construction again differs clearly from the circumstance construction.

Yucatec Maya may use its catch-all preposition éetel to join a circumstance, as in E227.

For the alternative of forming a gerundive see E234 below.

E227. a. Hùulyoh-e’ ayìik’al -chah yéetel meyah.
   YM Julian-TOP rich-PROC.CMPL [with work]
   ‘Julian gained wealth by working.’

b. Hùulyoh-e’ t-u pets’táant-ah le k’uxóolal-o’b yéetel túüs.
   Julian-TOP PST-SBJ.3 defeat-CMPL DEF enemy-PL with lie
   ‘Julian defeated the enemies (by) lying.’ (EMB)

4.8.4. Case marking

Case marking of a subordinate clause means that its interclausal relation is expressed by a bound morpheme from the paradigm that includes the case affixes. It usually, but not necessarily presupposes the nominalization or adverbialization of the subordinate clause. In the Japanese E228.a, the circumstance clause is nominalized by the suffix -koto, and the nominalized circumstance is marked by the instrumental case -de. In E228.b, the suffix -te forms a subordinate adverbial clause expressing a circumstance.
E228. a. Taro-wa zidensya-ni noru-koto-de karada-o kitaer-u.
   ‘Taro trains his body by riding the bicycle.’ (YN)

b. Taro-wa zidensya-ni not-te karada-o kitaer-u.
   ‘Taro trains his body by riding the bicycle.’ (YN)

The construction with the suffix -nagara ‘while’ in E229.a represents a complex situation with a simultaneous temporal relation. In contrast to the suffix -de E228.b, the suffix -nagara codes only the simultaneity between the two situations. It is therefore odd in a situation like E229.b which suggests an instrumental relation between the two situations.

E229. a. kare-wa wain-o nomi-nagara sinbun-o yomu.
   ‘While drinking wine, he reads the newspaper.’ (YN)

b. Taro-wa zidensya-ni nori-nagara karada-o kitaer-u.
   ‘Taro trains himself while riding the bicycle.’ (YN)

In Korean, the suffix -(으)myonso ‘by, while, -ing’ attaches to a clause whose subject is controlled by the main clause subject, subordinates this clause and expresses either a relation of concomitance or of simultaneity to the main clause. E230.a is therefore ambiguous in this regard, while E230.b is disambiguated by world knowledge.

E230. a. coya-nun radio-lul tul-umyonso kongpu-lul ha-n-ta.
   ‘She learns by listening to the radio.’ or ‘She learns while listening to the radio.’

b. ku-nun hangsang cacokko-lul tha-myonso undong-ul ha-n-ta.
   ‘He always exercises by riding the bicycle.’

A simultaneous temporal clause with a different subject is formed as a relative clause to the noun tongan ‘timespan, while’, which is marked by the locative case -e, as in E231.

E231. Minsu-ka ca-l tongan-e Suni-nun chaek-ul ilk-oss-ta.
   ‘Suni read a book while Minsu was sleeping.’

In the Lezgian E232, the secondary situation is nominalized by the masdar, and the circumstance thus nominalized is marked by the superdirective case -ldi.
In Turkish, the gerundial marker -(y)ArAk is most commonly used to indicate a circumstance, as in E233.

   TURK Ahmet [very work-GER] aim-3.SG-DAT reach-PST(3.SG)
   ‘Ahmet attained his goal by working a lot.’ (Kornfilt 1997:55)

b. Bu-nu ancak büyük çaba harca-yarak başar-dı.
   D1-ACC only/just [great pain spend-GER] accomplish-PST(3.SG)
   ‘He has only accomplished this by spending great effort.’ (GJ & YT)

In Yucatec Maya, a circumstance may be marked by the gerundive suffix -bil, as illustrated in E234.

E234. Húulyoh-e’ tús-bil t-u pets’táant-ah le k’uxóolal-o’b-o’.
   YM Julio-TOP lie-INTROV-GER PST-SBJ.3 defeat-CMPL DEF enemy-PL-D2
   ‘Julian defeated the enemies (by) lying.’ (EMB)

4.8.5. Other processes

A circumstance is a specific situation of its own. The processes of incorporation, conversion and lexical fusion therefore do not afford its accommodation in a clause. Theoretically, there might be an instrumental verb derivation that allows the verb to take a circumstance as a complement; but no language in our sample does such a thing.

4.8.6. Summary

The paradigm of concomitance strategies that code the circumstance is reduced to the less grammaticalized strategies of clause chaining, concomitant predication, adpositional marking and case marking. This is similar to the situation for the comitative and, even more clearly than there, speaks for the relative independence of the circumstance from the main predication. For most languages in the sample, the strategies are the same as for the concomitants preceding the circumstance on the gamut, while the particular markers are different. This testifies both to the unity of the functional domain and to the difference between circumstance, on the one hand, and manner and simultaneity, on the other hand.
5. Results

5.1. Language profiles

The following subsections will briefly summarize the findings for those languages of the sample for which we possess sufficient data. The languages will essentially be characterized by the strategies they employ for different segments of the gamut of concomitant roles set out in § 3.3.6. Only the subsection for Yucatec Maya will be expanded into a typological characterization.

5.1.1. Chinese and Hmong

Chinese marks all kinds of concomitants by concomitant predicates and uses this strategy to the exclusion of other strategies. The same is true in Hmong for those concomitants that we have data for. These two are the only languages of our sample to do this. Within this strategy, however, a wide variety of different markers (coverbs) are available. For each of the concomitant subroles – except, as it appears, the partner —, Chinese has a choice between two or more coverbs. There is one coverb, yòng, that covers the central segment of the gamut of concomitant subroles, from vehicle to manner. The largest field of concomitant predicates is available for confectives, which simply means that this particular function is not grammaticalized at all. For Hmong, we have seen three different coverbs, with a choice between two for tools.

5.1.2. English and German

English and German both use the strategy of prepositional marking throughout. The preposition itself varies to some extent. For the largest stretch of the spectrum, from partner down to tool, the preposition is English with, German mit. Vehicles proper, i.e. disregarding props, are not conceived as instruments, but as locations in these languages. Furthermore, different prepositions are used for manner and circumstance. The material is conceived as the provenience of a product, but the instrumental preposition may be used if the product does not consist exclusively of the material in question. In substandard varieties, this restriction may not apply. Both languages occasionally use lexical strategies – conversion, lexical fusion – for some concomitants.
5.1.3. **Japanese and Korean**

Korean and Japanese are very similar in their particular combination of the concomitant predicate and case marking strategies. The case marking strategy is available over the entire spectrum of concomitance. The case in question is the additive for partner and companion, the instrumental for the central segment, from the vehicle down to the manner and, in Japanese, including the circumstance. Both languages use the concomitant predicate strategy for the central segment of the gamut of concomitants, from the comitative down to the tool, and Korean even further down to the manner. While in either language there is one coverb that may be characterized as the unmarked instrumental coverb, in most cases there is a choice. Both languages prefer adnominal coding for the material. The choice among coding strategies and among markers is essentially determined by the empathy of the concomitant.

5.1.4. **Kayardild**

Kayardild employs the case marking strategy for those concomitants that we have data for. Four different cases are employed, whose locus is in different segments of the spectrum but three of which overlap in marking tools. For reciprocal constructions, there is a verb derivation.

5.1.5. **Lezgian**

Lezgian subdivides the spectrum of concomitant roles in using concomitant predicates down to and including vehicles, while switching to case marking from tools downward. A variety of converbs and no less than six cases is available, one of which, the addirective, may be characterized as an instrumental case.

5.1.6. **Thai**

Thai employs the two strategies of concomitant predication and prepositional marking. The latter is apparently restricted to the central segment of the gamut of concomitant roles, from the vehicle to the material. One of the prepositions, dûaj, is the default instrumental preposition.
5.1.7. Turkish

Over the largest part of the gamut of concomitant roles down to the tool and, with restrictions, even to the manner, Turkish uses one morpheme, the postposition *ile* with its grammaticalized variant, the instrumental suffix *(i)lA*. Since it is, thus, the same morpheme that represents the two strategies of adpositional and case marking, and these two strategies are grammaticalization variants of each other, it is probably appropriate to speak of the use of only one strategy of concomitance in this language. In this regard, Turkish is typologically equally uniform as Chinese.

5.1.8. Vietnamese

Vietnamese employs prepositional marking over the entire gamut of concomitants, with a choice from among just two prepositions, one of which, *búng*, is the default instrumental preposition. What is surprising is that the comitative preposition shows up again to mark the material. Over the central segment of concomitance, from the comitative down to manner, concomitant predication, with a variety of coverbs, is available as an alternative.

5.1.9. Yukaghir

Yukaghir uses case marking throughout concomitance, subdividing the spectrum between two suffixes, one for partners and companions, the other from vehicles downward. Verb derivation is available as an alternative for reciprocity. The circumstance relation is not specifically coded.

5.1.10. Yucatec Maya

In past publications, we had occasion to highlight the functional and structural richness of Yucatec Maya in different domains. The functional domain of concomitance is clearly not another example of this kind. What strikes the eye is the extreme poverty of the language in expressive means available for concomitance. There are essentially only two of them: a prepositional phrase and incorporation of an instrument noun in the verb. Furthermore, for the first of these strategies, the relevant paradigm reduces to one item, the preposition *éetél* ‘with’. This is a secondary preposition derived in the following way: The relational noun *éet* ‘companion’ is combined with the suffix *(i)Vl* to derive an abstract relational noun *éet-èl* ‘company’. This takes a possessive complement – that is, first of all, a possessive clitic – to indicate whose company it is, for instance *a wéetél-xlx* (POS.2 company-2.PL) ‘your(PL) company’. This possessed nominal in turn depends on the preposition *ti* ‘LOC’ to yield, for
instance, \([t{-}[a \ \text{yéetel}^{-e'-x}]_{NP}]_{PROP}\) ‘in your company’, which means ‘with you’. The introductory preposition and possessive clitic are generally missing in the third person, so that \(\text{yéetel}\) \(^{36}\) simply means ‘with’. Yucatec Maya is thus similar to Turkish in exhibiting this kind of syncretism in the expression of all the concomitants. In the recent history of the language, this item has been grammaticalized even further to a simple coordinator ‘and’ at structural levels below the clause, obviously as a kind of calque on Spanish y, to which the language possessed no counterpart.

To account for the general poverty of strategies in this functional domain, a few general facts are relevant. The most important of these is the absence of case from the language. This is a basic typological fact which follows from nothing but has far-reaching consequences, as we will see. A case is a binary relator that governs a nominal expression and enables it to modify something, most importantly the verb. In Yucatec, nominal expressions cannot be modifiers of anything. All of the dependency relations of the language are government relations. Outside the predicate, a nominal expression finds its place in the syntax of a sentence as a complement of something, or it does not find a place. Thus, the absence of case does have one correlate (not cause) in the language system, the prominent role of government.

For our concomitant strategies, this has a couple of consequences. First, no more need be said about the strategy of cased NPs. Second, the poverty of prepositions. In languages that have case, newly formed adpositions are commonly case forms of former nouns. By virtue of the case that it incorporates, the adposition, together with its complement, functions as a modifier of its dependency controller, mostly the verb. Yucatec prepositions, even those that are denominal in origin, are never based on case forms of nouns. Consequently, with the exception of one grammatical preposition, \(t'\) LOC, Yucatec prepositional phrases modify nothing. Consequently, the language makes little use of adjuncts. On the other hand, the one ‘real’ preposition \(t'\) gets a high functional load. It is combined with most of the denominal prepositions to convert them into modifiers. \(\text{yéetel}\) is a case in point. Any other preposition that might concur with \(\text{yéetel}\) would have to obey to the same constraints.

On the other hand, \(\text{yéetel}\), especially in its third singular form \(\text{yéetel}\), is highly grammaticalized in Modern Yucatec. We have seen that it is even used with body parts as instruments: \(\text{yéetel in k'ab} \) ‘with my hand(s)’ is literally ‘in the company of my hand(s)! This has not always been so.

In Colonial Maya, the preposition \(t'\) ranged even wider, witness examples like E235. The expansion of \(\text{yéetel}\) since that time must probably be understood as a response to Spanish con.

As for the concomitant predicate strategy, apart from the usual motion verb constructions, Yucatec has no verb serialization. Since verb serialization seems to prevail in lan-
guages of isolating structure, its absence in Yucatec is to be expected. Once there is no verb serialization, there are no coverbs. Thus one of the complex sentence constructions we found in concomitent constructions of other languages is ruled out. The other one would be the use of gerunds or other converbs in Korean or Japanese style. Yucatec does have one gerund, the formation in –bil that we saw in E234. However, unlike gerunds in other languages, this is just a verb form whose subject slot has been blocked (thus a non-finite form), but not a case form of a non-finite verb. Accordingly, it has a low functional load in interpropositional relations.

The use of simple verbs that include a concomitant in their meaning has been found chiefly in English and German, not in Yucatec. This observation would fit in with the results obtained in Talmy 1991. Here, the incorporation of modal and circumstantial information in the verb lexeme is a typological feature of, among others, Germanic languages, languages that treat this kind of information as a modification of the main verb. Yucatec does not belong to this type, as verb modification is practically absent.

The second most important strategy for Yucatec in our functional domain is incorporation. While this is practically limited to body parts as instruments, we may suppose that it would be more extensively developed, had there not been the extensive contact with Spanish which clearly disfavors incorporation and favors prepositions.

Besides all those things that Yucatec Maya does not have, it is pertinent to recall one area of grammar that it cultivates extensively, viz. possession (cf. Lehmann 2002). As we saw in § 3.4.2, concomitance is complementary with possession in a number of respects. As a consequence, a language may forego the domain of concomitance to some extent by using strategies whose locus is in the domain of possession. This is what Yucatec does. E236 is one example in many.

E236. le x-ch’uppàal chowak-tak u múuk’ yòok-e'
YHM DEF F-girl [ long-ADJ.PL POSS.3 strength foot ]-D3
‘the girl with long legs’, lit. ‘the girl that her legs are long’ (Lehmann 2002, ch. 3.3.2)

To the extent that concomitance and possession are converse, and the functional sentence perspective does not interfere (which it does not in attributes), possession may take the stead of concomitance.

5.2. The cognitive domain of concomitance

5.2.1. Strategies of concomitance

The coding of concomitants may be sensitive to all the absolute and relational properties introduced in § 3.3.6. However, both languages and strategies differ in this respect. The

37 Cf. Aristar 1997, where the principle that case relations are sensitive to empathy is generalized.
The functional domain of concomitance

99

broadest variation is observed in the most explicit strategies, i.e. in concomitant predication and adpositional marking. It is not surprising that there may be great intralinguistic uniformity in the particular marking device at the level of case marking, as in Japanese and Turkish, but it does characterize a language if only one preposition is used throughout the domain, as in Yucatec Maya. On the basis of our data, we do not expect to find a language that synchronizes all of the concomitant relations in one coverb or converb.

Particular coding strategies are sensitive to the empathy of concomitants in different degrees. One strategy, the use of a comitative adverb meaning ‘together’ (e.g. zusammen in German, beraber in Turkish etc.), is always sensitive to the empathy class of the concomitant. Generally, such a comitative adverb may be added if the actor/undergoer and its concomitant are at the same level of the empathy hierarchy. Thus, the use of such an adverb is excluded from the marking of concomitants from the vehicle downward in F3. These are concomitants positioned at a lower level of empathy than the actor.

We have seen a gamut of concomitants which differ in the specific way they are involved in the situation, and a gamut of strategies which vary in the explicitness with which they code both the concomitant itself and its relation. In our sample, the maximum of structural variation was ascertainable for the central concomitant subroles, i.e. above all the instrument of manipulation and, secondarily, the companion and the instrument of locomotion. This structural variety is to be observed both intralinguistically and cross-linguistically.

The peripheral subroles, on the other hand, evince considerably less variation at these two levels. From this we conclude that instruments are prototypical concomitants, and the other concomitants are – with reference to F3 – more marginal to this functional domain.

In particular, incorporation is practically only used for instruments of manipulation and is especially common for body parts. Comitatives are not incorporated, a result which follows from the fact known from the relevant literature that empathic participants are generally not incorporated (in whatever function).

Instruments are inanimate. The relatively high structural variation in their coding is due to the prominence of their role, not to their inanimacy. Quite on the contrary, one of the important universal correlates of the empathy hierarchy is precisely that the higher the position of an NP on F1, the richer the expressive means available. This creates a certain tension in our domain which sometimes renders functional interpretation of structures difficult. For instance, as we saw just before, comitative adverbs are practically limited to concomitants that precede the instrument on the gamut. This does not speak against the centrality of instruments, but follows from the premises that the default for a concomitant is to accompany the actor, that concomitants lower down on the gamut are increasingly less empathic than the actor and that such comcomitant adverbs require precisely that their referents are equal in empathy.

In the strategy of lexical fusion, the concomitant is a semantic feature of the verb. In this configuration, it still makes sense to ask towards which of the other participants of the situation the concomitant is specially oriented (in the sense of F2, #4). It appears that in all the relevant verbs we have seen, what is fused in the lexical meaning of the verb is a concomitant of the actor. Since structural variation is by definition impossible within this strategy, one may assume that it is restricted to the default case. This finding would then be inde-
dependent confirmation of our initial hypothesis that concomitance of the actor is the default in the domain.

Some of the strategies may co-occur syntagmatically. A main verb that contains some kind of concomitance in its meaning may co-occur with a concomitant phrase. In such a case, the simplest available means is chosen for the latter, to reduce redundancy. For instance, we have seen that where coverbs are used to join concomitants, they are more grammaticalized in reciprocal constructions than in comitative ones. This seems to be related to the fact that there are intrinsically reciprocal verbs, but no intrinsically comitative verbs.

Sometimes a language uses a particular strategy only for one of the concomitant roles. Thus, English uses lexical fusion only for tools, Kayardild and Yukaghir use verb derivation only for the reciprocal companion. In general, however, a strategy is employed over a certain segment of the gamut of concomitant roles. Here we observe that these segments are practically always continuous stretches in F3. Khmer may be an exception to this, with no adpositional marking of vehicles; but this may be a lacuna in our data. The order of the concomitant roles in F3 is the only one which allows this generalization and is thereby independently confirmed.

There is a fair amount of semantic and even lexical conditioning, thus of idiomaticity, involved in the choice of particular concomitant markers. This is typical of the grammar of case relators and well known from SAE prepositions. From this it follows that while there are cross-linguistic principles and intralinguistic systematicity in the choice of concomitant strategies, there is less regularity in the use of the particular markers. Nevertheless, it is remarkable that what we just observed about continuity of strategies in F3 is true to a large extent of particular markers as well. As a few examples in point, observe Chinese yòng, Korean -lo and Vietnamese duồng, which are employed for vehicle, tool, material and manner (and consequently as much synonymous as possible), or Thai dūaj, which only marks tool and material. We take this, once more, as evidence for the unity of the domain.38

From a structural point of view, none of our strategies is, within a given language, specific to concomitance. Insofar, our functional analyses would yet have to be completed by an analysis of the general locus of a strategy within each language system. For instance, it springs to mind that case marking is the preferred strategy for concomitance in those languages in which this strategy is central to the whole syntax. Likewise, the concomitant predicate strategy avoids the accumulation of nominal and adverbial expressions on one verb and targets a structure ‘one verb – one nominal dependent’ which many languages prefer in general and quite independently of any specific participant or interpropositional relations (cf. Lehmann & Shin & Verhoeven 2000 [U], § 2.3). However, as we cannot do this kind of analysis for each of our sample languages, we will leave it with the typology of Yucatec Maya given in § 5.1.10.

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38 Cf. also Heine et al. 1991:52 for metaphorical connections among the various senses of ‘with’.
5.2.2. Grammaticalization of concomitance

As was already anticipated in T5, the participant relation that connects a participant with a situation core may be grammaticalized to different degrees. The start of the scale is marked by non-grammaticalized constructions. Here the would-be concomitant is just a participant of a neighboring situation coded by an adjacent clause. In clause chaining, the concomitant clause and the main clause may be combined into a sentence without further grammatical marking. Since there is nothing to express concomitance, this is just a pre-stage to the means dedicated to this function. The next stage is the formation of a paradigm of concomitant predicates in the concomitant clause. Here there is a relator, but it is coded at the lexical level, viz. by a verb form, including a converb. Such a relator still constitutes a little situation core (‘use’, ‘mount’ etc.) of its own. The two situations may be linked to each other. The various gerundive or other non-finite suffixes appearing on the concomitant predicates of Korean, Japanese and Lezgian fulfill this function. Such an interpropositional relator may itself be an instrumental case relator, as in by means of $C$, with the help of $C$ etc., so that we get a stacking of instrumental relators at different levels of grammaticality. A more grammaticalized counterpart of this construction in other languages is the coverb, which lacks such an interpropositional relator and instead itself develops into a relator. Both converbs and coverbs may shrink to an adposition; and the latter finally becomes a case affix or derivational affix. At the end of this grammaticality scale, the concomitant is simply one of the participants of the situation in question, linked directly to the situation core by the most grammatical means or even by incorporation into the verb.

A morpheme meaning ‘with $C$', i.e. ‘by using $C$ as an instrument’, is the crystallization point of the functional domain of concomitance. It so happens that words with this function are prominent in SAE languages. Nevertheless, to posit this crystallization point is not a European bias. We have seen that languages all over the world, from Yucatec Maya to Khmer, tend to grammaticalize a relator into this function. The product and focus of this grammaticalization process is an instrumental case. This may, in turn, be subject to further grammaticalization, by which it may evolve, among other things, into an ergative case. Such latter processes, however, lead out of the functional domain of concomitance, as the ergative marks a central participant.

Since concomitant relators are case relators, their grammaticalization sources are lexical items that are semantically and generally also grammatically bivalent. This essentially comes down to transitive verbs and relational nouns. Here are a few examples of the former category:

- Concomitant predicates that are at the basis of comitative relators often mean ‘accompany’ (Mandarin $gèn$, $pèi$) or ‘follow’ (e.g. Vietnamese $théo$, Khmer $daoy$).
- Concomitant predicates that mark vehicles typically mean ‘mount, ride’ (Japanese $noru$, Korean $thata$, Khmer $cîh$, Mandarin $qî$).
- Concomitant predicates underlying instrumental markers typically mean ‘use’ (Mandarin $yòng$) or ‘take’ (Khmer $yːk$, Vietnamese $lày$).

Given the semantosyntactic constellation presupposed for concomitance in F2, what will be the concomitant naturally starts out as the undergoer of the concomitant predicate, while the
actor of the latter is coreferential with an argument of the main clause, typically its actor. This is true for all of the transitive verbs adduced. There is, however, a complication with the verbs adjoining a companion. The verbs meaning ‘accompany, follow’ follow the same structural pattern. Semantically, however, the future companion should be their actor, not their undergoer (as formalized in T2). This is quite obvious, e.g., in E66, where the verb theo is first used as a full verb meaning ‘follow’ and in the subsequent clause as a coverb meaning ‘with’. Since the participants are the same in the second clause, but their syntactic functions are switched, it is clear that the second occurrence of theo must be interpreted as ‘be followed by’. On the one hand, such voice distinctions tend to be neutralized in dependent clauses; on the other hand, negligence of such a distinction may also characterize an advanced degree of grammaticalization of these coverbs.

As examples of concomitant relators based on relational nouns, we may adduce:

- The German preposition mit derives from the relational noun Mittel ‘means’, which itself is a derivation based on the relational noun Mitte ‘middle’. Incidentally, this etymology fits in well with the mediating function of the concomitant mentioned in § 3.3.3.
- Yucatec Maya ñetel ‘with’ has the original meaning ‘company’ and is derived from the relational noun ñet ‘companion’, again a concept central to the whole functional domain.

For relational nouns, it is their possessive attribute that ends up as the concomitant of the main clause.

As usual, the specific participant role meaning expressed by a relator is not an interpretation associated with its governing slot, but with the meaning of the morpheme itself. To render this more concrete: A verb that evolves into a coverb of concomitance and finally into an instrumental case relator takes the NP that represents the concomitant as its complement. Being a complement, it is essentially an undergoer. It does not bear the semantic function of an instrument or of a concomitant at all, nor is it provided with any case marking to that effect. It is, thus, not the bare NP governed by the relator, but the whole complex comprising the relator plus the governed NP that functions as a concomitant. This implies that the concomitant meaning is contributed by the intrinsic meaning of the relator morpheme itself.

Quantitative and qualitative verb valency varies among languages. However, trivalence appears to be a maximum attained only by some languages, and in those only by few basic verbs. The semanto-syntactic functions associated with these valency slots are, at the typological level, ‘actor’, ‘undergoer’ and ‘indirectus’. Concomitant is not among them. Along the entire grammaticalization gamut from full verb down to case marker, there is no such thing as a valency slot whose function is ‘concomitant’. Form this it follows that the participant relation of concomitant is not specifically grounded in valency. It is, instead, grounded in the meaning of such relators as ‘use’, ‘accompany’, ‘with’. One of the consequences of this is that a verb derivation which enables a verb to take a concomitant as a complement, actually equips the verb with a new undergoer slot, while the derivational

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39 which, at the level of the syntax of a particular language, may come down to ‘subject’, ‘direct object’ and ‘indirect object’; cf. Lehmann et al. 2000[D]
morpheme contributes the information that this undergoer is to be interpreted as a concomitant.

5.2.3. The nature of concomitance

The concomitant differs from other participant roles (but not from the possessor) in that it is not only related to the situation core, but also to one other participant. This is generally a central participant, preferably the actor, secondarily the undergoer. The relation may be constituted either by similarity or by contiguity. This yields a fourfold classification of concomitant associations:

To the extent that the actor/undergoer and concomitant are alike in empathy and – active or passive – control of the situation, their participant roles are symmetric. Languages express this by relators that are symmetric, viz. connectives, or almost symmetric, like the Korean and Japanese additive case. In other languages, including Yukaghir and Yucatec Maya, the comitative relator is also used as a coordinator. The conceptual symmetry may also be expressed by syntactic structure, in that the concomitant forms a coordinative constituent with a central participant and the verb shows plural agreement with it. Here, concomitance changes into coordination.

The central participant may also have a relation of contiguity to the concomitant. The actor may bear a possessive or associative relation to the concomitant. Some languages express this with special cases – a proprietive or associative case –, others in the syntax, in that the concomitant is some kind of attribute to a central participant. Again, the concomitant bears a special associative relation to the undergoer if it is the material of which the latter is made. In this case, it may form an attribute of the undergoer. With its proprietive vs. instrumental case, Kayardild accounts in its case paradigm for the association of the instrument with the actor or with the undergoer.

The association with the undergoer is the primary one only for the subrole of material. The other subroles of concomitance are either primarily associated with the actor or they mediate between the actor and the undergoer. This mediating function and, thus, ambiva-
lence of the concomitant relation is best seen in the instrumental relation, which, as we have seen, represents the prototype of concomitance.

The concomitant predicate may specify different kinds of involvement of the concomitant. It is the core of a secondary situation to the main situation, one that we have called concomitant situation. The circumstance is just a logical extension of this concept which, while keeping the instrumental relation between the two situations, drops the constraint that the core of the concomitant situation must be some kind of ’using C’.

The main situation and the concomitant situation are in an interpropositional relation to each other which may be characterized as an ’instrument-purpose relation’. Depending on which of the two poles is focused on, the relation is systematically ambiguous. On various occasions (cf. E18 for Chinese and E146 for Vietnamese), we noted the close paradigmatic relationship between the instrumental and the purposive relation. It may be formalized as in F4:

\[
\text{F4. Instrument and purpose} \\quad S_1 \text{ by means of } S_2 = S_2 \text{ in order that } S_1
\]

The instrumental and the purposive relation are, thus, partly converse to each other. This regularity applies to all the subroles of concomitance in F3 from the vehicle down to the circumstance. This constitutes additional confirmation that all of these subroles do belong into this functional domain.

The converseness of instrument and purpose applies only to a subtype of purpose, viz. those purposes that are actually attained. If the right-hand side of F4 is provided with the additional information that \( S_1 \) is actually realized by the realization of \( S_2 \), then it follows that \( S_1 \) and \( S_2 \) are simultaneous. This includes the case where \( S_2 \), although anterior to \( S_1 \), has a result that persists during \( S_1 \). Simultaneity of the two situations is exactly the condition that holds for all of concomitance including the circumstance role.\(^{41}\)

The two constructions of F4 differ essentially in their functional sentence perspective. In the left-hand version, \( S_1 \) is the primary and \( S_2 \) the secondary situation; in the right-hand version, it is the other way round. In both cases, the secondary situation may be reduced by voiding its situation core of semantic specificity, so that only the central participant remains and gets directly linked to the primary situation by the fusion product of the interpropositional relator and the erstwhile core of the secondary situation. If this is done on the left-hand side of F4, a simple concomitant results. If it is done on the right-hand side, the result is a destinative or beneficiary. The latter process was not investigated here. We are, however, in a position to postulate a principled relationship between case relations and interpro-

\(^{41}\) This is the configuration that holds for an important grammaticalization source of instrumental relators, viz. the verb ‘take’ as a concomitant predicate.

\(^{42}\) If \( S_2 \) is a motion of the actor of both situations, then \( S_2 \) is anterior to \( S_1 \). This configuration is the basis of the grammaticalization of another important construction, the ’motion-cum-purpose’ construction.
positional relations: An interpropositional relation may be transformed into a case relation by fusing it with one of the situation cores concerned and reducing the product.

Indices

Abbreviations

Morpheme glosses & syntactic categories

<table>
<thead>
<tr>
<th>Symbol</th>
<th>Gloss</th>
<th>Category</th>
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### Languages

<table>
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<tr>
<th>Abbreviation</th>
<th>Language</th>
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<th>Language</th>
</tr>
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<tbody>
<tr>
<td>ENG</td>
<td>English</td>
<td>LEZ</td>
<td>Lezgian</td>
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<tr>
<td>CHIN</td>
<td>Chinese</td>
<td>MANAG</td>
<td>Managalasi</td>
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<td>GERM</td>
<td>German</td>
<td>MAY</td>
<td>Mayali</td>
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<td>HMONG</td>
<td>Hmong</td>
<td>THAI</td>
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<td>JAP</td>
<td>Japanese</td>
<td>TURK</td>
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<td>Kambera</td>
<td>UTE</td>
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<td>Kayardild</td>
<td>VIET</td>
<td>Vietnamese</td>
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<td>KOLYU</td>
<td>Kolyma Yukaghir</td>
<td>YID</td>
<td>Yidji</td>
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<tr>
<td>KOR</td>
<td>Korean</td>
<td>YM</td>
<td>Yucatec Maya</td>
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</tbody>
</table>
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HNAZ   Andrade & Máas Collí 1991, Cuentos Mayas Yucatecos; Tomo II, Mérida: Universidad Autónoma de Yucatán, 64-127.


BRICK  Bricker, Victoria et al. 1998, A dictionary of the Maya language as spoken in Hocabá, Yucatán. Salt Lake City: The University of Utah Press.

EMB    Ernesto May Balam, Yaxley, Quintana Roo, Mexico.

RMC    Ramón May Cupul, Yaxley, Quintana Roo, Mexico.

SBM    Sebastián Baas May, Yaxley, Quintana Roo, Mexico.

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Noun incorporation and participation


Noun incorporation and participation

A typological study on participant association with particular reference to Yucatec Maya

Abstract

The present study investigates the function of noun incorporation within the domain of participation. The focus is on the accommodation of peripheral participants in incorporative structures. As many other languages, Yucatec Maya, the Mayan language of the Yucatan peninsula of Mexico, incorporates into the verb especially those participants that reside in the lower part of the control decline, i.e. undergoer, instrument, more rarely a location. The resulting intransitive construction is, however, seldom used in syntax and, instead, immediately retransitivized, opening a new undergoer slot to accommodate a further participant. This participant may be either promoted from a peripheral position (adjunct, possessive attribute), or it may be a new participant bearing no direct semantic relation to the base verb.

Yucatec Maya is compared with four other languages, Nahuatl, Guaraní, Mayali and Samoan,43 which also use noun incorporation as a device to change the participant structure. We ask to what extent these languages employ similar or different strategies in their systems of noun incorporation with regard to the association of participants. A comparison with several other Mayan languages (Chontal, Huastec, Kanjobal, Jicalte, Mam, Quiche) shows that Yucatec Maya is exceptional not only with respect to the importance of incorporative verbs but also with respect to the range of functions fulfilled by incorporation.

43 We would like to thank Nick EVANS and Ulrike MOSEL for their help with the Mayali and Samoan data.
Contents

1. Introduction ....................................................................................... ..........................113
2. Theoretical prerequisites ........................................................................................................114
   2.1. Linguistic representation of a situation ..............................................................114
   2.2. Rearrangement of a situation ........................................................................116
   2.3. Incorporation .................................................................................................120
3. Phenomenology of incorporation ........................................................................................128
   3.1. Samoan ...............................................................................................................129
   3.2. Guaraní ...............................................................................................................133
   3.3. Nahuatl ...............................................................................................................137
   3.4. Mayali ...............................................................................................................144
4. Noun incorporation in Yucatec Maya ...................................................................................153
   4.1. Intro- and extraversion ...................................................................................153
   4.2. General properties of the incorporative construction ..............................................155
   4.3. Roles and features of participants incorporated ......................................................160
5. Other Mayan languages .................................................................................................184
   5.1. Object incorporation .......................................................................................185
   5.2. Instrument promotion .......................................................................................187
   5.3. Summary: comparison to YM ........................................................................188
6. Typological generalizations ..............................................................................................189
   6.1. General remarks ...............................................................................................189
   6.2. Participant roles incorporated ..........................................................................190
   6.3. Participant roles promoted .............................................................................191
   6.4. Incorporation and possession ..........................................................................192
   6.5. Typological characterization of YM .................................................................194
Indices ..................................................................................................................196
   Abbreviations ..........................................................................................................196
   Bibliographical references .....................................................................................199
6. Introduction

In previous work (LEHMANN & SHIN & VERHOEVEN 2004[ID]) we have shown that Yucatec Maya (YM), along with other languages like Samoan, tends to code various participant roles, among them even central participants like the recipient, as an attribute to the undergoer\textsuperscript{44} nominal. Compare E237.a for a recipient and E237.b for an intended beneficiary.

E237. a. káa t-u máan-s-ah
YM
CNJ PST-SBJ.3j pass-CAUS-CMPL
u éerèensyah u ìihoh-e’
[POSS.3j inheritance] [POSS.3j son]-CNTR
‘but he handed over the inheritance to his son’ (HIJO_062)

b. káa t-in bèet-ah in pak’-il tanah xàan
CNJ PST-SBJ.1.SG do-CMPL [POSS.1.SG brickwork-REL house] also
‘then I made a brick-house for myself, too’ (CHAN_131)

Such participants, then, are not directly related to the main verb at the syntactic level. We called this phenomenon \textit{indirect participation}. This YM feature is connected with another feature, the reluctance to code peripheral participants as (prepositional) adjuncts. The resulting question is: are there further strategies, besides indirect participation, that can compensate for the failure of accommodating peripheral participants in different semantic roles as verbal adjuncts? Knowing that YM makes use of noun incorporation, we hypothesized that this might be an alternative strategy of associating further participants.

It is one aim of this paper to investigate the role of incorporation in participation. The leading question will be: what does noun incorporation in YM contribute to the coding of different participant roles? In pursuing this question, we do not, of course, wish to deny that noun incorporation in YM just as in other languages fulfils important functions in dereferentializing participants and rendering the predication generic. However, the focus here is on incorporation as one of several strategies of accommodating a participant with a given semantic role in the syntax of a sentence. The results will be compared to the functions of noun incorporation within participation in other languages. Among these will be one language of the sample of LEHMANN & SHIN & VERHOEVEN 2004[P]/[ID], viz. Samoan, which was positioned closest to YM with respect to

\textsuperscript{44} Whenever tolerable, we will speak of ‘actor’ and ‘undergoer’ instead of ‘subject/ergative’ and ‘direct object/absolutive’. We do this for two reasons. First, we want to neutralize the difference between ergative and accusative syntactic structure, which is largely irrelevant to our concern. Second, any study of incorporation is faced with the alternative of a lexical vs. syntactic process (see section 7.4.1 below). In using purely syntactic terms, we would prejudge the issue in favor of a syntactic process, which we have no interest in doing.
indirect participation. The other languages of that sample either do not possess incorporation to any significant extent, as e.g. German, Tamil and Wardaman,\(^45\) or they only have incorporation of subject, object or local adjuncts, which in itself is no means of accommodating additional participants. Among these languages are Turkish and Korean, which show coalescence of a generic direct object with a transitive verb. Korean and Vietnamese may incorporate a body-part noun in subject or locative function, respectively, but obviously without changing the (syntactic) relation of the other participant(s).\(^46\) Additional languages that we investigated include Guaraní, Nahuatl and Mayali, all of which make considerable use of noun incorporation in the domain of participation. Finally, some Mayan languages are compared to YM with respect to this function.

The structure of the article is as follows. Section 7 introduces the general theoretical bases concerning incorporation and discusses the relevant structural and functional issues. In section 8 the individual incorporation systems of the four languages mentioned, Samoan, Guaraní, Nahuatl and Mayali, are presented with special reference to the contribution of incorporation to the association of participants. This presentation constitutes the background on which the YM system of incorporation is outlined and discussed in detail in section 9. Section 10 draws a comparison between YM and several other Mayan languages regarding the contribution of incorporation to participant association. Section 11 finally presents the typological results of the study. It considers the interrelation of incorporation with other grammatical features and areas such as person prominence, indirect participation and possession.

7. Theoretical prerequisites

7.1. Linguistic representation of a situation

We conceive of a situation, its members and the relations among them as outlined in Lehmann & Shin & Verhoeven 2004[D], ch. 2.1: At the linguistic level, the members of a situation are reified as participants, and these are in general represented structurally as (cased) noun phrases and adpositional phrases in actant or circumstantial functions. However, not every member of a situation is necessarily rendered in language. One of the first operations at the linguistic level is the exteriorization of the participants from the situation core (cf. Lehmann 1991:192). A situation member may remain implicit. Its presence in the situation may be pragmatically or semantically inferable, or it may be present as part of another lexeme, especially the verb (like ‘foot’ is included in the meaning of kick).

\(^45\) Merlan’s (1994) description of Wardaman does not mention incorporation.
\(^47\) Linguistic entities have neuter gender, even though they occasionally represent animate beings.
In every situation represented in E238, there is an instrument present. The sequence of E238.a – e illustrates its stepwise exteriorization.

E238. a. Morgen fliegt Harry von Athen nach Hawaii.
GER ‘Tomorrow Harry is flying from Athens to Hawaii.’

b. Ich muß noch das Haus fegen.
‘I have yet to sweep the house.’

c. Die Arbeiter sägten die ganze Nacht.
‘The workers sawed the whole night.’

d. Laß uns morgen ein bißchen radfahren.
‘Let’s do some bicycling tomorrow.’

e. Laß uns morgen mit dem Fahrrad fahren.
‘Let’s go by bike tomorrow.’

In E238.a the instrument, an airplane, is inferred on pragmatic grounds, more exactly, on the basis of world knowledge. Human beings normally fly long distances in airplanes. If the subject of fliegen were a bird, we normally would infer that the instrument was the bird’s wings (if we cared for such an inference at all). In E238.b and c, we infer the use of a broom and a saw, respectively. In these cases the inference is semantic because there is no choice of instrument depending on the context. The difference between fegen ‘sweep’ and sägen ‘saw’ is that the latter morphologically contains the instrument Säge ‘saw’. In E238.d, the instrument Rad is even more transparent, being one of the two roots of the compound verb radfahren. In E238.e, finally, the instrument is represented by a full prepositional phrase.

To complete the picture, we may add some additional intermediate steps in the exteriorization of a participant, that of its coding as a verbal affix (E239) and as a non-cased NP with non-specific reference (E240).

E239. da-ts!ayaś’
TAK mouth-he:washed
‘he washed his mouth’ (SAPIR 1912:75)

E240. Adam kitap oku-du.
TURK man book read-PST(3.SG)
‘The man reads (a book, books).’ (GJ)

S2 illustrates the continuum of the exteriorization of a participant from the situation core, which works stepwise from left to right. If the situation is maximally compact, the participant is not linguistically present and can only be inferred on either pragmatic or semantic grounds. Next comes its being coded as part of the verbal complex in a denominal verb, a verbal affix or an incorporated noun. A non-cased NP is at the transition point to an independent coding. It forms a tighter syntactic unit with the verb compared to a cased NP, which is located at the most explicit point of the continuum.
S2. **Explicitness in the linguistic representation of a participant**

<table>
<thead>
<tr>
<th>situation</th>
<th>+ compact</th>
<th>-compact</th>
</tr>
</thead>
<tbody>
<tr>
<td>participant coded as</td>
<td>zero</td>
<td>part of the verb(al complex)</td>
</tr>
<tr>
<td>inferred pragmatically</td>
<td>inferred semantically</td>
<td>denominal verb</td>
</tr>
</tbody>
</table>

The constructions we are comparing are functionally equivalent with respect to cognitive roles of the members of the situation. They may differ in other respects, e.g. in the referentiality of participants. To this extent, we do not claim ‘informational equivalence’ (TALMY 1985:122) for our n-tuples of examples in all respects.

### 7.2. **Rearrangement of a situation**

Languages generally possess mechanisms to rearrange a given situation in terms of its components and the way they are presented with regard to each other. Next to the fundamental choice of mentioning or not a given participant, participants can be **foregrounded** or **backgrounded** with respect to each other or with respect to an alternate linguistic representation of the situation which is paradigmatically related to the linguistic representation at hand by being structurally simpler (underived) and which may also be syntagmatically related to it, appearing in the linguistic context (as, e.g., in E336 below). The generic name for this operation will be **rearrangement** of participant structure or, for short, of a situation. In terms of **structural correlates**, foregrounding (as opposed to backgrounding) is a two-step procedure:

- the coding of a participant as a verbal dependent with a syntactic status as opposed to its incorporation in the verb stem;
- promotion of a verbal dependent to a position higher up on the hierarchy of syntactic functions\(^{48}\) as opposed to its demotion to a lower function or even to zero.

The following analysis focuses on the first of these alternatives. The applicative construction, which promotes an adjunct to direct object function, is an instance of the second operation. Other such operations are passivization, antipassivization, causativization and deagentivization. The operation of applicative formation\(^{49}\) is considered to the extent that it combines with incorporation.

The **semantic correlate** of promotion is simple: it centralizes a participant, thus heightening its involvement (cf. LEHMANN & SHIN & VERHOEVEN 2004[P], ch. 2.2). This effect is

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\(^{48}\) Very roughly: subject > direct object > indirect object > other complement > adjunct > constituent of a dependent clause. See LEHMANN & VERHOEVEN 2005, § 2.

\(^{49}\) LEHMANN & VERHOEVEN 2005 is dedicated to the typology of applicative formation in different languages.
well-known from applicative verbs and has often been noted with respect to examples like E241.b below. There is, however, a communicative correlate to the process, one which concerns functional sentence perspective (alias information structure) and which in many concrete cases is more important than the semantic effect. Referents in a discourse differ in their topicality, i.e. in the extent to which they are activated in the awareness of the interlocutors (s. Givón 1983). The most topical referents are generally not coded at all, but understood by zero anaphora. The least topical referents tend to be coded by full noun phrases in marginal or even dislocated or clefted syntactic positions. Referents of a medium degree of topicality, i.e. referents that play a ternary (but not too low) role in the thematic strand and which are not too far back in the discourse to be easily identifiable, tend to be coded by simple definite NPs in high positions of the hierarchy of syntactic functions (cf. Givón 1983:22). A referent of lower topicality is typically mentioned in a relatively low syntactic function; and then, when it is mentioned again, it is promoted to a higher syntactic function. Thus, if the hay can be invoked from a sentence that is not too far back in the discourse and we are now again talking about it, then version E241.a will be preferred, where it is the direct object of the sentence. If, on the contrary, the wagon is topical, then version E241.b will be preferred.

E241. a. Wir luden das Heu auf den/einen Wagen.
   GERM ‘We loaded the hay on the/a wagon.’
   b. Wir beluden den Wagen mit Heu.
   ‘We loaded the wagon with hay.’

At the communicative level then, foregrounding a participant means treating it as more topical, more central to the thematic strand. It must, however, be kept in mind that we are talking about nominal expressions, generally full NPs or at least nouns. These cannot be maximally topical, because then they would be pronominalized or even not be mentioned at all.

7.3. Participants in a situation

The properties and relations of participants in a situation have been discussed in detail in Lehmann & Shin & Verhoeven 2004[D], ch. 2.1 and ch. 2.3. and 2004[P], ch. 2.1. For the sake of convenience we will summarize the major points here.

7.3.1. Participant features

Entities and nominal expressions designating them may be ordered as in S3, the empathy hierarchy (sometimes called ‘animacy hierarchy’ or ‘deictic hierarchy’; cf. Kuno &
The main division is between propositional and non-propositional participants (entities). In the latter case, the participant may be a place or an object. An object may be individuated or a substance (mass). An individual object may be an inanimate thing or an animate being. The latter may be an animal or a human being. Finally, we distinguish between speech-act-participants such as first and second person and non-speech-act-participants. The further up a participant is located in S3, the more empathic the speaker is with it. For reasons of simplicity, we are going to use the converse of this concept by speaking of empathic and anemopathic participants.

### 7.3.2. Participant roles

The role of a participant vis-à-vis the predicate can be described as the degree of its involvement in the situation on the one hand and as its control over the situation or the fact of being controlled by the situation on the other hand (LEHMANN 1991[P]). Involvement and control/affectedness are conceived as gradient parameters. The assignment of different values on both of them characterizes more specific participant roles, as represented in S4,
which has been slightly changed with respect to the representation in LEHMANN & SHIN &
VERHOEVEN 2004[P].

S4. Participant roles

<table>
<thead>
<tr>
<th>control cline</th>
<th>control</th>
<th>indirectus</th>
<th>affectedness</th>
</tr>
</thead>
<tbody>
<tr>
<td>macrorole involvement</td>
<td>actor</td>
<td></td>
<td>undergoer</td>
</tr>
<tr>
<td>central</td>
<td>agent</td>
<td>force</td>
<td>theme</td>
</tr>
<tr>
<td>peripheral</td>
<td>experiencer</td>
<td>recipient/addressee/goal</td>
<td></td>
</tr>
<tr>
<td></td>
<td>emitter/source</td>
<td>beneficiary/place</td>
<td></td>
</tr>
<tr>
<td></td>
<td>comitative/instrument</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The notion of involvement relates to the degree of centrality vs. marginality of the participant to the situation. It is primarily assessed in contrast with the involvement of other participants in the same situation, which may be stronger or looser. Central participants are essential for the situation. This holds, in particular, for the agent and the patient in dynamic transitive situations as well as for the experiencer in experiential situations and the recipient in situations of transfer. Compared to them, participants in other roles like beneficiary, comitative and instrument or the local roles are more marginal. They can be added to many situations and presuppose the existence of other participants. At the structural level, strong involvement of participants correlates with the valency dependence of the corresponding nominal expressions. Central participants are represented by complements, peripheral participants by adjuncts.

Control and affectedness are equally gradient properties that are opposed to each other, and either increases with the centrality of a participant. A participant has control over a situation if it is responsible for it. This implies that it is within its power to initiate the situation, to let it realize and to stop it. It presupposes that it is involved in the situation at least to some extent, although mediated control is possible. Affectedness is the extent to which a participant is subject to the situation. This means that the situation happens to it; the participant is disposed or even acted upon in the situation. The participants located on the vertical axis of S4, the local roles, the instrument, the beneficiary, the recipient and the experiencer are more or less indistinct as to the parameter of control. In a given situation some of them may be construed as exerting some control, as e.g. the instrument, which may share some of the control

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50 S4 arranges in a two-dimensional space what others have formulated as a hierarchy. For instance, Dik (1980:14) proposes the following hierarchy of semantic roles determined by the degree of their centrality to the predication: Agent > Patient > Recipient > Beneficiary > Instrument > Locative > Temporal. S4 still does not succeed in visualizing the relations in an iconic fashion: the participants in the left and right upper corners are the most central ones; the participants on the vertical axis are more peripheral, increasingly so from top to bottom.
of the agent. In other situations, their controlledness may be underlined, e.g. if they are coded as applicative objects.

Peripheral participants – those on the central axis of S4 – are distinguished by specific role features. In the center of a situation such features give way to the control parameter: participants are only divided as to whether they mainly control the situation or whether they are controlled by it. Hence, they are categorized as actor or undergoer (cf. FOLEY & VAN VALIN 1984). The indirectus will not occupy us here.

7.4. Incorporation

7.4.1. Structural phenomena

Noun incorporation is the integration of a nominal expression, most commonly a noun stem, into a verb form. The incorporation of a complement blocks the corresponding governing slot of the verb and correspondingly reduces its valency. Consequently, a verb with an incorporated direct object behaves syntactically and morphologically like an intransitive verb. In the following, complex verbs resulting from noun incorporation will be called ‘incorporatives’ or ‘incorporative verbs’.

The question of incorporation as a morphological or syntactic process has sometimes been dealt with as an either/or issue (e.g. in BAKER 1988). Typological studies have revealed that, like other grammatical processes, noun incorporation partakes in the gradual transition between morphology and syntax. Individual strategies of incorporation differ along various parameters, one of which is the bondedness between the verb and the incorporated noun and the corresponding loss of autonomy of the latter. On this gamut, at least the following points may be distinguished, which correspond to a passage through the right half of S2 from right to left:

(a) The incorporated noun remains completely outside the verb, but forms a syntactic unit equivalent to an intransitive verb with the latter (e.g. Mam, where this is manifested by morphological intransitivization (antipassive) of the verb; cf. § 10.1.1).

(b) The incorporated noun is not integrated into the verb form, but merely juxtaposed (e.g. Samoan).

(c) The incorporated noun is integrated into the verb form, but remains essentially intact (e.g. YM; cf. § 9.2).

(d) A bound variant of the noun stem is incorporated; the combination is largely lexicalized (e.g. body-part incorporation in Takelma; cf. E239).

To the extent that the incorporated noun loses its autonomy, it also loses its status as a clause constituent, e.g. as direct object (see VELÁZQUEZ CASTILLO 1996:103, MITHUN 1984:856, against BAKER 1988). Where the verb is morphologically marked as intransitive, verb and incorporated noun are not in a syntactic, but in a morphological relation to each other.
Another parameter on which strategies of incorporation differ is **lexicalization**. In a system where incorporation is freely productive according to established patterns, as e.g. in YM, most incorporative constructions are semantically compositional, and to this extent, incorporation is a grammatical process. On the other hand, in a system which contains only a handful of age-old incorporative verbs, as e.g. in French, these will be highly lexicalized, and insofar incorporation is a lexical process, i.e. some kind of compounding.

### 7.4.2. Functional correlates

Incorporative constructions share a number of functional properties which may be systematized as properties of the situation core and features and roles of participants incorporated.

#### 7.4.2.1. Properties of situation core

Incorporation occurs most frequently with situations of **action** or **activity**. These often imply a **physical impact** on an object or a **change** of the latter. Verbs with complex or abstract meaning are rarer, although they do occur in incorporation (e.g. YM *báaxal* ‘play’). Moreover, there are also **experiential** verbs like ‘hurt’ that may incorporate a body part\(^{51}\) (which generally involves the promotion of the experiencer-possessor to subject function).

The incorporation of physical objects (non-body-parts) in the function of an undergoer generally results in **habitual** or **typical activities** which have a traditional function in a culture. Furthermore, recurrent situations comprise **projected activities** with a non-specific undergoer or activities operating on an unspecified mass (cf. MITHUN 1984:856).

The incorporation of instruments may imply a (frequent) **repetition** of the action, the instrument’s return to its starting position or a certain resulting state of the undergoer (SULLIVAN 1984:149f). This is especially true for advanced stages of lexicalization of the construction.

#### 7.4.2.2. Participant properties

##### 7.4.2.2.1. Semantic class

Incorporation does not apply equally to all semantic classes of nouns. Instead, what is most easily incorporated is the prototypical noun in the sense of LEHMANN & MORAVCSIK 2000, sect. 3, i.e. a noun designating a concrete anempathic object. Next come substances. The

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\(^{51}\) We take the liberty of occasionally applying a term that properly designates a non-linguistic object to a linguistic sign that designates such a world object.
locus of noun incorporation is at these positions of the empathy hierarchy. Entities which are more at the top of the hierarchy – animate objects, human beings, and especially speech act participants\(^{52}\) (SAP in S5) – are found with decreasing frequency in incorporation. The same holds, in principle, for entities at lower levels of the hierarchy, although abstract entities like instances of time and experience (‘pain’ etc.) may be incorporated in some languages.

S5 represents an application of S3. Incorporability increases from both ends of this hierarchy and is highest at the center.

S5. Empathy of participant incorporated

<table>
<thead>
<tr>
<th>Empathy</th>
<th>Incorporability</th>
</tr>
</thead>
<tbody>
<tr>
<td>SAP</td>
<td>zero</td>
</tr>
<tr>
<td>human</td>
<td>minimal</td>
</tr>
<tr>
<td>animate</td>
<td>maximal</td>
</tr>
<tr>
<td>concrete object</td>
<td></td>
</tr>
<tr>
<td>substance</td>
<td></td>
</tr>
<tr>
<td>location</td>
<td></td>
</tr>
<tr>
<td>abstract</td>
<td>minimal</td>
</tr>
</tbody>
</table>

If entities are incorporated, their referentiality changes and they get de-individuated (cf. ch. 7.4.2.2.3). On these grounds, Mithun (1984:863) relates the decreasing incorporability of entities in the left zone of S5 (in direction of increasing empathy) to the communicative backgrounding that comes along with incorporation (cf. § 7.4.2.2.4) and that is dispreferred for human participants. Proper names never seem to be incorporated.

7.4.2.2.2. Relationality

Relational and non-relational nouns alike (as in E238.d) may be incorporated into the verb. Among relational nouns, body-part expressions are especially frequent in being incorporated in the languages of the world. In general, the relationality of the item is maintained. This means that the situation includes a relatum (a possessor) of the entity in question, which must be identified among the other participants that are linguistically or contextually present (cf. Polinskaja & Nedjalkov 1987:253). If the possessor is present in the same clause, then it is generally either the actor or the undergoer of the verb. The rules for this alternative are partly language-specific. In Instruments, preferably body parts, are incorporated in many languages. Yucatec Maya is one of them. E174 and E175 show incorporation of a body part and a tool, respectively.

from YM, the possessor of the incorporated body part is the actor, while in E243 from Nahuatl the same body part is related to the undergoer.\(^{53}\)

\(^{52}\) A (personal) cross-reference marker on a verb is not an instance of incorporation.

\(^{53}\) Incorporative forms and other relevant structures are highlighted in the examples throughout the paper.
Noun incorporation and participation

E242. kāa t-u coh-chek’-t-ah le mùula-o’
YM CNJ PST-SBJ.3 push-foot-TRR-CMPL DEF mule-D2
‘then he kicked the mule’ (HNAZ_0068.02)

E243. neč-ikši-wite?-ki
NAH (SBJ.3)OBJ.1.SG-foot-hit-PST
‘it hit me on the foot’ (MERLAN 1976:188)

In other cases, especially in those of strong lexicalization, the possessor of the incorporated relational noun need not be linguistically present and must then be inferred on the basis of world knowledge.

E244. t-u tuk-ni’-t-ah-en
YM PST-SBJ.3 pile.up-nose-TRR-CMPL-ABS.1.SG
‘he knocked me over with its front (i.e. the front of his vehicle)’ (EMB_0198)

Here it is only the – linguistic or extralinguistic – context by which we can conclude that the possessor of the ‘nose’ is a car.

7.4.2.2.3. Referentiality

Generally, incorporated nouns have less referentiality than independent ones (WOODBURY 1975:12, MITHUN 1984:863 etc.). They lose their individuating force and assume non-specific reference, as may be seen in E245 from Onondaga.

ONO TNS:he>it-buy-ASP DET it-tobacco:NS
‘He bought the tobacco.’

b. Wa?ha-ye?kwa-hni:-nu?=?
ONO TNS:he>it-tobacco:buy-ASP
‘He bought tobacco.’ (WOODBURY 1975:10)

54 In some languages (e.g. Nahuatl and Mayali) incorporated nouns may be used in reference tracking (this corresponds to MITHUN’s (1984) incorporation type III). A given participant appears as an independent NP on its first occurrence and is incorporated on further occurrences. In this case the incorporated noun can bear the same referential mode as the antecedent noun, i.e. it may be specific if the antecedent noun has specific reference. It is, however, backgrounded as ‘given’ information, as in the following question–answer pair from Nahuatl (cf. also E310 from Mayali):

A: Ika thaʔke ki-teʔki? panci?=?
with what (SBJ.3.SG)OBJ.3.SG-cut bread
“What did he cut the bread with?”

B: Neʔ panci-teʔki? ika kočillo.
he (SBJ.3.SG)-bread-cut with knife
“He cut the bread with the knife.” (MERLAN 1976:185)
This loss of referentiality has a set of structural correlates. Incorporated nouns are not be marked for definiteness and number; are not be accompanied by demonstratives, numerals, possessives; are not modified by adjectives;\(^55\) cannot be referred to anaphorically.

Things are slightly different with the referentiality of relational nouns (cf. 7.4.2.2.2). They, too, are unmarked for individuation if they are incorporated. However, their reference can be identified by their (mostly inalienable) relation to their possessor, which is also present in the situation (cf. POLINSKAJA & NEDJALKOV 1987, § 4).

### 7.4.2.2.4. Topicality

As we saw in § 7.2, a referential NP enjoys, _ceteris paribus_, higher topicality the higher it is on the hierarchy of syntactic functions (cf. Givón 1983:22). NPs lower on that hierarchy tend to be focal. Incorporated NPs are generally non-referential. They may not, by themselves, constitute either the topic or the focus, but may only participate in it if the incorporative verb as a whole is topic or focus. In § 7.2, we said that a highly topical nominal expression is in the discourse foreground. Any movement that removes it from that position is thus a kind of backgrounding. There are at least two opposite ways of doing this: First, it may be demoted on the hierarchy of syntactic functions. Second, it may be incorporated into the verb (cf. VELÁZQUEZ CASTILLO 1996:167, TALMY 1985).

Demotion of a nominal expression by incorporation is the syntagmatic counterpart of the simultaneous promotion of other components of the situation. The incorporation of a nominal dependent into the verb (leading to the latter’s intransitvity) places the activity as such in the center of attention, while the specific involvement of that participant, e.g. the affection\(^56\) of the undergoer or the use of an instrument, are pushed into the background.\(^57\) VELÁZQUEZ CASTILLO (1996:118) comments on E246: “the outcome of the activity (i.e., bread) is not as salient as the activity itself”.

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\(^55\) Some polysynthetic languages, including Mayali and West Greenlandic, allow external modification of an incorporated noun. In West Greenlandic, the modifier bears instrumental case. It may be marked for plural, as in the following example, or it may be a numeral.

```
Esta nutaa-nik aalisagar-si-vu-q
Ester new-INST.PL fish-get-IND.INTR-3.SG
‘Ester got (more than one) fresh fish.’ (VAN GEEVEN 1998:18)
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For external modification in Mayali, cf. § 8.4.1.

\(^56\) _Affection_ will be used as the action noun of the verb _affect_ and the dynamic counterpart to _affectedness_.

\(^57\) This fits with MITHUN’s (1984:856) type I incorporation, whose main function is to create a ‘unitary concept’ of predicate.
Noun incorporation and participation

E246. A-he-kuave’e a-chipa-po-vo nde re-jogua-ta-ro avati.
GUA AC.1-RFL-offer AC.1-bread-do-PURP you AC.2-buy-FUT-if corn
‘I offer to bake bread if you will buy the corn.’ (VELÁZQUEZ CASTILLO 1996:118)

Transitive use of an incorporative construction permits the promotion to direct object function of a participant which would otherwise be less prominent. This is e.g. the case with possessors ‘raised’ to direct object function upon incorporation of their body part.

E247. O-puka jakare, o-mbo-psy’a-kyryi chupe.
GUA AC.3-laugh crocodile AC.3-CAUS-chest-tickle him
‘The crocodile laughed, (the monkey’s words) made him feel good (lit.: chest-tickled him).’ (VELÁZQUEZ CASTILLO 1996:169)

Incorporation of one participant here fulfils the function of maintaining the focus of attention on some other participant in a discourse.

7.4.2.3. Participant relations

Languages vary in the kind and number\(^{58}\) of participants that can be incorporated. Nevertheless, there are crosslinguistic tendencies regarding the incorporability of the various participant roles. We represent them in S1, which is some kind of projection of the two-dimensional S4 onto its horizontal axis and may therefore be called ‘control hierarchy’. The most commonly incorporated participant is the **undergoer** (which may be the only participant of an intransitive verb or the direct object/absolutive of a transitive verb). Depending on its affectedness, it may be a **patient** (more affected) or a **theme** (less affected). Next comes the incorporation of an **instrument**, seemingly related to the important role of body-part incorporation. Incorporation of a **location** (place, goal or source) or of other adverbial participants like manner, time etc. is rarer (cf. sect. 7.4.2.2.1). These participants constitute the lower (shaded) part of the control hierarchy.

**S6. Incorporability of participant role**

<table>
<thead>
<tr>
<th>control</th>
<th>agent</th>
<th>comitative</th>
<th>experiencer</th>
<th>recipient</th>
<th>beneficiary</th>
<th>local roles</th>
<th>instrument</th>
<th>theme</th>
<th>patient</th>
</tr>
</thead>
</table>

As can be seen from S1, there is a tendency for incorporability to correlate inversely with control. The fact that patients incorporate most easily correlates with the fact that they

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\(^{58}\) We are referring to the number of distinct roles of incorporable participants, not to syntagmatic cooccurrence of actually incorporated ones. There are indeed cases of multiple incorporation, e.g. Mayali (E291), though this does not seem to be frequent.
are the most central participants, so that nominals representing them are intimately tied to the verb. This does not contradict the observation that incorporation of a patient frequently comes along with its incomplete affection, as this may be interpreted as a side effect of its low referentiality. The participant roles residing in the left part of S1 occur seldom or never in incorporative structures.\(^{59}\)

In some languages, the theme of a property or state may be incorporated into the verb, as is shown for resa ‘eye’ in the Guaraní example in E248.

E248. a. Che-resa hovy.
   GUA 1.IN-eye blue
   ‘My eyes are blue.’

b. (Che) che-resa-rovy.
   I 1.IN-eye-blue
   ‘I am blue-eyed.’ (VELÁZQUEZ CASTILLO 1996:139)

We subsume such participants under ‘theme’ as the least specific role regarding control properties and empathy. This participant functions as a point of reference for properties and states (cf. LANGACKER 1986). In the situation relevant to incorporation, it has a possessive (or interparticipant; see section 7.4.2.4) relationship to another participant that is normally not coded as a verbal dependent. In such a constellation, it is always the controlled entity, the possessum, never the controller, the possessor, that is incorporated into the verb. This is

\(^{59}\) Some cases of the incorporation of agents, comitatives and beneficiaries have been reported. However, they either seem to be marginal and idiosyncratic, as the beneficiary case of Mayali (cf. footnote 77); or they are subject to special conditions, as the comitative in Mayali, which may be incorporated if inanimate (cf. E92.a, E300 and LEHMANN & SHIN this volume, section 3.3.1 for a discussion of prototypical features of the comitative). Agent (actor) incorporation in Olutec (Mixean) is restricted to an inverse alignment of the participants involved, i.e. the undergoer is more salient and empathic than the agent and the latter is generally inanimate (or at most an insect), as in the following examples.

(i) ta=tüpxi-jep-ü-w.
   B1(ABS)=rope-scrape-INV-CMPL
   ‘The rope scraped me.’

(ii) ta=pixtük-kay-ü-w 7uxüwi
   B1(ABS)=flea-eat-INV-CMPL night
   ‘The fleas ate me last night.’ (ZÁVALA 2000, § 2.1.4.)

A similar case is reported by LAUNEY (2004) for Classical Nahuatl, where the agent of a passive construction is incorporated:

(iii) kówá-k"a-lo
   (SBJ.3.SG)snake-eat-PASS
   ‘He is bitten (lit.: eaten) by a snake’ (LAUNEY 2004, § 7.2.)

The exceptional behavior of these cases seems to be related to the low empathy of the respective participants. Thus, we may conclude that the factor of empathy (S5) outweighs the participant role (S1) in determining the incorporability of a given participant.
shown in S7, which complements S1. If the possessum is incorporated, it leaves its former syntactic function to the possessor, as may also be seen from E248.

**S7. Incorporability of interparticipant role**

A comparison of S5 with S1 and S7 reveals the following correlation: Such roles that are typically or exclusively fulfilled by highly empathic participants (agent, experiencer, recipient, beneficiary, possessor) generally do not incorporate.

### 7.4.2.4. Interparticipant relations

An interparticipant relation between two participants of a situation is a relation which connects them directly and independently of the situation in which they partake. It is a possessive relation in the broadest sense. For the syntax of interparticipant relations, the relationality of one of the two participants – the possessum – is the most important factor. See LEHMANN & SHIN & VERHOEVEN 2004[D] for an in-depth analysis.

As has been shown in section 7.4.2.2.2, the incorporated noun may be relational or non-relational. If its participant bears an interparticipant relation to another participant of the situation, the relationality contrast generates two principal cases. In the first case, the incorporated noun is an inalienable noun, especially a body-part term. It maintains its relationality, and its possessor can be retrieved from the context. In general, this may be the actor or the undergoer of the incorporative verb. If the body-part noun is incorporated in the function of an instrument, its possessor will always be the actor, due to the control relation between them (cf. LEHMANN & SHIN this volume, section 3.3.3). If the body-part noun is incorporated in undergoer or locative function, there are generally both possibilities of being related to the actor or to the undergoer. However, the actual choice is language-specific (cf. Instruments, preferably body parts, are incorporated in many languages. Yucatec Maya is one of them. E174 and E175 show incorporation of a body part and a tool, respectively. vs. E243). No cases have been found where an incorporated inalienable noun would be in a possessive relation to a peripheral participant. As anticipated in the preceding section, in interparticipant relations, it is always the possessum and never the possessor that is incorporated, due to the latter’s empathy (cf. 7.4.2.2.1) and its generally high degree of individuation (cf. 7.4.2.2.3).

In the second case, the incorporated noun is a non-relational one. Here, the intimate tie between the activity and this participant outweighs any interparticipant relations that it might have. That is, if such a relationship exists at the cognitive level, it is typically lost at the linguistic level. For instance, if the incorporative verb is used transitively, there may be
an alienable relation of the incorporated item to the new undergoer. In E249.b (anticipated from E324.c below), the incorporated noun *che’* ‘tree, stick’ is in a more or less permanent local relation to the undergoer *küol* ‘milpa’, expressed as a possessive relation in YM, as in E249.a.

E249. a. t-in  ch’ak-ah u che’-il  in  kòol

YM  PST-SBJ.1.SG  cut-CMPL  POSS.3  tree-REL  POSS.1.SG  milpa

‘I chopped the trees in my cornfield.’

b. t-in  ch’ak-che’-t-ah  in  kòol

PST-SBJ.1.SG  cut-tree-TRR-CMPL  POSS.1.SG  milpa

‘I chopped trees in my cornfield’ (BRICKER et al. 1998:354)

This relationship is, however, not expressed in E249.b. In general, the strategy of incorporation is not used to express interparticipant relations. This would, in fact, be an anti-iconic representation of such a relation.

A Guaraní example such as E250 appears to run counter to the generalizations stated for inalienable noun incorporation. Given certain conditions of agentivity and dynamicity, an incorporative complex of the structure Pron-Noun-Verb is possible, where Noun is the patient, Pron is a cross-reference morpheme and the possessor of Noun.

E250.  Tani  che-rova-pete.

GUA  Tani  1.IN-face-slap

‘Tani slapped me in the face.’ (VELÁZQUEZ CASTILLO 1996:162)

Thus, possessor and possessum appear in adjacency within the incorporative construction. However, as will be shown below (sect. 8.2.3.1), what appears to be a possessive prefix is actually the undergoer prefix, so that Guaraní follows the same principle.

Outside incorporation, YM iconically represents inalienable relations by possessive constructions to the detriment of other participant relations which hold in the same situation, thus leaving the identification of the latter to a semantic or pragmatic inference (cf. LEHMANN & SHIN & VERHOEVEN 2004[D]). Other languages prefer the opposite economic way: they only express the participant relation and leave the possessive relation and the identification of the possessor to an inference which may be based on the relationality of the possessum. This holds for possessor promotion constructions in many European languages. YM uses this strategy only in such body-part incorporating constructions as Instruments, preferably body parts, are incorporated in many languages. Yucatec Maya is one of them. E174 and E175 show incorporation of a body part and a tool, respectively.
8. Phenomenology of incorporation

In the present section, we focus on four languages, Samoan, Guaraní, Nahuatl, and Mayali, and discuss their systems of incorporation. Samoan was already part of our previous samples and was positioned closest to YM with respect to the features of indirect participation and relation prominence. From this point of view it is interesting to compare the functions of incorporation in Samoan to those of YM and relate them to their common typological features. Furthermore, it seems to be fruitful for a typological evaluation of the functions of incorporation in YM, to be analyzed in section 9, to compare them with those functions fulfilled by incorporation in other languages that make considerable use of it. Therefore, Guaraní, Nahuatl, and Mayali have been chosen for comparison.

The descriptive sketches of incorporation in the languages of the sample will be subdivided along two parameters:
1. participant role of the incorporated noun as introduced in § 7.4.2.3f;
2. semantic class of the incorporated noun as introduced in § 7.4.2.2.

Since the general approach is semasiological, we present the roles and features of incorporated participants as we find them in each language. However, to the extent that the languages are alike, the same values on the two parameters provide the relevant subsections: undergoer, instrument, location and other roles for the first parameter; body-parts and non-body parts for the second parameter. Since the two parameters cross-classify to a large extent, it seems immaterial which of the two criteria provides the higher level of subdivision.

8.1. Samoan

8.1.1. General remarks

Samoan belongs to the Samoic-Outlier subgroup of the nuclear branch of the Polynesian language family and is spoken in Western Samoa by about 160,000 people. See LEHMANN & SHIN & VERHOEVEN 2004[D] & [P] for a summary characterization. The Samoan data in this paper is taken from MOSEL & HOVDHAUGEN 1992 and SHIONOYA 1991.

Samoan does not show morphological incorporation of a noun into the verb. The noun is, rather, juxtaposed and postposed to the verb. Despite the lack of morphological evidence, there are some syntactic and lexical clues that support the analysis of incorporation. The position of some particles distinguishes incorporation from non-incorporation at least with singular NPs. Moreover, many complexes of verb plus incorporated noun are realized as one word both phonologically and orthographically. There are a lot of incorporatives with fairly strong lexicalization, but in general, incorporatives range – semantically as well as morphologically – at different stages on a continuum of cohesion. The incorporated noun cannot be accompanied by articles or possessive and demonstrative attributes, i.e. it no longer has NP status. Just as with many simple words, the lexical category of the compound
is not predefined and instead depends on the syntactic slot in which the compound appears. If a sequence of ‘verb + noun’ appears in the VP slot, we are dealing with an incorporative verb; if it appears in the NP slot, we are dealing with a deverbal noun, e.g. a nomen agentis. Thus, *ave pasi* (drive bus) means ‘drive a bus’ as a verb and ‘bus driver’ as a noun (cf. the examples E252.a and E260 as well as MOSEL & HOVDHAUGEN 1992:89 and Compes & Otto 1994:8).

8.1.2. Roles of participants incorporated

In Samon, participants with various semantic roles can be incorporated. Next to the undergoer, these are participants in peripheral functions such as instrument, location, time or cause.

8.1.2.1. Undergoer

The locative-directional undergoer of intransitive verbs can be incorporated, as the examples in E251 show.

E251 a. E fia tilotilo-teine Tolu.
   SAM PRS want watch-girl Tolu
   ‘Tolu wants to do girl-watching.’ (SHIONOYA 1991:130)

   b. E fia tilotilo Tolu i le teine.
   PRS want watch Tolu DAT/LD the girl
   ‘Tolu wants to watch (at) the girl.’ (o.c.129)

Furthermore, the patient of a transitive verb can be incorporated from absolutive function. This entails a change in valency. The absolutive object in E252.b, *ma’i* ‘patient’, is incorporated into the verb *tausi* ‘take care’ in E252.a. The agent, which has ergative function in E252.b, appears in absolutive function after incorporation in E252.a.

E252. a. Sā *tausi* ma’i le fafine.
   SAM PST take.care patient ART woman
   ‘The woman took care of patients.’

   b. Sā *tausi* e le fafine le ma’i.
   PST take.care ERG ART woman ART patient

If the undergoer is incorporated, the focus is on the activity as a unitary concept, being applied to the kind of undergoer. Referentiality of the undergoer changes to non-specificity.
Due to this, the incorporated undergoer is less affected. Compare the following examples and E251.a, E252.a.

E253. ‘O lo’o sali popo le toea’ina.
SAM PROG scoop.out copra ART old.man
‘The old man is cutting copra.’ (o.c. 395)

E254. Ae afai e te le loa sui ofu
SAM but if 2.SG GENR not know sew dress
‘But if you do not know how to sew dresses’ (o.c. 603)

E255. Fia faatau puaa oe?
SAM want sell pig 2.SG
‘Do you want to sell pigs?’ (o.c. 738)

E256. Sa faatau lole i ai l=o=na tama.
SAM PST buy lolly LD ANAPH ART=POSS=3.SG father
‘Her father bought her lollies.’ (o.c. 334)

As E256 shows, there is no promotion of the beneficiary to absolutive function after incorporation of the object lole ‘lolly’.

After incorporation of the undergoer and de-ergativization (intransitivization) of the complex verb, the latter may accommodate a new undergoer. However, given that the incorporative verb complex is intransitive, the new participant cannot become an absolutive argument. Instead, it is added as a locative-directional phrase, which indicates its minor (e.g. partial) affectedness in comparison with its absolutive coding in an ergative frame (cf. E257 and E251.a for the same case frame with a simple verb).

E257. ‘O le pō o le Aso Faraile ‘ua fuafua=ina.
SAM PRSV ART night POSS  ART day friday PF plan=ES
e tali malo ai le kapeneta i le palenia
gener receive guest ANAPH ART cabinet LD ART prime.minister
o Niu Sila.
POSS New Zealand
‘Friday night it is planned that the cabinet will invite [lit.: receive as a guest] the prime minister of New Zealand.’ (o.c. 396)

A slightly different kind of referential identity between the incorporated noun and the secondary undergoer may be seen in E258.

E258. ... ona ou alu atu lea e sele po’o l=ő=u ulu.
SAM CNJ 1.SG go DIR that GENR shave skull ART=POSS=2.SG head
‘... I am going to shave your head.’ (o.c. 605)
8.1.2.2. Peripheral roles

Participants in several other semantic roles like locations (E259), instruments (E260), time (E261), cause etc. may be incorporated, too. Since these are always modifiers of the verb, no change of valency (of transitive or intransitive verbs) takes place.

E259. ... i le fale e tu‘u ‘apa
SAM LD ART house GENR put can
ai i’a e fafine,
ANAPH fish(spec.pl.) ERG woman(spec.pl.)
‘... to the house where (the) woman canned the fish.’ (o.c. 394)

E260. ... ‘o fa’a=susu fagu e le teine tausi=ma’i
SAM PROG CAUS=suck bottle ERG ART girl care.for=patient
le tama a le isi fafine papalagi
ART child POSS ART other woman papalagi
‘... that a nurse [lit.: girl caring for patients] feeds the child of another papalagi
woman with a bottle’ (o.c. 395)

E261. E a la po lava si o=u tama
SAM GENR wake.up night EMPH ART(em.sg) POSS=1.SG father
e sauni le ti.
GENR prepare ART tea
‘My father used to get up when it was still night, to prepare the tea’ (o.c. 394)

8.1.3. Features of participants incorporated

The above examples already give an impression of the semantic spectrum of incorporated lexemes. Most of them belong to the class of (physical) objects; however, local (E262) or time (E261) expressions and even nouns with the semantic feature [+human] (cf. E251.a, E252.a) are admissible.

E262. E tu matu tele.
SAM GENR stand north much
‘It (i.e.Auckland) is (too) much in the north (and therefore, could not become
the capital of New Zealand.’ (MOSEL & HOVDHAUGEN 1992)

Body-part incorporation is frequent in Samoan, too (cf. E258, E263, E264).

E263. a. fufulu nifo
SAM wash tooth
‘brush teeth’
b. **fufulu lima / vae**  
wash hand / foot  
‘wash hands/feet’ (Ulrike MOSEL p.c.)

However, in contrast to many other languages (e.g. Guaraní, ch. 8.2.3.1), the incorporation of a body part does not entail a possessor promotion construction in Samoan. Quite in general, body-part terms need not appear in their possessed forms as long as the possessor can be retrieved from the context. With strongly lexicalized incorporatives, the body part is semantically derelationalized and no possessor is needed anymore, as in E264.

E264. ... e manaia faa=momoi loto  
SAM GENR beautiful CAUS=break heart  
le tetetete o le leo o si tamaitai  
ART quiver POSS ART voice POSS ART(em.sg.) lady  
‘... the voice of the lady was heart-breakingly beautiful’ (o.c. 398)

### 8.1.4. Summary

In Samoan, absolutes as well as adverbials in various semantic functions can be incorporated. The strategy is primarily used to present a situation as a typical or habitual one. Secondarily, there is also the possibility of accommodating a further participant in locative-directional function to relate the verbal action to a particular undergoer. This function, however, is only weakly developed in the language. It does not entail a retransitivization of the incorporative verb, as is the case in YM (cf. section 9.2.1).

### 8.2. Guaraní

#### 8.2.1. General remarks

Guaraní belongs to the larger Tupí-Guaraní family and is spoken in several varieties in Paraguay, Bolivia, Argentina and Brazil by roughly 4.5 million people. The language differentiates between active and inactive cross-reference marking on the verb. Actor and undergoer are marked by verb prefixes, depending on the parameters of dynamicity and control/voluntariness. Tense, aspect and mood are marked by verbal suffixes. Possessive prefixes on nouns are identical with the inactive cross-reference markers (as in E265.b below). The distinction between alienability and inalienability plays a crucial role in the grammar of possession. Although there is no special morphological marking of inalienable vs. alienable possession, formal differences in the possessive constructions clearly relate to this distinction. Guaraní has flexible word order determined by discourse; the default order,
however, in decontextualized sentences seems to be VO, with the subject appearing either before or after the verb. Nouns may be morphologically incorporated into the verb form, between the cross-reference prefix and the verb stem. Noun incorporation is productive to a limited extent in Guaraní, but there are many established and conventionalized incorporative expressions. The following analysis and data are based on the Paraguayan variety of Guaraní investigated in Velázquez Castillo 1996.

8.2.2. Roles of participants incorporated

In Guaraní, most incorporated nouns are in an undergoer relation to the incorporating verb. The actant in question may be the object of a transitive verb or the subject of an intransitive verb. Moreover, the only actant (theme) of an intransitive predicate designating a property, a state or an uncontrolled movement may be incorporated if it is relational, especially a body part. Instrument incorporation is not reported for Guaraní. However, there are a few cases of incorporation of manner adverbials.

8.2.3. Features of participants incorporated

Generally, as most incorporating languages, Guaraní incorporates inanimate participants. However, there are rare cases of the incorporation of animate participants, e.g. kinship terms. These are only incorporated if they are inactive, lacking control with respect to the verbal meaning. Furthermore, the possessor of the incorporated participant is strongly affected by the situation. In the incorporative construction, the possessor is conceptualized as a beneficiary/maleficiary, as in E266.

E266. Aichenjaranga Na-María, ko-kuehe-tente
GUA poor Ms-Maria this-yesterday-only
o-heja chupe i-mena ha ko’ąga i-memby-mano.
AC.3-leave her POSS.3-husband and now IN.3-son-die
‘Poor Mrs. Maria, just the other day her husband left her, and now her son died.’ (Velázquez Castillo 1996:152)

Guaraní generally distinguishes between two kinds of incorporation depending on whether the noun is or is not a body part term, thus on the feature of relationality (inalienability), with regular differences in form and function of the incorporative complex.
8.2.3.1. Body-part incorporation

The incorporation of a body-part term that functions as an undergoer results in a possessor-promotion construction. The body part is integrated into the verb, and its possessor behaves as an undergoer of the incorporative construction. In E267.a, the lexical possessor *pe-mitā ‘that child’* fills the normal undergoer slot following the verb.

   GUA  AC.1-face-wash-FUT that-child
   ‘I’ll wash that child’s face. (lit.: I’ll face-wash that child.)’

   b.  A-johe-ta pe-mitā rova.
   AC.1-wash-FUT that-child face
   ‘I’ll wash that child’s face.’ (VELÁZQUEZ CASTILLO 1996:133)

When the actor is first person and the possessor second person, as in E268.b, both of them are cross-referenced on the verb by the portmanteau prefix *ro-* indicating first-person actor and second-person undergoer (E268.a).

E268.  a.  (Che) ro-hova-hei.
   GUA  I AC.1>IN.2-face-wash
   ‘I washed your face.’

   b.  (Che) a-johei nde-rova.
   I AC.1-wash IN.2-face
   ‘I washed your face.’ (VELÁZQUEZ CASTILLO 1996:134)

As mentioned in section 7.4.2.3, after incorporation of a body-part term in an intransitive verb, its possessor may be promoted to undergoer function. This is possible with verbs designating a state or property, as in E269 and E270 (repeated from E248).

E269.  a.  (Che) che-resay-syry.
   GUA  I IN.1-tear-flow
   ‘I cried profusely.’

   b.  Che-resay o-syry.
   POSS.1-tear AC.3-flow
   ‘My tears flowed.’ (VELÁZQUEZ CASTILLO 1996:139)

E270.  a.  (Che) che-resa-rovy.
   GUA  I IN.1-eye-blue
   ‘I am blue-eyed’

   b.  Che-resa hovy.
   POSS.1-eye blue
   ‘My eyes are blue.’ (VELÁZQUEZ CASTILLO 1996:139)
Since the possessive prefix is identical to the inactive verb prefix, E269.a and E270.a might be analyzed as incorporation of ‘possessor plus possessum’. This analysis can be disproved by E267.a, E268.a and E273, which display active and portmanteau marking on the verb, cross-referencing the actor and/or undergoer. The cross-reference marking on incorporating verbs does not differ from that on non-incorporating verbs, as is revealed by a comparison of E269.a and E270.a with E271.

E271. a. (Che) che-karape.
   GU A I IN.1-low
   ‘I am short.’

   b. (Che) che-kane’ô
   I IN.1-tired
   ‘I am tired’ (VELÁZQUEZ CASTILLO 1996:14)

Incorporation of body parts and other items intimately related to a possessor\(^\text{60}\) entails the latter’s syntactic promotion. This suits its affection in the situation (cf. E267.a, E273, E269.a). It is also related, especially in some of the intransitive cases, with the feature of empathy (cf. E270.a) common to all relevant possessors. In fact, body-part incorporation is only possible with human beings and such domestic animals that are in a close relation to their holders. The feature of high empathy is closely related to topicality. The fact that empathic possessors have a higher degree of salience than their body parts as the entities performing the action or being in the state designated by the verb, pragmatically licenses their positing as reference points in examples like E269 and E270 (cf. VELÁZQUEZ CASTILLO 1995:692).

8.2.3.2. Non-body-part incorporation

If a non-body-part undergoer is incorporated into the verb, its actant position is blocked and the result is an intransitive construction.\(^\text{61}\) There is no possibility for another undergoer to occur in sentences like E272, as there is in analogous cases in YM (cf. ch. 9.3.1.3).

E272. a. (Che) a-mba’e-jogua-ta ko-ka’aru.
   GU A I AC.1-thing-buy-FUT this-afternoon
   ‘I’ll go shopping this afternoon.’ (VELÁZQUEZ CASTILLO 1996:99)

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\(^{60}\) The incorporation of kinship terms is allowed to a small extent, with possessor-to-subject promotion (cf. VELÁZQUEZ CASTILLO 1996:151).

\(^{61}\) VELÁZQUEZ CASTILLO (1996:113ff) shows that the incorporative construction does not function as an intransitive verb in all respects. For instance, causativization with the morpheme applied to intransitive verbs is only possible for incorporatives with strongly integrated nouns like \(\text{kā-}’u\) (kā-ingest) ‘drink ka’ha’, \(\gamma-’u\) (water-ingest) ‘drink water’ etc. There is a continuum of cohesiveness between the verb root and the incorporated noun determined by various factors, among them phonological integrity and semantic transparency of the compound.
b. A-ñe-kuave’e a-**chipa-po-vo** nde re-jogua-ta-rô anati.
   AC.1-RFL-offer AC.1-bread-do-PURP you AC.2-buy-FUT-if corn
   ‘I offer to bake bread if you will buy the corn.’ (VELÁZQUEZ CASTILLO 1996:118)

In Guaraní, incorporation of non-body-part undergoers has the function of backgrounding them and thus focusing on the activity as a whole, while independent NP status of the undergoer would focus on the result of the activity.

There may be an alienable possessive relationship between the incorporated undergoer and some other participant. If the former belongs to the ‘personnal sphere’ (in the sense of BALLY 1926) of the latter, then the possessor also bears the role of a beneficiary at the same time. It may then be expressed by a directional adjunct, as in E273. According to VELÁZQUEZ CASTILLO 1996, the close relation between the future possessor and the possessum/benefactum in E273 is the condition for incorporation, where the possessive relation remains unexpressed in favor of the benefactive relation.

E273. Huan o-**hoga-po** i-sy-pe.
   GUA Juan AC.3-house-make POSS.3-mother-LD
   ‘Juan built a house for his mother.’ (VELÁZQUEZ CASTILLO 1996:160)

8.2.4. Summary

Guaraní displays undergoer and adverbial incorporation, the latter being only a marginal possibility. Incorporating structures in Guaraní differ according to the semantic class of the incorporated noun. Non-body-part nouns are incorporated from undergoer function into the verb, rendering it intransitive. The situation is presented as a typical activity operating on a typical undergoer which is structurally and referentially backgrounded by the operation. Again, incorporation of body-part nouns does not change the valency of the base verb, but rather replaces the referent in a given argument position. After incorporation of a body-part noun, its possessor takes the latter’s former function as the actor or undergoer of the construction. This entails the syntactic and pragmatic promotion of the empathic possessor from its former position of a possessive attribute to the body-part noun. Thus, incorporative demotion of the body part rendered promotion of a highly empathic participant to a high syntactic function possible.
8.3. Nahuatl

8.3.1. General remarks

Nahuatl is a Uto-Aztecan language with a number of varieties spoken by about 1.5 million people in west-central Mexico. It is a polysynthetic language and may be further described as “omnipredicative” (LAUNEY 2004): verbs, nouns and locatives can function as predicates on their own. The verb has six prefix positions, cross-referencing subject, object, directional, reflexive as well as unspecified human and non-human arguments. The order depends partly on the relative empathy and specificity of the participants. The categories tense, aspect, and mood are marked by verbal suffixes. Nominal morphology is simpler. As clause constituents, most nouns occur in the absolute form, which is marked by a suffix. Inalienable nouns, however, appear in their possessed form (without the absolutive suffix). The syntactic structure is mainly concentric, i.e. the head – verb and possessed noun – is marked for the dependent by cross-reference indices. Word order is rather free, but preferably right-branching, with the verb in initial position.

Nahuatl possesses a rather rich derivational system of verbal valency change including causative and applicative formation (the latter adding a beneficiary to the valency frame). Verbal composition/ incorporation also plays a role in changing argument structure. Among others, objects and adverbials may be incorporated. What is incorporated is the bare noun stem, i.e. without absolutive suffix, possessive and number marking. The incorporated noun stem follows cross-reference prefixes and precedes the verb stem (as in Guaraní).

In the following analysis, we use data from Modern Nahuatl (mainly Huauhtla Nahuatl, MERLAN 1976, but also Tetelcingo Nahuatl, TUGGY 1979, 1987, North Pueblo Nahuatl, BROCKWAY 1979 and Michoacán Nahuatl, SISCHO 1979) as well as from Classical Nahuatl (ANDREWS 1975, LAUNEY 2004). MERLAN (1976:189) investigates noun incorporation at the discourse level and shows that noun incorporation may also function as a reference-maintaining device. This corresponds to type III in MITHUN 1984. This function of incorporation is, however, not central to our concern.

8.3.2. Roles and features of participants incorporated

In Nahuatl, participants with many different roles can be incorporated. Next to the undergoer, this includes various participants in peripheral functions, among them instrument,

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62 The past prefix o- in E279 from Tetelcingo Nahuatl is an exception.
63 Since the orthography of the examples stems from the authors, Modern and Classical Nahuatl differ in it. The examples from LAUNEY are adapted to the orthography used by ANDREWS.
64 Since third person cross-reference markers may be referentially indeterminate, noun incorporation can help disambiguate referentiality in a given context.
Noun incorporation and participation

location, time, duration, cause, purpose and (compared) manner. The most frequently incorporated ones among these peripheral roles, instrument and location, are treated below.

8.3.2.1. Undergoer

8.3.2.1.1. Body-part incorporation

In Nahuatl, body parts are incorporated more frequently than other noun class. For them, incorporation in general represents the unmarked form of expression. Non-incorporated forms occur if the body-part noun is under contrastive focus (cf. E275.b). Body-part incorporation entails a prominent syntactic coding of the possessor while the body part itself remains in the background (cf. also Mithun 1984:860, Mithun & Corbett 1999).

In intransitive (E274.a) and reflexive (E274.b) constructions, it is the body part of the actor that is incorporated.

E274. a. Ni-yori-totomoka.

HNAH SBJ.1.SG-heart-beat

‘My heart is beating.’

b. Ni-mo-nenepil-k"a?-ki.

SBJ.1.SG-RFL-tongue-eat-PST

‘I bit my tongue.’ (Meralan 1976:188)

With transitive verbs, the incorporated body part is that of the undergoer, as is illustrated in E275 and E276.


HNAH (SBJ.3.SG)OBJ.1.SG-foot-hit-PST

‘It hit me on the foot.’ (Meralan 1976:188)

b. Ni-ʔ-temowiya-ya se tlamanalli

SBJ.1.SG-OBJ.3.SG-lower-IMPF a load

wa-n neč-wite?-ki no-ikši.

and (SBJ.3.SG)OBJ.1.SG-hit-PST POSS.1.SG-foot

‘I was lowering a load and it hit me on the foot.’ (Meralan 1976:188)


CNAH SBJ.1.SG-OBJ.3.SG-throat-cut

‘I cut him (by) the throat.’ (Launey 2004, § 7.2.)

The (empathic) possessor is coded as a verbal dependent in both constructions of E275. In E275.b, it is coded, in addition, as a possessive attribute to the object no-ikši ‘my foot’. Thus, there is no possessor promotion from E275.b to a.
The verbal cross-reference to the possessor of the undergoer (in addition to the possessive prefix on the latter) is, however, optional. For E277, MERLAN proposes the following analysis: In the non-incorporative version E277.b, the body-part noun *i-tos* 'his voice' is the direct object, while in the incorporative version E277.a, its possessor is the direct object.

E277.  

a. Ni-*tos-išmati*.  

\[\text{HNAH} \quad \text{SBJ.1.SG-voice-know}\]  

'I know his voice.'

b. Ni-ki-išmati        i-tos.  

\[\text{SBJ.1.SG-OBJ.3.SG-know} \quad \text{POSS.3.SG-voice}\]  

'I know him by his voice (as opposed to otherwise).' (MERLAN 1976:188)

E277 has two problems. First, the absence of a direct object prefix from E277.a (the reference to the personal direct object) is hard to explain.\(^{65}\) *Tos* appears rather to be incorporated according to the pattern of non-body parts (see next section), i.e. by occupying the direct object prefix slot. Second, since the direct object prefix does not distinguish animacy, its reference in E277.b is not clear.

There is, however, evidence from another dialect, North Pueblo Nahuatl (BROCKWAY 1979), to the effect that marking of the possessor of a body-part noun on a non-incorporative verb, as in E275.b, is indeed optional. This can be seen in E278.a, where the non-incorporative verb bears the direct object prefix -*ki*-. This must refer to the possessed body part-noun, not to the possessor. The possessor is coreferential with the subject in both E278.a and the incorporative construction E278.b. If there were a cross-reference to the possessor in E278.a, then it would have to take the form of a reflexive marker, as in E278.b.

E278.  

a. Sa=niman   ki-piya    in   peine  

\[\text{PNAH} \quad \text{just=reserved OBJ.3.SG-have ART comb} \quad \text{tlen=ik} \quad \text{ki-šelwas-wi-a} \quad \text{in} \quad \text{i-tencon.}\]  

'He has a comb which he reserves for combing his beard.' (BROCKWAY 1979:162)

b. K-i’to-a-’ke      [mač san i-pan       mo-tencon-paka].  

\[\text{OBJ.3.SG-say-PRS-PL} \quad \text{QUOT just POSS.3.SG-LOC (SBJ.3.SG)RFL-beard-wash}\]  

'They say that he just washes his beard in it.' (BROCKWAY 1979:182)

Data from Tetelcingo Nahuatl (TUGGY 1979) supports this analysis. In E279, it is the external possessed body-part NP that is cross-referenced on the verb, which is clear from the plural marking.

\(^{65}\) As a comparison with other examples (E275.b, E281.a) shows, the allomorph \(\mathcal{P}\) would be expected.
Noun incorporation and participation

TNAH all POSS.3.SG-tooth-POSS.PL PST-OBJ.3.PL-scatter-APPL
‘He knocked out all his teeth.’ (TUGGY 1979:9)

From this, it may be concluded that the possessor is promoted by incorporating its body part
in Nahuatl (as in Guaraní; cf. section 8.2.3.1).

8.3.2.1.2. Non-body-part incorporation

The incorporation of a non-body-part direct object comes along with the reduction of one
slot in verbal valency. Thus, monotransitive verbs become intransitive, ditransitive verbs
become monotransitive, and verbs with three objects become ditransitive (cf. ANDREWS

The incorporation of the direct object renders the verbal complex intransitive. The verb
loses its cross-reference marker for the third person object (E280, E281). In E280, the
incorporative b-version is the unmarked one. As with body-part incorporation, the
non-incorporative version only occurs if the object is focused (E280.a, E281.a). On the other
hand, according to MERLAN 1976, examples like E280.b are strongly lexicalized.

HNAH he (SBJ.3.SG)OBJ.3.SG-close-PST door-ABS
‘He closed the door.’

he (SBJ.3.SG)door-close-PST
‘He closed the door.’ (MERLAN 1976:187)

E281. a. Aške·man tiʔ-kʷa naka-tl.
HNAH never SBJ.2.SG-OBJ.3.SG-eat meat-ABS
‘You never eat meat.’

b. Naʔ ipanima ni-naka-kʷa.
I always SBJ.1.SG-meat-eat
‘I eat meat all the time.’ (MERLAN 1976:185)

Once a non-body part as undergoer has been incorporated, a beneficiary may be coded as
a direct object, as in E282.b.

E282. a. ni-miʔ-chihu\nca
CNAH SBJ.1.SG-field-make
‘I cultivate fields’

66 Intransitive subject incorporation, resulting in an avalent verb, is rare. TUGGY (1987:3) illustrates it
from Tetelcingo Nahuatl iōnal-kisā ‘sun-come.out’.
This, however, appears to be an irregular applicative formation. In general, applicative verbs are derived by a suffix -lia, and this process is completely independent of incorporation. Thus, in E283.a we have a trivalent non-incorporative applicative verb, while in E283.b, valency is reduced by undergoer incorporation (cf. E280, E281).

E283.  a. ni-quin-ø-te-mo-lia
       SBJ.1.SG-OBJ.3.PL-OBJ.3.SG-seek-APPL
       ‘I seek it for them’

b. ni-quin-xochi-te-mo-lia
       SBJ.1.SG-OBJ.3.PL-flower-seek-APPL
       ‘I seek flowers for them’ (ANDREWS 1975:164)

Contrary to the situation in YM (cf. section 9.2.1), the applicative derivation is not subsequent to the process of incorporation, but occurs independently.

8.3.2.2. Peripheral participant roles

As mentioned above, Nahuatl allows for a great variety of peripheral participant roles to be incorporated. The incorporation of a peripheral participant does not trigger a change in the valency of the base verb, be it transitive or intransitive. Since the peripheral roles most frequently incorporated are instrument and location, these will be analyzed in what follows. Both may consist of a body-part or a non-body-part noun.

8.3.2.2.1. Instrument

The instrument is incorporated into transitive (E284, E286) and intransitive verbs (E285), though the former is surely more frequent since instrumental situations are prototypically transitive. As a body part, the incorporated noun is always in a possessive relation with the actor (E284, E285).

E284.  a. ni-tla-mah-te-moa
       SBJ.1.SG-OBJ.3.UNSPEC-hand-seek
       ‘I am groping for something’ (ANDREWS 1975:166)

Cf. LEHMANN & SHIN this volume, section 3.3.3 for a general account of instrumental situations.
b. **qui-tlan-kotōna**  
(SBJ.3.SG)OBJ.3.SG-tooth-tear  
‘he tears it with his teeth’ (LAUNEY 2004, § 7.2.)

**E285.**  **n-ix-huetzca**  
CNAH SBJ.1.SG-face-laugh  
‘I smile (lit.: laugh by means of the face)’ (ANDREWS 1975:166)

**E286.** a. **ni-tla-teh-huatza**  
CNAH SBJ.1.SG-OBJ.3.UNSPEC-fire-dry  
‘I roast something’ (ANDREWS 1975:166)

b. **qui-te-witeki**  
(SBJ.3.SG)OBJ.3.SG-stone-hit  
‘He hits him with a stone.’ (LAUNEY 2004, § 7.2.)

Incorporation of nouns in instrumental function does not change the valency or argument structure of the verb, since in a corresponding non-incorporative construction, such nominals are adverbials. E287.a shows that the incorporation of the instrument leaves the verb transitive, while incorporation of the object renders it intransitive: there is no cross-reference-marker for an object in E287.b.

**E287.** a. Ya? ki-kočillo-teteki panci.  
HNAH he (SBJ.3.SG)OBJ.3.SG-knife-cut bread  
‘He cut the bread with a knife.’

he (SBJ.3.SG)-bread-cut with knife  
‘He cut the bread with the knife.’ (MERLAN 1976:185)

**8.3.2.2.2. Location**

In E288.a, the relation of the subject to the incorporated body part is as in E274.a. There, the body part was conceived as the theme of the situation. Alternatively, the body part in E288.a may be understood as a location of the process which directly applies to its possessor as the theme (as in E292.b below). In E288.b, a local role for the incorporated body part is even more plausible, and here its possessor is the actor of the situation.

**E288.** a. **ni-tzon-iztaya**  
CNAH SBJ.1.SG-hair-get.white  
‘my hair is turning white’ (ANDREWS 1975:167)
According to ANDREWS 1975, § 23.6, an incorporated body-part location could also be related to the undergoer, depending on the semantics of the situation core as well as on the number and empathy of the central participants. While ANDREWS does not give adequate examples for Classical Nahuatl, E289 from Michoacán Nahuatl is a case in point.

E289. ki-nakas-teka
MNAH (SBJ.3.SG)OBJ.3.SG-ear-lay
‘he lays it on its side’ (SISCHO 1979:353)

The examples in E290 demonstrate the incorporation of non-body-part locations into a transitive (a) and an intransitive verb (b).

E290. a. qui-tlā-tōka
CNAH (SBJ.3.SG)OBJ.3.SG-earth-bury
‘He buries it in the earth.’ (LAUNEY 2004, § 7.2.)

b. ni-cuauh-tlehco
SBJ.1.SG-tree-ascend
‘I climb trees’ (ANDREWS 1975:166)

8.3.3. Summary

Like the languages analyzed before, Nahuatl uses incorporation of subjects, objects and adverbials to represent culturally relevant and usual situations. The incorporated participants play a typical role in these situations and can, thus, be referentially backgrounded. The process of incorporation is so regular that it concerns verbs of all valency patterns. If direct objects are incorporated, valency is reduced by one actant place.

Despite the regularity of the process, the function of associating a further participant is only marginally fulfilled by it. A beneficiary may be additionally accommodated as a direct object after incorporation of the patient (cf. E282). However, this function is normally fulfilled by the highly regular applicative derivation and is in no way genuine to the process of incorporation.

Moreover, Nahuatl incorporates body parts in order to promote their possessors to a central syntactic function (cf. also Guaraní, section 8.2.3.1). We saw before that applicative derivation is a means of coding a beneficiary in a central syntactic function (cf. E283). For body-part nouns, the incorporative construction (with the possessor promoted) is unmarked in comparison to the non-incorporative one. In general, the language seems to accord prominent coding to highly empathic participants.
8.4. Mayali

8.4.1. General remarks

Mayali is a Gunwinjguan (Non-Pama-Nyungan) language of North Western Arnhem Land in Australia spoken by about 2000 people. As Mayali is a polysynthetic and head-marking language, the verb complex includes a large number of different grammatical informations. The template of the pre-root morphological positions from left to right is, roughly, the following: First comes two pronominal prefixes cross-referencing person and number of actants. The first refers to the subject, the second generally represents the object, i.e. the second argument with transitive and derived semi-transitive verbs, and the indirect object with simple and derived ditransitive verbs. Then come manner, directional and benefactive derivational prefixes. The following two slots are reserved for grammatical and lexical noun incorporation. The position immediately preceding the root is taken by applicative, comitative and aktionsart prefixes. There are two suffix positions for reflexive/reciprocal and tense/aspect/mood. Nominal case morphology is generally underdeveloped, but there are prefixes for four noun classes. The language has free word order and a rather flat, appositive syntactic structure. The following analysis is based on EVANS 1996, 1997 and 2003.

Nouns are morphologically incorporated into the verb without their noun class prefixes. The two types of incorporation, grammatical and lexical incorporation, are distinguished by the criterion of whether or not the incorporative complex can be paraphrased by a construction in which the noun has syntactic status: grammatical incorporation is productive, lexical incorporation is not. The former divides further into body-part and non-body-part incorporation, based on the relationality of the incorporated noun. The three types of incorporation can also be identified morphologically by the occupation of different slots in the compound. In E291, the first incorporated noun yaw- ‘child’ represents non-body-part incorporation, the second, guk- ‘body’ body-part incorporation and the third, girri- ‘ground oven’ lexical incorporation.

E291. Na-marnde ba-yaw-guk-girri+bo-m.
MAY 1-devil 3.PST-child-body-ground.oven+hit-PST.PFV
‘The devil cooked the child’s body in a ground oven.’ (EVANS 1996:74)

Modifiers of incorporated nouns may be stranded in the clause outside the verb form:

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68 This type of incorporation is called ‘generic incorporation’ in EVANS 1996, 1997 due to the referential status of the incorporated noun, which may be generic as in E309.

69 A compound interpretation of yaw-guk (as in E302) that would contradict the above analysis is ruled out here because the incorporation of a compound presupposes its independent existence, but neither yaw ‘child’ nor guk ‘body’ are attested as first or second element, respectively, of an independent compound (cf. EVANS 2003, ch. 5.4).
E292. a. Kamak kan-bolk-bukka-n ke.
MAY good 2>1-country-show-NONPST your
'It is good that you will show me your country.' (EVANS 1997:400)

b. Gu-gun nga-mim-baba-ng
LOC-right 1-eye-hurt-NONPST
'My right eye hurts.' (EVANS 1996:74)

In the pre-root positions enumerated, up to three dependents may be represented
verb-internally, as illustrated in E292.a. In general, there is a complementary distribution
regarding the representation of arguments in the verb: animate participants tend to be
represented by the pronominal prefixes while inanimate participants tend to be represented
as incorporated nominals. The exact distribution is somewhat more complicated and
depends on the number of participants and their relative position on the empathy hierarchy.
Given the possible number of argument slots in the verb, an incorporated participant may be
additionally represented in one of the pronominal slots of intransitive (cf. E294, E297.a) and
transitive verbs (E309.b). However, since incorporated nouns are often inanimate and
inanimate participants are represented pronominally only in a reduced way, there is not
much formal redundancy.

8.4.2. Roles of participants incorporated

In Mayali, participants in the undergoer role are incorporated most frequently, followed by
nouns in actor and comitative role. Other roles are not productively incorporated, but do
occur in lexical incorporation. Among these are the instrument and various local roles.

8.4.2.1. Undergoer

The undergoer is the main role incorporated in Mayali. Its incorporation does not change the
pronominal representation of the arguments in the verb, as shown in E293.

MAY white:cockatoo 3.PST-rock-split-PST.PFV
b. Ngarradj ba-djobke-ng gun-warde
white:cockatoo 3.PST-split-PST.PFV IV 1-rock
‘White cockatoo split the rock.’ (EVANS 1996:65)

70 In the prefix glosses, the first number represents the subject, the second the object.
71 The Roman numbers from I to IV represent the four noun-classes.
Depending on the transitivity of the verb, the incorporated nominal may be the subject – with intransitive (E294.a) and (derived) semi-transitive verbs (E294.b) – or the direct object – with transitive (E293.a) and ditransitive verbs (E295).

MAY 3.PST-tree-fall-PST.PFV  
‘The tree fell.’

3>1-BEN-meat-go.bad-PST.PFV  
‘The meat went bad on me.’ (EVANS 1996:80)

E295. Aban-madj-bukka-ng.  
MAY 1>3.PL-swag-show-PST.PFV  
‘I showed the swag(s) to them.’ (EVANS 1997:413)

Derived benefactive (E296.a) and comitative (E296.b) ditransitive verbs also incorporate the undergoer.

E296. a. Aban-marne-kanj-kinje-ng.  
MAY 1>3.PL-BEN-meat-cook-PST.PFV  
‘I cooked the meat for them.’ (EVANS 1997:413)

b. Aban-daluk/bo-yi-warlkka-ng yerre.  
1>3.PL-woman/liquid-COM-hide-PST.PFV behind  
‘I hid the woman/drink with them out in the back.’ (EVANS 1997:416)

8.4.2.2. Actor

The incorporation of the actor is quite rare in the languages of the world. In Mayali, some agentive intransitive\(^\text{72}\) verbs may incorporate the actor, as in E297. In addition to being incorporated, the noun may recur with actant status, as in E297.c.

E297. a. Ga-yaw-wage-n.  
MAY 3.NONPST-child-crawl-NONPST  
‘The baby is crawling.’ (EVANS 2003, ch. 10.4.3.1)

b. Ga-bid-wayda-n.  
3.NONPST-hand-wave(intr.)-NONPST  
‘He is waving with his hand.’ (EVANS 1996:84)

\(^{72}\) agentive = unergative = agent-oriented; inactive = unaccusative = patient-oriented
c. ba-m**bo-re-i.** ba-**bo-lohm-i** an-bo-kimuk
‘when the floodwaters used to come running high’ (EVANS 1997:401).

8.4.2.3. Comitative

In Mayali, the association of a comitative participant involves the formation of a comitative verb. A comitative verb is formed from underlying intransitive and transitive verbs by the comitative applicative prefix yi-. Just as benefactive applicative formation, comitative derivation leads to a valency increase. The new object slot is reserved for a dependent in comitative role, as in E298:

E298  yiban-yi-rrurnde-ng
MAY 2>3.PL-COM-return-NONPST
‘you are taking them back’ (EVANS 1997:410)

With underlying intransitive verbs, the derived comitative object can be incorporated:

E299.  Yi-yiwk-yi-rrurnde
MAY 2(>3)-honey-COM-return-NONPST
‘You are taking the honey back.’ (EVANS 1997:410)

For transitive verbs, there are two incorporative patterns. Depending on the verb class, the undergoer may be incorporated and the comitative get actant status, or vice versa. This correlates basically with the empathy of the undergoer and the comitative participant. One class of comitative verbs is formed as in E296.b above: the comitative participant is empathic and has the status of a verbal actant, while the undergoer is incorporated. Verbs of the other class generally have anempathic comitative objects that can be incorporated while the empathic undergoer is represented pronominally, as in E300.73

E300.  Ngan-**bo-yi-na**-ng.
MAY 3>1-liquid-COM-see-PST.PFV
‘He saw me with a drink.’ (EVANS 1997:414)

8.4.2.4. Other

Participants with such roles as instrument, location, destination, source and manner do not undergo grammatical, but lexical incorporation. However, as mentioned above, this type of

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73 From a diachronic point of view, the construction in E300 is based on the incorporation of a noun plus a comitative postposition –yi. A construction as in E296.b presupposes a reanalysis of the structure as described in EVANS 1997:414.
Noun incorporation and participation

incorporation is not productive. EVANS (1996:75) gives the following examples, for which there are no well-formed paraphrases with a verb-external noun: E301.a for an instrument, E301.b for a location (for a complete example see E291), and E301.c for a source.

E301.  

a. **danj+bu**

   **MAY** fish.spear+hit
   'spear with a fish spear'

b. **girri+bu**

   'ground.oven+hit
   'cook in a ground oven'

c. **wilk+mang**

   ashes+get
   'get out from ashes' (EVANS 1996:75)

8.4.3. Features of participants incorporated

Mayali distinguishes between body-part and non-body-part incorporation.

8.4.3.1. Body-part incorporation

Incorporated body parts\(^{24}\) form an open class. They may all be incorporated regardless of their specificity. This is shown in E302, where a compound body-part noun is incorporated into the verb.

E302.  **Nga-godj-mud-djobge-re-n.**

   **MAY** 1-head-hair-cut-RFL/RECP-NONPST
   'I’m going to cut my hair.' (EVANS 1996:77)

The participant roles taken by incorporated body parts are exactly the same as described above with non-body-part examples. Thus, body-part nouns are mainly incorporated in undergoer function, as shown in E303 for a transitive verb.

E303.  

a. **Ngan-melme-ng an-gorn.**

   **MAY** 3>1-touch.with.foot-PART.PFV III-crotch
   'He felt my crotch with his foot.'

\(^{24}\) Next to body-part nouns, this class comprises manifestations of an animate being such as speech, names, excreta, tracks, nests, eggs etc. (cf. EVANS 1996:93f).
b. Ngan-gorn-melme-ng.
   3>1-crotch-touch.with.foot-PST.PFV
   ‘He felt my crotch with his foot.’ (EVANS 1996:88)

If the body-part noun has actant status, as in E303.a, the possessor is not encoded as an
adnominal modifier. Instead, it occupies the second pronominal position on the verb. This
remains unchanged after incorporation of the body part, as in E303.b. Thus, there is no
change in prefixal cross-reference after body-part incorporation. Part and whole are in an
appositive relation, both being linked to the same argument position of the verb. They bear
the same participant role with regard to the verb.

The following examples illustrate body-part incorporation with a simple intransitive verb
(E304.a), with a derived semi-transitive verb (E304.b), with a simple ditransitive verb
(E305.a), and a derived ditransitive verb (E305.b).

   MAY 1-rib-crack(intr.).PST.PFV
   ‘I cracked my ribs.’

b. Bi-marne-mim-gimukm-inj.
   3>3.AN-BEN-eye-become.big-PST.PFV
   ‘He made eyes at her.’ (EVANS 1996:83)

   MAY I child 1>3.PL-ear-show-PST.PFV doctor
   ‘I showed my child’s ear to the doctors.’ (EVANS 1996:85)

b. Nga-bornang ba-wam barri-ngabed-marnb-om,
   POSS.1-daughter 3.PST-go-PST.PFV 3.AUG>3.PST-hair-make-PST.PFV
   ‘My daughter went (to the salon) so they would do up her hair, and they did up
   her hair for me.’ (EVANS 1996:85)

A body-part noun may equally be incorporated in comitative function within a derived
comitative verb as in E306.

   MAY 1>3.PL-tail-COM-see-PST.PFV buffalo 3.AUG>3.PST-tail-hold-PST.IMPF
   ‘I saw them with a buffalo’s tail, holding the tail.’ (EVANS 1997:415)

In the intransitive and semi-transitive constructions, the incorporated body part is one of
the subject (cf. E304). In transitive, simple ditransitive, and derived benefactive construc-
tions, it is always a body part of the object (E303, E305). Thus, its interpretation as an
instrument (of the actor) is excluded in such constructions. Neither is it related to the
indirect object, as becomes clear in E305. With comitative verbs, the grammatical function
of the possessor of the body part depends on the class of the comitative verb (cf. 8.4.2.3). In
E306, the body part belongs to the comitative object, while in E307, it belongs to the base object.

3>1-horn-COM-leave-PST.PFV  buffalo
‘He left the buffalo’s horn with me / he left me the buffalo’s horns.’ (EVANS 1996:84)

In all Mayali cases discussed above, the incorporation of a body part is unmarked in comparison to its non-incorporation. If body-part nouns occur externally, they are always promoted and highlighted for discourse reasons, as in E308.75

E308.  Barri-marnbom        rowk.
3.AUG>3.PST-prepare:PST.PFV all
barri-bbbe-gana-ga-ng,        gun-berd, gun-dad, ... 
3.AUG>3.PST-each-ITER-take-PST.PFV IV-tail IV-thigh
‘They prepared it (the kangaroo), they each took their share, some part of the tail, some a thigh, ...’ (EVANS 1996:98)

It was seen in section 8.4.3.1 that the possessor is coded in the second pronominal position on the verb, both in incorporative and in non-incorporative constructions (E303). Consequently, there is no syntactic possessor raising with body-part incorporation (EVANS 1996, §5). There is, in fact, no need for it, since the possessor is already prominently marked in non-incorporative versions. The possessor is only indirectly foregrounded at the discourse level as a consequence of demoting the body part by incorporation.76

8.4.3.2. Non-body-part incorporation

Incorporable non-body-part nouns form a closed class of about 40 items which are generally inanimate, except for yaw77 ‘child’ and, more limited, daluk ‘woman’ and bininj ‘man’.

75 The fact that E308 speaks of detached body-parts would not, in Mayali, prevent their incorporation (EVANS 1996:94f).
76 Possessor raising is present in another Mayali construction. After benefactive applicative derivation with -marne, the affected possessor of the undergoer is raised to object function and cross-referenced on the verb. In addition to E305.b, here is another example:
(i)Bi-yaw-melme-ng      ngarduk na-beywurd.
3>3.AN-child-touch.with.foot-PST.PERFV my I-child
‘He kicked my child.’
(ii) Ngan-marne-yaw-melme-ng    na-beywurd.
3>1-BEN-child-touch.with.foot-PST.PERFV I-child
‘He kicked my child / he kicked the child on me.’ (EVANS 1996:88)
77 Yaw ‘child’ is an exceptional case in that it allows additional possibilities of incorporation: contrary to universal and typological tendencies, it can even be incorporated as an indirect object or a beneficiary (cf. EVANS 2003, ch. 10.4.3.2):
They may have non-specific reference when incorporated, and the construction may include a more specific external nominal. This is a form of classificatory incorporation (MITHUN 1984, §4, MITHUN & CORBETT 1999:61f) which is possible with transitive and intransitive constructions.78

E309. a. Ga-rrulk-di an-dubang / an-bernbern

MAY 3.NONPST-tree-stand(N) III-ironwood/tree / III-ghost.gum

‘An ironwood / ghostgum tree is there.’

b. Ga-yaw-garm-e al-daluk

3>3-child-have-NONPST II-female

‘She has a baby girl.’ (EVANS 1996:77)

This syntactic structure of generic incorporation with an external specific argument is parallel to that of body-part incorporation where the possessor noun is an external argument.

Non-body-part nouns occur incorporated as well as verb-externally in Mayali discourse. The choice is controlled by factors of information structure. External non-body-part nouns carry new information and appear when first mentioned, while incorporated nouns belong to the given information and serve the maintenance of reference, similar to personal pronouns (cf. EVANS 1997:405). In this case the incorporated noun usually appears alone without external modification.

E310. Ngaye gorrogo an-bang nga-gurrm-i,

MAY I before III-dangerous 1>3-put.down-PL

gun-gurlah79 a-ma-ngi.

IV-pelt 1>3-get-PST.IMPF

gun-gurlah a-ga-ni djamun-djahdjam.

IV-pelt 1>3-take-PST.IMPF dangerous-place

Gorrk abanmani-yaw-wo-ng

clothes 1>3DU-child-give-PST.PERFV

‘I gave the clothes to the two babies.’ (EVANS 2003, ch. 10.4.3.2)

Furthermore, it may receive the predicative reading ‘as a child’ or ‘like a child’ in some contexts. This latter function is also present with other incorporated generic nouns.

78 MITHUN 1984 calls this type of incorporation ‘classificatory incorporation’ since in some languages (e.g. Mohawk), a classificatory system results from the type of incorporation described. “Nominals are classified according to the particular general N stem that is incorporated to qualify V’s directed at them.” (MITHUN 1984:863)

79 [Gun-]gurlah with the meaning ‘hide, pelt’, as in E310, is conceived of as alienable and belongs to the class of generic incorporated nouns. In other contexts it may be incorporated in its inalienable reading as a body-part noun, meaning ‘skin’ (cf. EVANS 2003, ch. 8.1.3.3).
8.4.4. Summary

Mayali displays rich possibilities of incorporating participants. The language distinguishes between three kinds of incorporation according to the productivity of the construction and the referentiality and relationality of the nouns incorporated. In the productive forms of grammatical incorporation, participants are mainly incorporated in the role of the undergoer, which is in concord with many incorporating languages (cf. also 7.4.2.3). Moreover, comitative participants may be incorporated with one class of derived comitative verbs. Finally, even the actor may be incorporated in an intransitive verbs. Other roles such as instrument, location etc. are not productively incorporated, but may occur in lexical incorporation.

The language exhibits a strong tendency to foreground persons. Next to the rules of pronominal marking, which are clearly governed by empathy, body-part incorporation involves a relative discourse foregrounding of the generally animate possessor. However, there is no syntactic possessor promotion with incorporation, since the possessor is coded as a pronominal prefix on the verb even with external possessed nouns. Instead, possessor promotion to object function is possible in benefactive situations after the applicative derivation with –marne.

There is no incorporative construction in Mayali that would contribute to the promotion of a peripheral participant. This is due to the fact that incorporation in Mayali does not affect the valency frame of the base verb, i.e. incorporation of the actor or (primary or comitative) undergoer does not vacate a subject or object function that might be taken by a former peripheral participant. Instead of this, Mayali displays an appositive structure in part-whole and generic-specific constructions. The incorporated noun – the part or generic term – is pushed into the communicative background, while the whole noun or the specific noun, resp., retain their former functions.
9. Noun incorporation in Yucatec Maya

9.1. Prerequisites of YM Grammar

9.1.1. Argument structure

The system of fundamental relations in YM has accusative structure; i.e. the core syntactic functions are subject and object. It is only the verb agreement system by pronominal indices which works on a mixed basis, requiring the notions of subject and absolutive. Subject marking cross-references the sole actant of an intransitive verb and the actor of a transitive verb, while absolutive marking cross-references the sole actant of a monovalent predicate and the undergoer of a transitive verb.

There are two sets of dependent pronominal indices in YM, viz. preverbal clitics and suffixes. Mayan structural linguistics calls them ‘Set A’ and ‘Set B’, respectively. They will here be called subject clitics and absolutive suffixes because of their agreement pattern. These are purely structural concepts which are not directly mappable onto syntactic functions, let alone semantic roles. By the criterion of the distribution of the pronominal indices, the actor and the undergoer of a transitive verb are cross-referenced as subject and absolutive, respectively.

E311. k-u ho’p’-ol u hats’-ik-ech
YM IMPF-SBJ.3 begin-INCMPL SBJ.3 strike-INCMPL-ABS.2.SG
‘he begins to strike you’ (CHAAK_078)

With intransitive verbs, subject and absolutive marking are in complementary distribution as determined by tense/aspect/mood categories. Incompletive aspect on the verb requires subject clitics for the actant (E312.a), while completive aspect ((E312.b) and subjunctive mood ((E312.c) require absolutive suffixes.

E312. a. káa h ho’p’ a xímbal
YM CONJPST begin(CMPL) SBJ.2 walk(INCMPL)
‘and you began to walk’ (cf. HTS’ON_017)

b. tu’x túun h bin-ech
wherethen PST go(CMPL)-ABS.2.SG
‘where did you go’ (BVS_14.01.22)

c. káa tàal-ak-ech
CONJcome-SUBJ-ABS.2.SG
‘that you should come’ (BVS_13.01.02.2)

Since the suffix for a third person singular direct object is zero, transitive verbs cannot necessarily be distinguished from intransitive verbs by bearing both cross-reference indices. However, they can be distinguished by their aspect/mood suffixes, since their allomorphy is
conditioned by the transitivity and the agentivity of the verb. In E313.a, e.g., the completive suffix -ah clearly identifies the verb xok ‘read’ as transitive, as does the incompletive suffix -ik in E315.a. for the verb ch’ik ‘stick’. By the same criterion, the verbs xòok ‘read\INTROV’ in E313.b and ch’ik-che’ ‘stick-tree’ in E315.b can be identified as belonging to the agentive class of intransitive verbs, which does not bear a suffix in the incompletive aspect.

9.1.2. Intro- and extraversion

The YM operations of intro- and extraversion are both related to incorporation. For the general background of valency changing operations in YM, the reader is referred to LEHMANN 1993, § 6.3.1.2 and § 6.3.1.4.

**Introversion** of a transitive verbal base blocks its undergoer slot so that the action designated does not extend beyond the actor itself. The latter acts on an unspecified undergoer, which is the typical one with respect to the verbal meaning. The action is often understood as habitual. The morphological marking of the operation differs for basic and derived transitive bases. If a base-transitive verb is introverted, the root vowel gets low tone, as in E313.b. A derived base gets a suffix –bal. The verb joins the agentive subclass of intransitive verbs.

- E313. a. Hwaan-e’ t-u xok-ah le kwentoh in wu’y-o’.
  - YM John-TOP PST-SBJ.3 read-CMPL DEF tale SBJ.1.SG feel-D2
  - ‘John read the story to me.’ (EMB_0002)
  - b. k’abéet in bin h xòok
  - necessary SBJ.1.SG go SS read\INTROV
  - ‘I have to go study’ (BVS_10.01.27)

**Extraversion** is the reverse operation: it provides an intransitive verbal base with an undergoer slot. The action then extends to an undergoer and affects it. Most base verbs are of the agentive subclass of intransitive verbs. The verb stem is suffixed with the applicative morpheme –t TRR, and the verb joins the class of transitive verbs. This is illustrated in E314.

- E314. a. Tèen-e’ táan in bin h xíimbal.
  - YM me-TOP PROG SBJ.1.SG go SS walk
  - ‘Me, I´m going for a walk.’ (BVS_01.01.12)
  - just come-ABS.1.SG SBJ.1.SG walk-TRR-ABS.2.SG
  - ‘I just came to visit you.’ (BVS_07.01.07)

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80 the inflectional counterpart of which is called antipassivization
9.2. General properties of the incorporative construction

9.2.1. Morphosyntax

Noun incorporation is one of a number of processes of verb-complex formation in YM. In all of these processes, the verb stem functions as the base and is, thus, the determinatum. It incorporates various classes of other stems as determinans (cf. BLAIR 1964, ch. 2.3.1.1, SULLIVAN 1984, § 2). In this function, adverbs, verbs and sometimes noun stems get into preverbal position (called 'specifier' in S10 below), while the productive pattern of noun incorporation has the incorporated stem immediately after the verb stem (see S10 for precision and cf. BRICKER et al. 1998, ch. 2.5.1).

The base verb in incorporation is mostly a transitive action verb. A noun stem – i.e. a bare noun stripped of its determination, possessive, plural etc. markers – follows the verb stem. It generally fulfils the role of a controlled participant. Regardless of the semantic role of the incorporated noun, the result is an intransitive verb stem. This process is shown in E315, where the direct object che’ ‘tree’ of the transitive verb ch’ik ‘stick’ in E315.a is integrated into the latter, yielding an intransitive verb in E315.b. This entails de-individuation of the undergoer and typicization of the activity at the semantic level (compare the English translations).

E315. a. tíin       ch’ik-ik    le   che’ ti’ lu’m-a’
     YM PROG:SBJ.1.SG stick-INCMPL DEF tree  LOC earth-D1
     ‘I am sticking this pole into the earth here’

b. tíin       ch’ik-che’
     PROG:SBJ.1.SG stick-tree
     ‘I am sticking poles (i.e. making a fence)’

c. tíin       ch’ik-che’-t-ik    in      pàak’al
     PROG:SBJ.1.SG stick-tree-TRR-INCMPL POSS.1.SG thing-planted
     ‘I am fencing in my plantation’ (LEHMANN 2003:26)

The detransitivization of an incorporative verb is not a morphological process, but merely a recategorization. If it were a morphological process, it would have to be some kind of introversion. However, none of the formal processes signalling introversion (s. section 9.1) is actually present here. Many bisyllabic incorporative verb stems display a tone pattern of the shape ‘high-low’, like béech-pòol (wave-head) ‘nod’. However, while the details depend on a YM tonology yet to be written, this pattern does not appear to be obligatory for incorporatives. It is, in any case, unrelated to the low tone marking introversion.

Subsequent to incorporation, the intransitive compound verb of E315.b ch’ik-che’ ‘stick poles’ may be retransitivized (term introduced in SULLIVAN 1984:144) by adding the applicative -t suffix. The resulting transitive verb now governs a (further) direct object (pàak’al ‘plantation’ in E315.c). The verb structure resulting from the whole process is represented in S8.
Dependent nouns in various participant roles may be incorporated in this way, above all the undergoer and the instrument. Incorporation of a noun in instrument role is shown in Yucatec Maya uses its preposition *éetel* both for body parts, as in E151, and for other instruments, as in E152.

E151. It is especially frequent with incorporated body parts, as will be shown below. Note that even the incorporation of a peripheral participant renders the verb intransitive (Yucatec Maya uses its preposition *éetel* both for body parts, as in E151, and for other instruments, as in E152.

E151.b). If the participant that was the direct object of the base is to retain this function, the incorporative has to be retransitivized as in Yucatec Maya uses its preposition *éetel* both for body parts, as in E151, and for other instruments, as in E152.

E151.c.

E316. a. k-u lóm-ik yéetel u k’ab
YM IMPF-SBJ.3 poke-INCMPL with POSS.3 hand
‘he pokes it with his hand’

b. k-u lóom-k’ab
IMPF-SBJ.3 poke-hand
‘he pokes with his hand’

c. k-u lóom-k’ab-t-ik
IMPF-SBJ.3 poke-hand-TRR-INCMPL
‘he pokes it with his hand’ (LEHMANN 2003:127)

Occasionally, not only basic transitive verbs may be the basis for incorporation but also derived applicative verbs (cf. SULLIVAN 1984:143, GUTIÉRREZ BRAVO 2003, § 3). These, however, obligatorily drop the applicative marker -t (TRR) before incorporation. The applicative verb itself may be derived from a noun (cf. E317) or an intransitive verb (E318).

E317. a. táan in k’áak’-t-ik bak’
YM PROG SBJ.1.SG fire-TRR-INCMPL flesh
‘I am roasting meat’

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81 GUTIÉRREZ BRAVO further presents an example from the YM dialect of Laguna Kaná where a causative verb is the basis for noun incorporation. Our data contain no such construction.
b. táan in k’aak’-bak’
  PROG SBJ.1.SG fire-flesh
  ‘I am roasting meat’ (RMC_2055)

E318. a. le x ch’úuppal-o’ táan u yoxo’m-t-ik le nal-o’
  YM DEF F woman:child-D2 PROG SBJ.1.3 shell-TRR-INCMPL DEF corn.plant-D2
  ‘the girl is shelling the corn’

b. le x ch’úuppal-o’ k-u yoxo’m-nal
  YM DEF F woman:child-D2 IMPF-SBJ.3 shell-corn.plant
  ‘the girl is shelling corn’ (SBM_0276)

Thus, we may conclude that the incorporative verb is based on the applicative verb on semantic grounds, but on the (noun or intransitive verb) root on morphological grounds.

Contrasting with this, incorporation into real intransitive bases is quite rare. Among them we find agentive verbs (E319.a,b), including soundsymbolic ones (E319.b, cf. SULLIVAN 1984:143), but also positional verbs (E319.c) and even inactive ones (E319.d). Generally, the incorporated noun is the instrument of the intransitive action verb. Transitivity with the applicative morpheme -i is again possible (E319.b/d).

E319. a. h Peédroh-e’ ma’-tech u báaxal-t’aan
  YM M Peter-TOP NEG-INTENS SBJ.3 play-speech
  ‘Peter, he never jokes’ (BRICKER et al. 1998, s.v. b’áaš(1))

b. t-u puruch’-chi’-t-ah
  PST-SBJ.3 snort:mouth-TRR-CMPL
  ‘he frowned scornfully on him’ (EMB_0190)

c. k-u xol-lan-píix-o’b t-u táan-o’
  IMPF-SBJ.3 kneel-DISTR-knee-3.PL LOC-POSS.3 front-D2
  ‘they were all kneeling down in front of him’ (HK’AN_0414.1)

d. t-in háak-chek’t-ah hun-p’éel ba’l
  PST-SBJ.1.SG slide-foot-TRR-CMPL one-CL.INAN thing
  káa h lüub-en
  CNJ PST fall-ABS.1.SG
  ‘I slipped on something so that I fell’ (RMC_0425)

The process of noun incorporation into an intransitive base verb with subsequent retransitivization resembles that for transitive base verbs and is represented in S9.

S9. Transitivity of incorporative verbs with intransitive base
While the details of the morphological slot for incorporation remain to be investigated, the morphological template of S10 may serve to represent the incorporation position for the purpose of our discussion (see BLAIR 1964, § 2.3.1.3 for more detail).

S10. Morphological template for incorporative verb form


The suffix -lan 'DISTRIBUTIVE' (cf. E319.c) is apparently the only derivational operator to precede the incorporation position. Other examples are chuklanpach (seize-DISTR-back) 'hunt down' and haplanchi' (open-DISTR-mouth) 'talk to oneself'.

9.2.2. Properties of the incorporating verb

As already mentioned in section 7.4.2.1, incorporating verbs typically designate actions. Especially forceful actions and motions like ch’ak ‘cut’, k’op ‘punch’, koh ‘push’, ch’ik ‘stick’ etc. are frequent among the incorporative verbs. Other verbs include those designating habitual activities as t’ok ‘tear off, pick, harvest’ or púut ‘bring in’.

Although reduplication is by no means restricted to incorporating verbs, these are, in fact, frequently reduplicated. Reduplication has such semantic effects as intensification, repetition etc. It thus fits the function of incorporative verbs to represent typical, institutionalized and culture-relevant actions.

E320. a. k-a ts’unts’un-k’ab-t-ik le ya’-o’
YM IMPF-SBJ.2 RED:press.on.soft.thing-hand-TRR-INCMPL DEF zapote-D2
‘you repeatedly squeeze the sapodilla fruit (i.e. to see if it is ripe)’ (SULLIVAN 1984:150)

b. t-u k’ok’op-ni’-t-ah
PST- SBJ.3 RED:punch-nose-TRR-CMPL
‘she sniffed around (infant seeking breast)’ (BRICKER et al. 1998, s.v. K’op(2))

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82 According to SULLIVAN (1984:141), this holds for all verbal compounds. Cf. also ANDRADE 1955, ch. 4.50.
9.2.3. Properties of the incorporated noun

Nouns of all classes except proper nouns may be incorporated (s. SULLIVAN 1984). Among body-part nouns, it is chiefly the subclass of inalienable body-part nouns which is incorporated, and this is one of the characteristics for the functional unity of this noun class in YM (cf. LEHMANN 2003, ch. 5.3.). It contains, on the one hand, those body parts which have salient spatial properties like páach ‘back’, táan ‘front’ etc., and on the other hand those body parts which animate beings can control and use in their actions. Both functions are relevant with respect to incorporation, as becomes obvious in the following examples.

E321.  a. t-in **nup’-táan-t-ah** Hwàán
YM PST-SBJ.1.SG join-front-TRR-CMPL John
‘I met John’ (BRICKER et al. 1998, s.v. nup’)

b. t-u **pech’-k’ab/chek’-t-ah** le ch’ik-o’
PST- SBJ.3 crush-hand/foot-TRR-CMPL DEF flea-D2
‘he crushed the flea with his hand/foot’ (LEHMANN 2003:127)

Incorporated nouns tend to be monosyllabic, though there are also cases of bisyllabic incorporated nouns. Some native speakers, however, reject the incorporation of phonologically complex body-part nouns like keléembal ‘shoulder’. The following example, produced by one native speaker, was not accepted by another.

E322.  k’ol-keléembal
YM hit-shoulder
‘hit [s.th.] with one’s shoulder’

Apart from the effect of phonological rules, incorporated nouns generally retain the phonological forms of their non-incorporated counterparts. Interestingly, however, two of the most commonly incorporated noun stems, che’ ‘tree, stick’ and -chek’ ‘foot’ (suppletive form of the free allomorph òok), become homonymous under incorporation due to a regular phonological process that reduces /k’/ before consonant to /’/. This results in homonyms like tul-che’-t- (push-foot/stick-TRR) with the meaning ‘push with foot/stick’ (cf. LEHMANN 2003:128).

9.3. Roles and features of participants incorporated

In YM, incorporated nouns function in most cases as an undergoer, as an instrument or as a location with regard to the base verb. Of these, undergoers and instruments are incorporated most frequently and regularly; incorporation of locations is less frequent.
9.3.1. Incorporation of undergoer

9.3.1.1. Basic notions

All incorporative verbs are intransitive. The incorporated noun may therefore be assumed to occupy the direct object slot of a transitive base verb. The verb may – and often does – acquire a new direct object slot by retransitivization. Where a direct object is incorporated, the new direct object slot is unrelated to the basic one; retransitivization is not a kind of reanimation. Consequently, the selection restrictions of the new direct object slot generally differ from those of the basic one. This may be seen in many of the examples below, among others in E324.c, E325, E326.a, E344. A coherent class of exceptions is discussed in § 9.3.1.2.2. Otherwise, persistence of the selection restrictions for the direct object into the incorporative verb is unsystematic. E323 is one of the rare cases in point:

E323.  t-in nat’-tsiimin-t-ah le che’-o’
YM PST-SBJ.1.SG hold.fast-horse-TRR DEF tree-D2
'I rode the trunk like a horse’ (RMC_1708)

The incorporative verb is based on the idiomatic verb phrase nat’ tsiimin ‘ride a horse’.

The new undergoer of the retransitivized verb may have been present in the situation designated by the base construction, e.g. in a peripheral position such as location or addressee; or it may be a new participant arising from the semantic change brought about by the operation of incorporation. In any case, we may speak of a primary undergoer, the one incorporated into the verb, and a secondary undergoer, the one occupying the direct object position of the retransitivized incorporative. The secondary undergoer is optional or even hardly joinable at all (as in E315) in the construction of both the base verb and the intransitive incorporative verb, and it is never its immediate undergoer. It becomes a central participant only through transitivization of the incorporative. These relationships are illustrated by E324.a – c. Methodologically, the a-version may be considered a paraphrase of the b- and c-version (E249.a above is another such paraphrase).

E324. a. t-in ch’ak-ah che’ ichil in kòol
YM PST-SBJ.1.SG cut-CMPL tree in POSS.1.SG milpa
b. h ch’ak-che’-nah-en ichil in kòol
PST cut-tree-CMPL-ABS.1.SG in POSS.1.SG milpa
c. t-in ch’ak-che’-t-ah in kòol
PST- SBJ.1.SG cut-tree-TRR-CMPL POSS.1.SG milpa
'I chopped trees in my cornfield’ (BRICKER et al. 1998:354, RMC_1685)

S11 – S13 schematize these relationships.

S11. Basic construction
As noted before, Z may or may not be present in S11. It may be a location where the verbal action takes place (E324.a). Incorporating the primary undergoer into the verb opens the possibility to focus on this location as affected by the action carried out on the primary undergoer (E324.c). The secondary undergoer may also be a person that is more or less affected by the complex action expressed by the incorporative complex of base verb plus primary undergoer, as in E325.

E325. \(t\)-\(u\) \(lek\)\(^{\prime}\)-\(ich\)-\(t\)-ah \(u\) \(xùun\)  
YM \ PST-SBJ.3 \ open-eye-TRR-CMPL \ POSS.3 \ spouse  
'he looked scornful at his wife' (EMB_0176)

In any case, the primary undergoer is demoted, being no longer expressed on its own but only as a part of the complex verb. At the same time, its incorporation is a precondition of the promotion of the secondary undergoer by transitivization.

For most incorporative verbs, the retransitivized variant is much more frequent than the plain intransitive variant (cf. SULLIVAN 1984:160). We conclude that the detransitivization entailed by incorporation is partly dysfunctional and therefore undone by immediate retransitivization. Transitivization of incorporatives is so regular that it may also be performed if the speaker has no specific undergoer in mind. E320.b may be an example in point.
9.3.1.2. Body-part incorporation

A body part may be incorporated if it is an inalienable noun. If such an inalienable noun had syntactic status (as the head of a full NP), the possessive relationship would have to be expressed, minimally by a preceding possessive clitic (LEHMANN 2003:126). If it is incorporated into the verb stem, then it appears in its bare form, and no possessive relation is expressed. As in other languages, the class of inalienable nouns includes, besides body parts, manifestations of animate beings such as bòok ‘smell’, t’àan ‘speech’, tükul ‘thought’ etc.

9.3.1.2.1. Part of the actor

An incorporated body part, whether an undergoer (as in this section) or an instrument, will mostly be part of the actor. The syntactic paradigm constituted by the joint application of incorporation and retransitivization to such a constellation is shown in S14, where S14.a is a variant of S11 and S14.b is a specification of S13. E326.b illustrates S14.a, while E326.a illustrates S14.b.

S14. Undergoer incorporation of actor’s body part

a) Basic construction

\[ \begin{array}{|c|c|c|c|c|}
\hline
X & v_{tr} & Y & N_{inal} & Z & N_{Obj} & Z & N_{Sbj} & W & N_{adjunct} \\
\hline
\text{possessum} & \text{possessor} & \text{action} & \text{undergoer} & \text{actor} & \text{peripheral participant} \\
\hline
\end{array} \]

b) Retransitivized incorporative construction

\[ \begin{array}{|c|c|c|c|}
\hline
X & -Y & -t & v_{tr} & W & N_{Obj} & Z & N_{Sbj} \\
\hline
\text{possessum} & \text{actor} & \text{primary undergoer} & \text{secondary undergoer} & \text{possessor} \\
\hline
\end{array} \]

E326. a. le pàal-o’ t-u ts’op-k’ab-t-ah u ta’

YM DEF child-D2 PST-SBJ.3 insert-hand-TRR-CMPL POSS.3 shit

b. le pàal-o’ t-u ts’op-ah u k’ab ti’ u ta’

YM DEF child-D2 PST-SBJ.3 insert-CMPL POSS.3 hand LOC POSS.3 shit

‘the child stuck his finger in his feces’ (BRICKER et al. 1998, s.v. k’ab’, RMC_2000)

In E327, the situation would be similar, but since t’in-chek’ (spread.out-foot) is strongly lexicalized, there is no corresponding paraphrase.

E327. T’in-chek’-t u péedal-il !

YM spread.out-foot-TRR(IMP) POSS.3 pedal

‘Hit the pedal (of the bike)!’ (RMC_1269)

\[83\] Cf. fn. 74 for Mayali.
The secondary undergoer is often a location, as in E326. In the base construction, this is marked by the generic preposition \textit{ti‘} LOC/DAT. After incorporation, it is conceived as undergoing the situation.

If the incorporative verb does not designate a physical action, the secondary undergoer may take different roles. The versions in E328.b and E329.b are again paraphrases of the incorporative constructions in a. As in the preceding examples, the secondary undergoer is joined with \textit{ti‘}.

E328. a. t-u \textit{t‘in-ich-t-ah-en} \\
\textit{YM} PST-SBJ.3 spread.out-eye-TRR-CMPL-ABS.1.SG \\
b. t-u \textit{t‘in-ah y-ich ti‘ tèen} \\
PST-SBJ.3 spread.out-CMPL POSS.3-eye LOC me \\
\hspace{1cm} ‘he saluted me with his eyes / raising his brows’ (EMB_0179, RMC_2000)

E329. a. ts‘o’k u \textit{he‘-chi‘-t-ik} u ts‘a‘-ik to’n krèeditoh \\
\textit{YM} TERM SBJ.3 open-mouth-TRR-INCMPL SBJ.3 put-INCMPL us credit \\
b. ts‘o’k u \textit{he‘ik} u \textit{chi‘} \\
TERM SBJ.3 open-INCMPL POSS.3 mouth \\
\hspace{1cm} ti‘ u ts‘a‘-ik to’n p‘aax \\
LOC SBJ.3 put-INCMPL us credit \\
\hspace{1cm} ‘he has affirmed that he will give us credit’ (RMC_0488, RMC_2000)

Contrary to E326 and E327, the secondary undergoer in E328.b and E329.b cannot be directly related to the base verb. In both cases, verb and direct object form a collocation with an idiomatic meaning which is only metaphorically related to the literal meaning of body-part movement or action. The appearance of the secondary undergoer in the locative/dative phrases is, thus, only licensed with respect to the collocation as a whole. The incorporative versions in E328.a and E329.a mirror this relation in syntactic structure.

For other similar incorporatives, corresponding paraphrases are less acceptable or even inexistent; cf. E330 and E331.

E330. a. t-u \textit{lek‘-ich-t-ah} u xùun \\
\textit{YM} PST-SBJ.3 open-eye-TRR-CMPL POSS.3 spouse \\
\hspace{1cm} ‘t-u lek‘ah u yich ti‘ u xùun \\
PST-SBJ.3 open-CMPL POSS.3 eye LOC POSS.3 spouse \\
\hspace{1cm} ‘he looked scornfully at his wife’ (EMB_0176, RMC_2000)
Noun incorporation and participation

E331. a. t-u  
   PST-SBJ.3  reach.up-head-TRR-CMPL
   tich-ho’l-t-ah

b. *t-u  
   PST-SBJ.3  reach.up-CMPL
   tich-ah  u  ho’l  ti’
   POSS.3  head  LOC:ABS.3

‘he saluted him by nodding his head’ (EMB_0196)

In all cases from E328 to E331, the incorporatives are strongly lexicalized so that an entirely new argument slot emerges with respect to the base verb. In E328 and E329, where the paraphrases are also lexicalized, the participant in question is accommodated in a peripheral function, while in E330 and E331, there is no acceptable paraphrase that would contain it as a verbal dependent. Most of the relevant verbs change their meaning from body-part activation to some communicative meaning (sometimes with emotive overtones). Depending on the verb meaning, the additional participant in undergoer function may be the addressee/goal (cf. E328, E330), the message (E329) and, with emotive verbs, the stimulus (E330).

In other cases of strong lexicalization, the incorporated noun may occur a second time externally, as in E332.

E332. bèey bin  ka’-p’éel  u  k’ab máak  bin  ts’al-k’ab-t-e’
   YM  thus  QUOT  two-CL.AN POSS.3 hand person  QUOT  press-hand-TRR-D3

‘it was two hands which someone had printed there’ (HAPAIKAN_047)

Recall that this is also possible in Mayali (cf. E297.c for a similar example). Both languages may be said to show MITHUN’s technique of classificatory incorporation at an incipient stage. Identity of incorporated and external noun seems to be a special case of this type of incorporation.

Another special case of the classificatory type is present in E333 where, next to the secondary undergoer, an optional prepositional phrase in instrumental function is added. However, unlike the classificatory constellation, the relation between the incorporated noun and the external one is not a taxonomic, but a meronomic one.

E333. káa  bin  t-u  ts’op-k’ab-t-ah
   YM  CNJ  QUOT  PST-SBJ.3 thrust-hand-TRR-CMPL
   yéetel  u  chàan  t’ùup
   with  POSS.3 little  youngest.sibling

‘he put his little finger in it’ (HK’AN_0069)

84 A non-incorporative version would be possible with a purpose clause explaining the relation between the secondary undergoer and the meaning of the verbal complex in the main clause. The latter has a literal meaning here:

   t-u  tich-ah  u  ho’l  uti’a’l  u  k’am-ik
   PST-SBJ.3 reach.up-CMPL POSS.3 head for SBJ.3 receive-NCMPL

   ‘he raised his head to welcome him’ (RMC_2000).

85 Mayali E297.c differs from YM E332 in that the external noun is more specific than the incorporated one, but there are other examples in which both are identical.
E333 features a complex combination of two body parts, the second of which is part of the first. The first is incorporated into the verb as a patient. (The anaphoric direct object of the retransitized verb is the goal of the action.) The second body part is then adjoined as an instrument. The ‘little finger’, not being a body-part noun and not even a noun at all, cannot be incorporated. E333 again displays lexicalization of the incorporative verb. In a suitable paraphrase as well as in the translation, the body-part whole (k’ab ‘hand’) cannot be accommodated. It is demoted into the verb, where it serves the latter’s lexical specification.

In classificatory incorporation in general, and in E332 in particular, there is no additional participant accommodated, since the incorporated and the external nominal are essentially coreferential. This is not so in the deviant construction of E333, because the external nominal is conceived as a different participant (an instrument) and does not occupy the newly created valency slot.

Several of the verbs which incorporate a body part of the actor also occur in intransitive constructions, with or without explicitly mentioning a secondary undergoer. It need not be mentioned if the speaker wants to focus on the mere action, which is often the case in ritual acts such as in E334. Again, the focus is on the actor’s activity and not on the affection of an undergoer, as in the transitive constructions above.

E334. he’l tun bin k-u ton-ho’l-o’b-o’
YM PRSVthen QUOT IMPF-SBJ.3 bend-head-ABS.3.PL-D2 ‘that is where they bowed and bowed’ (HKAN_0413)

A partial or specific kind of affection of the additional participant may be expressed, depending on the verb type, with the preposition ti’ or, as in E319.c, with a more concrete preposition such as e.g. tu táan ‘in front of’.

9.3.1.2.2. Part of the undergoer

A situation may contain a patient that is affected on one of its body parts. The two being in a part-whole relationship, the body part may be construed as the patient and the animate being as a sympathetic patient. Syntactically, the body part may be the direct object, while the sympathetic patient may be a possessive attribute of the former or some kind of possessive adjunct. In YM, it would regularly be a possessive attribute. Because of the sympathetic relation between part and whole, there are some verbs in this section – e.g. in E335 – E337 – , whose selection restrictions for the primary undergoer remain essentially the same for the secondary undergoer.

Verbs with a body-part noun incorporated in undergoer function also occur in such sympathetic situations, which means that the possessor of the body part is not identified with the actor, but with the secondary undergoer of the derived verb. This strategy entails the promotion of the (normally animate) possessor from an adnominal function to the adverbal func-

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86 Situations with a sympathetic patient are treated in detail in LEHMANN & SHIN & VERHOEVEN 2004[D] § 4.3, with the possibilities of like or unlike affection of the possessor and its body-part.
Noun incorporation and participation

tion of a direct object. In YM there are only a few verbs that allow this. The syntactic paradigm of the basic and retransitivized incorporative constructions is shown in S15. S15.a is a variant of S11, S15.b is a specification of S13.

S15. Undergoer incorporation of undergoer’s body part

a) Basic construction

| X | Vtr | Y | N.inal | W | NP | Z | NP-Sbj | possessum | possessor | action | undergoer | actor |

b) Retransitivized incorporative construction

| X | -Y-t | Vtr | W | NP | Z | NP-Sbj | possessum | possessor | action | primary undergoer | secondary undergoer | actor |

The a-version of E335 shows an example with a retransitivized incorporative verb in the passive, which entails the coding of the possessor in subject function. The b-version illustrates a corresponding non-incorporative passive construction, with the body-part noun coded in subject function.

E335. a. h \textit{ch’a’-pach-t’a’b} tuméen hun-túul nuxib lòoboh

YM PST take-back-TRR-CMPL.PASS by one-CL.AN old.man wolf

‘he was pursued by a big wolf’ (SBM_0035)

b. le o’lal \textit{ch’a’-a’b} u pàach,

DEF reason take-CMPL.PASS (ABS.3.SG) POSS.3 back

le o’lal kim-s-a’b-ih

DEF reason die-CAUS-CMPL.PASS-ABS.3.SG

‘therefore he was persecuted, therefore he was killed’ (FCP_306)

Incorporative and non-incorporative constructions differ in use. This is best shown by considering a passage of running discourse. E336 is from a fairy tale.
Poor little boy! It won’t take me long to catch up with you. … and he said: I am going to catch up with them running. There the giant went out running. … The little boy looked at the light stone, he saw that they were almost reached by him.’ (H’KAN_102-123)

Both variants (chuk-pach-t-~ chuk POSS pàach ‘catch s.o., catch up with s.o.’) occur in immediate vicinity. In the incorporative version, the possessor is promoted to direct object function (first occurrence) or even – in the passive voice – to subject function (second occurrence). In both cases its affection in the situation is underlined. This comes along with the marking of the terminative aspect (first occurrence) and the adverb ta’itak ‘almost’ (second occurrence). Both devices underline the (near) accomplishment of the action. The plain form takes the body part as the direct object and the possessor remains in the background as a possessive attribute. This construction occurs in a sentence marked by the immediate future aspect, which expresses an intention of the subject (here: the giant) to perform an action (here: of catching up with the boy and his horse). Thus, unlike the incorporative version, the action here is not yet accomplished.

Although the relationality of the incorporated noun does favor the promotion of its possessor to direct object function, some of these incorporatives are also used intransitively. In the following example series, the a-versions represent transitive incorporative verbs, with the possessor of the incorporated noun being construed as secondary undergoer and, thus, promoted to direct object function. In the b-versions, the incorporative verbs appear in their

87 Cf. BOHNEMEYER 1998, ch. 6.2.2.1.3 for a comprehensive analysis of the future (prospective) auxiliary.
intransitive form. The possessor of the incorporated noun may be joined as an adjunct (E337.b), or it may remain unexpressed (E338.b, E339.b). The latter cases resemble introversion in that the undergoer of the action designated by the detransitivized verb, the possessor/sympathetic patient, is unspecific (cf. section 9.1).

E337. a. k-in t’ul-pach-t-ik le x ch’úuppal-o’
YM IMPF-SBJ.1.SG follow-back-TRR-INCMPL DEF F woman:child
‘I follow that girl’ (RMC_1651)

b. k-u bin u t’ul-pach yóok’ol le ha’-o’
IMPF-SBJ.3 go SBJ.3 follow-back on DEF water-D2
‘it flys along the river’ (RMC_1285)

E338. a. 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’ (RMC_1699)

b. h tsol-xikin-nah-en
PST line.up-ear-CMPL-ABS.1.SG
‘I gave advice’ (RMC_1329)

E339. a. le pèek’-o’b-o’ táan u ch’a’ch’a’-bòok-t-ik-o’b le kèeh-o’
YM DEF dog-PL-D2 PROG SBJ.3 RED:take-smell-TRR-INCMPL-3.PL DEF deer-D2
‘the dogs are scenting the deer’ (EMB_0321)

b. táan u ch’a’ch’a’-bòok in pèek’
PROG SBJ.3 RED:take-smell POSS.1.SG dog
‘my dog is sniffing’ (RMC_0359)

The intransitive use of the undergoer-related incorporatives indicates again their strong lexicalization. The relational noun, once incorporated, no longer needs to have its possessor within the same construction. The example in E337.b is especially striking, because the locative undergoer cannot be understood as the literal possessor of the incorporated noun. This is structurally reflected by its coding as a prepositional adjunct.

9.3.1.3. Non-body-part incorporation

Non-body-part terms are subsumed here under one group because of their common behavior regarding incorporation. In the present section, we distinguish between intransitive and transitive use of the incorporative complex.
9.3.1.3.1. Intransitive use

In YM, the incorporation of a non-body-part in undergoer function is very common to refer to habitual or typical situations. The undergoer is de-individuated; the noun has no specific reference, but designates a kind of object undergoing the action of the verb base. This always entails backgrounding of the undergoer in terms of information structure. Usually the action as a whole constitutes the comment; there is no particular focus on the affection of the undergoer. Compare E340 – E343.

E340.  *h* bin-en  *ch’ak-ya’*  behla’ke’
YM PST go-ABS.1.SG cut-zapote today
‘I went to cut chicle today’ (RMC_0352)

E341.  yan  in  bin  *púut-ha’*
YM DEB SBJ.1.SG go bring.in-water
‘I will bring in water’ (EMB_0129)

E342.  *ho’lyak-e’*  *h*  *t’ok-bu’l*-nah-en
YM yesterday-TOP PST pick-bean-CMPL-ABS.1.SG
‘yesterday I picked beans’ (SBM_0175)

E343.  H  bin-en  *k’ub-mu’hu*l  *ho’lyak:*
YM PST go-ABS.1.SG deliver-pledge yesterday
PST-SBJ.1.SG all carry-CMPL POSS.3 tool
IMPF- SBJ.3 necessary-PROC LOC-ABS.3.PL
‘Yesterday I went match-making: I brought (the bride / her parents) all that they need (for the wedding).’ (RMC_0756)

With these functional correlates, incorporation again resembles introversion.

9.3.1.3.2. Transitive use

Verbs with incorporated non-body-parts may be transitivized, with the addition of a secondary undergoer. Compare E344; a is a transitivized version of E340.

E344.  a.  *t-in  *ch’ak-ya’*-t-ah  le  che’o’*
YM PST-SBJ.1.SG cut-zapote-TRR-CMPL DEF tree-D2
‘I cut chicle in that tree [which is not a chicle-tree]’ (RMC_2000)

b.  *ko’x  hóoy-ha’*-t-ik  le  pàak’al-o’*
YM let’s.go spray-water-TRR-INCMPFL DEF planting-D2
‘let’s go irrigate the garden’ (SULLIVAN 1984:145)
Noun incorporation and participation

171

c. ko’ne’x lan-k’áak’-t le kòol-o’
let’s.go stick-fire-TRR(SUBJ) DEF milpa-D2
‘let’s burn the milpa’ (EMB_0110)

However, not all of such incorporative verbs may be retransitivized; sometimes there is no secondary undergoer to be thought of. Transitive versions of E341 and E343, as in E345, do not make sense.

E345. a. ’yan in púut-ha’-t-ik
YM DEB SBJ.1.SG bring.in-water-TRR-INCMPL (RMC_2000)
intended: ‘I have to affect it by bringing in water’

b. ’t-in k’ub-mu’hul-t-ah
PST-SBJ.1.SG deliver-pledge-TRR-CMPL (RMC_2000)
intended: ‘I have to affect her by match-making’

E346 (repeated from E324) and E347 show the incorporated noun in a local relation to the secondary undergoer. The latter may be animate or inanimate; in any case it is affected by the complex action expressed by the incorporative verb. The secondary undergoer is promoted from adverbial to direct object, which reflects its semantic foregrounding and heightened topicality.

E346. a. t-in ch’ak-che’-t-ah in kòol
YM PST-SBJ.1.SG cut-tree-TRR-CMPL POSS.1.SG milpa
‘I chopped trees in my cornfield.’

b. t-in ch’ak-ah che’ ichil in kòol
PST-SBJ.1.SG cut-CMPL tree in POSS.1.SG milpa
‘I chopped a tree in my cornfield’ (BRICKER et al. 1998:354)

E347. a. t-in wek-ha’-t-ah h-Pìil
YM PST-SBJ.1.SG spill-water-TRR-CMPL M-Philip
‘I threw water at Philip’

b. t-in wek-ah ha’ ti’ h-Pìil
PST-SBJ.1.SG spill-CMPL water LOC M-Philip
‘I threw the water on Philip’ (BRICKER et al. 1998:354)

In addition to the local relation, there may be a possessive relation between the incorporated noun and the secondary undergoer. E348 comes from an account of how a piece of jungle is prepared for agricultural use as a milpa (kòol). Throughout the report, the ‘emerging milpa’ is implicitly present as the place of the events, the undergoer of transitive verbs and the possessor of relational nouns.
E348. ... u_ti’a’l k pa’t-ik
YM so.that SBJ.1.PL await-INCMPL
u yàan-tal u xìiw-il,
SBJ.3 EXIST-PROC POSS.3 weeds-REL
u_ti’a’l k xot-eh.
so.that SBJ.1.PL cut-eh.
Le k-u ts’o’k-ol k xot-xìiw-t-ik –
when IMPF-SBJ.3 finish-INCMPL SBJ.1.PL cut-weeds-TRR-INCMPL
k-u ya’l-a’l leti’ le páak-il-o’ –
IMPF-SBJ.3 say-PASS.INCMPL that.one DEF weed-ABSTR-D2
pwes k pa’t-ik
well IMPF-SBJ.1.PL await-INCMPL
u nuk-tal u nal-il-o’b-o’ ...
SBJ.3 big-PROC POSS.3 corn.plant-REL-PL-D2
‘... so that we wait there for weeds to grow, so that we cut them. After we finished weed-cutting it – that is what the weeding is called – well, we wait for the corn(-shrubs) to grow ...’ (TRAB_026-030)

The weeds (xìiw) first occur with actant status, as “possessed” by the milpa, and then incorporated in the transitive verb xot. The established possessive relation is marked by the relationalizing suffix -il on the possessum. This suffix does not, of course, accompany the noun into incorporation. Semantically, the milpa is in a local relation to the incorporated noun xìiw and to the action of weeding as a whole. In this function, it is construed as the secondary undergoer of the incorporative verb and promoted to its direct object.

E349 is similar. E349.a is from a text that talks about building a traditional house. Again, this house is the continuous (implicit) referent in the report and, thus, the anaphoric direct object of the verb.

E349. a. ma’ a bín a láah chuyche’-t-e’
YM NEG SBJ.2 FUT SBJ.2 all face-TRR-D3
‘you won’t face it all’ (NAH_110)

b. ma’ a bín a láah chuy u che’-il
NEG SBJ.2 FUT SBJ.2 all sew(SUBJ) POSS.3 tree-REL
‘you won’t connect all its slats’ (RMC_2000)

The house is construed as the “projected possessor” of the slats (che’). This is why it figures as a possessive attribute (u) in the paraphrase E349.b of the original incorporative version E349.a.

Thus, the possessor promotion function of incorporation is also present with some non-relational nouns which are in a possessive relation to another participant which may be construed as the secondary undergoer of the situation. Incorporation of the part renders the syntactic promotion of the whole and its greater topicality possible. This is analogous to body-part incorporation (section 9.3.1.2.2). We may conclude that in YM sympathetically
affected wholes, be they empathic or anempathic, may be promoted to direct object function. However, for both of these nominal classes, there are relatively few verbs that allow this. Possessor promotion, though present in incorporation, is not one of its primary functions in the language. Moreover, it generally comes along with lexicalization of the respective incorporative verbs. For instance, the incorporative *chuyeche*’ has been nominalized to a compound noun meaning ‘palisade’, i.e. the result of the action designated by the verb. Thus, the prominent coding of a possessor is not so much a matter of syntax but, rather, a lexical phenomenon.

**9.3.2. Incorporation of instrument**

Another participant that is frequently incorporated in YM is the instrument. It is chiefly body parts that are incorporated as instruments (9.3.2.1); non-body-part incorporation with instrument function is much rarer (9.3.2.2).

**9.3.2.1. Body-part incorporation**

The incorporation of a body part as an instrument is much more frequent in YM than its incorporation as an undergoer. As we saw in § 9.3.1.2, if a body part is incorporated in undergoer function, it may belong to the actor or to the undergoer. If it is incorporated in instrument function, it is always the actor’s body part. The process of incorporating a body part of the actor in instrument function is rather productive, and new incorporatives may be formed under certain conditions.

Verbs incorporating instruments are generally transitive; intransitive verbs are quite rare in this construction. This is related to the fact that prototypical instrumental situations are transitive. They contain an agent using an instrument that operates on a patient (cf. LEHMANN & SHIN this volume, section 3.3.3). Among the body parts, primarily those that animate beings can control and use in their actions, are incorporated as instruments. The most frequently incorporated ones are without doubt *k’ab* ‘hand’ (Yucatec Maya uses its preposition *éetel* both for body parts, as in E151, and for other instruments, as in E152.

E151, E350.a/b) and -*chek*’ ‘foot’ (Instruments, preferably body parts, are incorporated in many languages. Yucatec Maya is one of them. E174 and E175 show incorporation of a body part and a tool, respectively.

, E321.b, E350.c).

E350. a. in *lom-k’ab-t-ik-ech*  
YM SBJ.3 poke-hand-TRR-INCMPL-ABS.2.SG  
‘I poke you with my finger’ (SULLIVAN 1984:151)
b. ts’an-k’ab-bil le wàah-o’
press-hand-GER DEF tortilla-D2
‘the tortillas have to be pressed together’ (RMC_1341)

c. le mehen pàalal-o’b-e’
DEF small child:COLL-PL-TOP
túun ba’ba’l-che’k-t-ik-o’b le bòolah-o’
then RED:surround-foot-TRR-INCMPL-3.PL DEF ball-D2
‘the kids are kicking the ball around’ (EMB_0057)

The incorporation of body parts as instruments is so productive in YM that even such body parts which are not primary instruments, such as tsèem ‘chest’ or nak’ ‘belly’, may be incorporated as instruments as long as they are not ruled out on phonotactic grounds (cf. E322). E351 may be a comment on handling the ball in a football match.

E351. t-u t’ées-tsèem/nak’-t-ah
YM PST-SBJ.3 push-chest/belly-TRR-CMPL
‘he pushed it with his chest/belly’ (EMB)

The preposition for instruments represented by an NP is yéetel ‘with’. Incorporated body parts, however, are not easily paraphrased by constructions where they are contained in an instrumental prepositional phrase (cf. SULLIVAN 1984:149). This is due to the fact that body parts, especially the hand, represent the default instrument (cf. LEHMANN & SHIN this volume, section 3.3.3). Their use as an instrument is generally not highlighted. Incorporating them into the verb reflects this ancillary role. However, whenever the use of a body part as an instrument is underlined, there is no problem to specify it in a prepositional phrase with yéetel (E352.a). E352.b and c feature incorporative verbs with an additional instrumental phrase. In both cases the incorporative verb is lexicalized. Thus, in E352.b the implicit body part ‘foot’ can occur a second time in a prepositional phrase. This case is parallel to E332 in that the incorporated noun and the external noun refer to the same participant. This time, however, they are heteronymic. In E352.c the external instrument che’ ‘tree, stick’ is a non-body part which is semantically compatible with the incorporated body part k’ab ‘hand’ (as in E333), but in a relation of contiguity with it.

E352. a. t-u hol-ah yéetel u tuch’ub
YM PST-SBJ.3 pierce-CMPL with POSS.3 forefinger
‘he pierced it with his forefinger’ (FBC_0082)

b. le xi’pàal –o’ t-u ya’-che’h-t-ah
DEF man:child PST-SBJ.3 kick-foot-TRR-CMPL
hun túul kan yéetel u yòok-o’
one CL.AN snake with POSS.3 foot-D2
‘the boy trod a snake with his foot’ (AEF_0004)
Noun incorporation and participation

175
c. táan in birix-k’ab-t-ik
   PROG SBJ.1.SG brush.lightly-hand-TRR-INCMPL
   le x nòok’ol-a’ yéetel le che’ he’l-a’
   DEF F worm-D1 with DEF tree PRSV-D1
   ‘I am rubbing this worm with this stick here’ (RMC_1704)

In the preceding examples, the base verbs generally take the same kind of direct object as the incorporatives (cf. also Yucatec Maya uses its preposition éetel both for body parts, as in E151, and for other instruments, as in E152.

E151). This behavior is in consonance with the adverbial character of the incorporated participant as an instrument in the situation. Incorporating a body part adds or just specifies the instrument of the action, and thereby also specifies the action itself. The selection restrictions that the verb imposes on its undergoer remain untouched. Here it becomes obvious that the grammatical processes of intransitivization and subsequent retransitivization are dysfunctional with adjunct (instrument or location) incorporation. An explanation for this behavior is attempted in sections 9.3.4 and 9.3.5.

Other incorporatives are lexicalized in such a way that the selection restrictions on the undergoer are indeed changed from the base verb. In E353, there is no transparent semantic relation between the undergoer and the base verb meaning. The function of the undergoer is clearly related to the incorporative verb as a whole. None of the three examples possesses a regular paraphrase. At least in E353, the process of lexicalization implies a metaphor (compare E328 – E331 for similar examples with undergoer incorporation).

E353. a. ma’ t-u hàah-il u yóol u puksi’k’al
   YM NEG LOC-POSS.3 true-ABSTR POSS.3 mind POSS.3 heart
   k-u ch’a’-chi’-t-ik-o’b diyos-i’
   IMPF-SBJ.3 take-mouth-TRR-INCOMPL-3.PL God-NEGF
   ‘not with a sincere heart do they put (the name of) God into their mouths’
   (FCP_310/311)

b. hàalibe’ káa t-u hal-k’ab-t-ah le t’u’l-o’
   well.then CNJ PST-SBJ.3 bring.down-hand-TRR-CMPL DEF rabbit-D2
   ‘okay, then she untied the rabbit’ (HA’N_0011.01)

c. táan u lalah-k’ab-t-ik le cha’n-o’
   PROG SBJ.3 RED:slap-hand-TRR-INCMPL DEF spectacle-D2
   ‘he is applauding the spectacle’ (SBM_0093)

Some instrument incorporatives from transitive bases can be used in their intransitive form. In Yucatec Maya uses its preposition éetel both for body parts, as in E151, and for other instruments, as in E152.

E151.b, the undergoer is, although not syntactically anaphoric, understood to be present. Other examples are lexicalized and do not refer to an undergoer anymore, as E354, which is an intransitive version of E353.c.
Since the prototypical instrumental situation involves an actor working on an undergoer, base verbs are typically transitive. Incorporation of an instrument into an intransitive verb is, however, possible, as was shown in section 9.2.1 by E319.a/c/d. Here, again, the subject is typically an actor, as in E319.a and c, where the base verbs are agentive. With such intransitive bases, there is a semantically unproblematic relation of an instrument to an actor.

In E355.a (repeated from E319.d), the base verb is inactive, i.e. its subject is an undergoer (cf. E355.b). The body part is again the subject’s; however, it cannot be understood as an instrument in the prototypical sense, since that would presuppose intentional use. Consequently, the incorporated body part in examples like E355.a is more in a sympathetic than an instrumental relation to its whole.

The examples in E356 illustrate that, given an appropriate context, a base-transitive verb with an incorporated body part may have an unintentional reading, too, and insofar the body part is not a prototypical instrument here, either.
9.3.2.2. Non-body-part incorporation

Non-body-part nouns are rarely incorporated in instrument function. The only nouns found in this function with some frequency are *che’* ‘stick’ and *tunich* ‘stone’ (cf. also SULLIVAN 1984:148). Here are a few examples.

E357. a. **hul-che’-t** le pak’áal-o’
Y M  stick-tree-TRR(IMP)  DEF orange-D2
‘poke that orange (to get it from the tree)’ (BRICKER et al. 1998, s.v. hul)

b. **pets’-che’-t-’e’x** le xa’n yóok’ol le piib-o’
p  press.down-tree-TRR-ABS.2.PL DEF palm on  DEF underground.oven-D2
‘fix the palm leaves on the earth oven with sticks’ (EMB_0418)

c. táan in **pets’-tunich-t-ik** le hu’n-a’
 PROG SBJ.1.SG press.down-stone-TRR-INCMPL DEF paper-D1
‘I am pressing this paper down with a stone’ (EMB_0420)

Again, it will be noticed that the selection restrictions on the direct object do not change after incorporation of the instrument. Thus, no additional participant is accommodated in comparison with a syntactic paraphrase. Given that instrument incorporation with non-body-parts is relatively rare, there are no incorporative verbs of this type which would be so highly lexicalized as to have different selection restrictions than their base verb. However, examples like E357.b demonstrate that after the incorporation of the instrument, another peripheral participant (viz. the location phrase yóok’ol le piib-o’) is associated more easily, since YM generally does not string several prepositional phrases within one clause.

With instrument incorporation, an additional more specific instrument may be added in a prepositional phrase, resulting in a further case of classificatory incorporation (cf. E333 and E352 above for similar YM cases, and E309 from Mayali for classificatory subject and object incorporation). E358 and E359 are relevant examples.

E358. káa **k’eb-che’-t-ik** yéetel x-bakche’
Y M  CNJ half.open-tree-TRR-INCMPL with F-husking.tool
‘you rib it open (e.g. an ear of corn) with the husking tool’ (SULLIVAN 1984:149)

E359. k’abéet a **tsits-ha’-t-ik** yéetel t’àanbil-ha’
Y M  necessary SBJ.2 sprinkle-water-TRR-INCMPL with holy-water
‘you must sprinkle them with holy water’ (BRICKER et al. 1998, s.v. ha?)

This time the relation between the incorporated instrument and the external one is taxonomic, i.e. the external instrument is ‘a kind of’ the incorporated instrument. This incorporative construction has a specifying function in a two-fold sense. Firstly, the incorporated noun specifies the meaning of the base verb. Secondly, a more specific

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88 anthropologically probably the next most typical instruments after the body-parts
instrument is added which restricts the number of possible instruments to the one mentioned. The latter is optional, due to its adjunctive function with respect to the main verb. Since both the incorporated noun and the optional NP refer to the same participant, this strategy affords no rearrangement of the situation as posited in this paper (cf. also MITHUN & CORBETT 1999:61f).

9.3.3. Incorporation of location

Incorporation of a location is more restricted in YM than incorporation of an undergoer or an instrument. It is more frequent with body-part nouns (section 9.3.3.1). Non-body-part nouns are only occasionally incorporated in this function (section 9.3.3.2). Despite the relatively marginal role of the incorporation of a location, examples of different local subtypes, viz. of places, goals and sources are documented. Among these, place incorporation prevails.

9.3.3.1. Body-part incorporation

Body parts possessing salient spatial properties like pak’chi’ ‘back’ etc. can be incorporated as locations, as the b-paraphrases of E360.a, E361.a and E362.a illustrate.

E360. a. tāan in kuch-pach-t-ik in nal
YM PROG SBJ.1.SG load-back-TRR-INCMPL POSS.1.SG corn
‘I am carrying my corn on my back (multiple trips)’ (BRICKER et al. 1998, s.v. kāku-‘pak’chi’)

b. tāan in kuchik in nal t-in pak’ch’
YM PROG SBJ.1.SG load-INCMPL POSS.1.SG corn LOC-POSS.1.SG back
‘I am carrying my corn on my back’ (RMC_2000)

E361. a. u nat’-xìik’-mah u bòolsoh
YM SBJ.3 hold.fast-wing-PART.PF POSS.3 bag
‘he is carrying his handbag under his shoulder (i.e. in his armpit)’ (RMC_1646)

b. u nat’-mah yáanal u xìik’
YM SBJ.3 hold/fast-PART.PF under POSS.3 wing
‘he is carrying it under his shoulder’ (RMC_2000)
Noun incorporation and participation

E362. a. le wínik-o’ u k’óoch-póol-mah
   YM DEF man-D2 SBJ.3 carry.on.shoulder-head-PF
   u ho’l le k’éek’en-o’ tán u yóok’ot
   POSS.3 head DEF pig-D2 PROG SBJ.3 dance
   ‘that man is dancing with the pig’s head on his head’ (SBM_0227)

   b. le máak-o’ hun-kúuch si’
      DEF person-D2 one-load firewood
      u k’óoch-mah t-u póol
      SBJ.3 carry.on.shoulder-PART.PF LOC-POSS.3 head
      ‘that person is carrying one load of firewood on his head’ (RMC_0748)

Body-part nouns that are incorporated in the function of a location are always related to the actor. A relation to the undergoer would imply a situation with a sympathetic patient similar to those described in section 9.3.1.2.2. There it was seen that the incorporation in undergoer function of a body part of the secondary undergoer is restricted to lexicalized cases. The markedness of this constellation adds up with the markedness of incorporation of a noun in a local function so that incorporation in local function of a body part of the secondary undergoer does not exist in YM.

The regularity of the paraphrase relation between incorporative a-versions and non-incorporative b-versions in E360 – E362 indicates that, again, the participant in direct object function is the same in both constructions, i.e. the selection restrictions concerning it are not touched by the operation.

In some of the above cases, the body part might as well be construed, at the cognitive level, as an instrument. E363 can be regarded as an alternative paraphrase of E362.b.

E363. Péedroh-e’ t-u k’óoch-ah hun-kúuch si’
   YM Péedroh-TOP PST-SBJ.3 carry.on.shoulder-CMPL one-load firewood
   yéetel u póol
   with POSS.3 head
   ‘Peter carried one load of firewood with his head’ (SBM_0226)

Conversely, several of the participants analyzed as instruments might alternatively be conceptualized as locations (e.g. E319.d, E353.a, b). By incorporating a participant in a given semantic and syntactic function, these functions become indistinct. Not only do the grammatical markers that bear the semantic relation get lost, but also the specific semantic role fades into the notion of a general undergoer. This holds, above all, for the incorporation of a body part.

This analysis is confirmed by E364 and E365, which illustrate body-part incorporation with inactive intransitive verb bases. Like E355, these sentences designate unintentional actions with a body part involved. In E364.a, the body part k’ab ‘hand’ bears the function of a source, while for E364.b the analysis is parallel to the one given for E355 above: The body part -chek’ ‘foot’ undergoes the action of slipping and might be analyzed as an
unintentionally used instrument. At the same time, the body part could be conceptualized as the place of slipping with respect to its animate possessor.

E364.  a. t-in **kip-k’ab**-t-ah le pòomo-o’
YM PST-SBJ.1.SG slip-hand-TRR-CMPL DEF glass-D2
‘the jar slipped off my hand(s)’ (NMP_0269)

b. t-in **kip-chek’**-t-ah u hòol le nah-o’
PST-SBJ.1.SG slip-foot-TRR-CMPL POSS-3 hole DEF house-D2
‘I slipped on the threshold of the door’ (SBM_0248)

For other inactive verbs, the incorporated body-part is clearly a location:

E365. Pèedroh-e’ t-u láam-chekHz’-t-ah hun-p’éel k’i’x.
YM Peter-TOP PST-SBJ.3 stickDEAG-foot-TRR-CMPL one-CL.INAN chaff
‘Peter got a chaff stuck in his foot’ (EMB_0108)

The noun incorporated in a local role is mostly a place, but other local participants like the source may also be incorporated, as shown in E364.a above and in E366. In E366.a, the verb *pitho’l* ‘remove from head’ has a literal meaning, while it is used metaphorically in E366.b.

E366. a. ts’o’k in **pit-ho’l**-t-ik / **pots’-ho’l**-t-ik
YM TERM SBJ.1.SG undress-head-TRR-INCMPL / release-head-TRR-INCMPL
in kùuch-a’
POSS.1.SG load-D1
‘I already released this load from my head’ (EMB_0423)

b. ts’o’k in **pit-ho’l**-t-ik in p’àax
TERM SBJ.1.SG undress-head-TRR-INCMPL POSS.1.SG debt
‘I already paid off my debt [lit.: I already removed my debt from my head]’ (BRICKER et al. 1998, s.v. *hó’ol*)

9.3.3.2. Non-body-part incorporation

There are only few examples of incorporation of a non-body-part location. E367 and E368 illustrate incorporation of a place, while in E369 the goal of the action is incorporated (the patient being a bottle).

E367. táan in **bàab-ha’**
YM PROG SBJ.1.SG swim-water
‘I am swimming’ (EMB_0441)
Noun incorporation and participation

9.3.4. Ambiguity and neutralization of semantic role

As we saw above, a body part, when incorporated into the verb, can play the roles of an undergoer (section 9.3.1.2), an instrument (section 9.3.2.1) or a location (section 9.3.3.1). As an undergoer, it can be related to the actor (section 9.3.1.2.1) or to the (secondary) undergoer (section 9.3.1.2.2). As an instrument, the body part is always related to the actor (section 9.3.2.1). In such a constellation, the agent’s control and the controlledness of the inalienable body part coincide, as one does not use the body part of another person as an instrument.

Since any noun may be incorporated as an undergoer, while incorporation as an instrument is largely confined to body parts, and since incorporation of a body part in undergoer function is less restricted than its incorporation in instrument function, one may conclude that although the role of the incorporated body part as an instrument is, at least synchronically, more frequent, its role as an undergoer follows a more basic pattern in YM.

We come back to the ambiguity concerning the role of the body part in incorporative constructions. In section 9.3.3.1, it was shown that a body-part noun in a given incorporative construction may be conceptualized as an instrument or a location. E370 features the same body part (‘foot’) with the same base verb (‘spread out’) in different situations. In E370.a (repeated from E327) it is an undergoer; in E370.b it is an instrument.

E370. a. T’in-chek’-t u péedal-il!
YM spread.out-foot-TRR(IMP) POSS.3 pedal
‘Hit the pedal!’ (RMC_1269)
b.  T’in-chek’t le k’áan-o’!
   spread.out-foot-TRR(IMP) DEF hammock-D2
   ‘Stretch the hammock taut with your leg (and then release it again)!’
   (SULLIVAN 1984:150)

The same ambiguity holds for non-body-part nouns, witness E371.

E371. tíán in hol-che’
   YM PROG SBJ.1.SG pierce-tree
   ‘I am piercing (a hole in) the wood / with the stick’ (EMB_0356)

When non-body-part nouns are incorporated, they function mostly as undergoers (section 9.3.1.3). Their function as instrument (section 9.3.2.2) or location (section 9.3.3.2) is more restricted. This is reflected in the morphology: incorporation always renders the verb intransitive, irrespective of the kind of role incorporated and the grammatical function of the respective actant. This allows us to conclude that the incorporation of an undergoer is the basic model, while the incorporation of an instrument or a location requires additional motivation.

The crucial locus of variation is constituted by trivalent verbs which mean that the agent applies one object to another object. Verbs like ‘rub’, ‘press’, ‘prick’ etc. display a convertible valency in many languages: the body part may be conceptualized as a patient or as an instrument, with the secondary undergoer then conceptualized as a location or a patient, respectively.89 This holds true for YM, too. The incorporative version in E372.a has two paraphrases. E372.b construes the body part as a patient and the secondary undergoer of the a-version as a location, while in E372.c, the body part is construed as an instrument and the secondary undergoer of the a-version as a patient.

E372. a. t-u koh-ni’tah a xanab
   YM PST-SBJ.3 push-nose-TRR-CMPL POSS.2 shoe

b. t-u koh-ah u ni’ ti’ a xanab
   PST-SBJ.3 push-CMPL POSS.2 nose LOC POSS.2 shoe

c. t-u koh-ah a xanab yéetel u ni’
   PST-SBJ.3 push-CMPL POSS.2 shoe with POSS.3 nose
   ‘It hit your shoe with its snout’ (RMC_2000)

The paraphrase in E372.b is in accordance with the basic principle of incorporating the undergoer. The paraphrase in E372.c is derivative and based on the convertibility of the verbal valency. Thus, a process – incorporation – whose function is the rearrangement of participants follow the lines of another process – conversion – which has the same function. This constitutes the structural basis for the incorporation of body-part nouns in the function of an instrument, upon the same structural model as their incorporation in undergoer func-

89 SULLIVAN (1984:147) notes such a variable conceptualization in connection with verbs like yulni’ ‘rub snout’ (with a hint to SAPIR 1911:257).
Noun incorporation and participation

The functional basis of the process lies in the fact that, for an agent of a situation, the controlled parts of its body are always available as instruments.

This analysis is corroborated by data such as E333, where a secondary, more specific body-part instrument *chàan t’ùup* ‘little finger’ is added in an adpositional phrase. This is indicative of the instrument-interpretation of the incorporated body part *k’ab* ‘hand’ even though the base verb *ts’op* ‘thrust’ takes the body part as a patient.

Once the schema of incorporating an instrument (in the same way as the patient) is established in the language, it may be expanded to other roles. A possible bridge from an instrument reading to a locative reading for body parts was indicated in section 9.3.3.1 with examples E362f. Especially for body parts, the identification of their exact semantic role does not seem important. Body parts operate in their peculiar way, and their involvement in a situation can be deduced from world-knowledge and the context. Patient, instrument and location as typical roles of body parts are, in this sense, templates available at the typological level, from which a language may choose, through which it may pass a variety of cognitively distinct forms of involvement (cf. Lehmann & Shin & Verhoeven 2000[Z]) and the choice among which is partly free. Again, since incorporation obliterates the semantic and syntactic function of a nominal and its referent, body parts are especially well suited for incorporation, since relational information which is not coded may be easily inferred.

This account is, thus, compatible with both of the typological scales of incorporability set out in § 7.4.2. As far as participant features are concerned (see S5), concrete objects such as body parts are most easily incorporated, and the strategy may be expanded from there to other kinds of entities. As far as participant roles are concerned (see S1), patients are most easily incorporated, and the strategy may be expanded from there to instruments, locations and other roles.

### 9.3.5. Detransitivization and retransitivization

It was observed that incorporation renders a verb intransitive even if the incorporated noun does not correspond to its syntactic object, and that incorporative verbs have to be overtly (re-)transitivized if they are to take a direct object. This is true even if the derived object fills the semantically same argument position as the primary object, as, e.g., in Yucatec Maya uses its preposition *éetel* both for body parts, as in E151, and for other instruments, as in E152.

Diachronically, it is possible that at a first stage, only such nouns were incorporated that corresponded to direct objects. This regularly detransitivized the verb. At a further stage, incorporation of nouns in other functions became possible by the mechanism outlined in section 9.3.4. At that time, intransitivity was already firmly established as a syntactic property of incorporative verbs and was automatically transferred to incorporative verbs which did not, in a syntactic sense, have their direct object position blocked. At the last stage, all
compound verbs, including those composed with a specifier, were categorized as intransitive.

Whether or not things did happen that way historically, the present situation in YM is as follows: There are basically two kinds of transitive verbs, those (like hats’ ‘beat’) that are root-transitive, and those that are transitivized by a dedicated derivational morpheme. Now, all YM root-transitive verbs have the phonotactic shape CVC. This means that any verb stem that does not have this shape is not considered transitive and therefore has to be overtly transitivized if it is to take a direct object. This comprises not only incorporative and other compound verbs, but also Spanish loans. Spanish verbs are borrowed in the infinitive. Thus, they never have the form of a YM root-transitive verb. As a consequence, the YM lexicon is full of Spanish loans such as *dalkansar-t ‘reach’, húuntàar-t ‘gather’ etc., whose Spanish transitivity is ignored and whose YM transitivity is ensured by the transitivizer –t.

What this amounts to is that the retransitivization of YM incorporatives is, at least synchronically, not at all motivated syntactically, but merely morphologically. There is a morphological principle according to which any verb which is not root-transitive has to be transitivized by derivation if it is to take a direct object. Thus, while the detransitivization of a verb stem irrespective of the syntactic nature of the valency operation involved is dysfunctional from a syntactic point of view, the principle which is actually operative in YM ensures maximum transparency of verb stems as to their transitivity.

9.3.6. Summary

Just as many other languages, YM uses the device of incorporation to label ‘name-worthy’ culturally relevant activities which involve a particular participant as a typical undergoer, instrument or location. At this level, incorporating a participant represents just an alternative strategy of accommodating a participant. Also, the referentiality of the participant and the scope of the predication change. However, this in itself does not yet contribute anything to the association of ‘new’ participants or to the rearrangement of a situation.

The main contribution of YM incorporation to participation is intimately connected with subsequent (re)transitivization that allows for another participant to be accommodated in the valency of the derived incorporative verb. This reduces the burden of the syntax by avoiding prepositional coding of peripheral participants. In YM, the schema of a trivalent verb is only weakly developed. Incorporation of the direct object participant with subsequent retransitivization opens the respective slot to be filled by another participant – the secondary undergoer. This may be a participant that was coded peripherally and is then promoted to the vacated direct object function. This strategy supports the YM tendency to code dependents in the valency of the head as much as possible. Whenever possible, a situation with more than one participant is represented by the transitive schema. This strategy entails the neutralization of many distinct semantic roles in the undergoer function.

90 The view that YM incorporative verbs are a common means to express three-place verbal concepts is also advanced in KRAMER & WUNDERLICH 1999.
The coding of peripheral semantic roles in the undergoer function is not only achieved by syntactic promotion of circumstances. As shown above, a fair share of incorporatives is lexicalized and opens an entirely new argument slot in comparison with the base verb. Accommodation of a new participant is, insofar, a result of lexicalization. 91 Here, the result goes well beyond the compositional combination of two meaning components; the combination creates a new lexical item with an argument frame of its own. This latter strategy holds for undergoer as well as for instrument incorporation.

Apart from these cases of strong lexicalization, incorporation of peripheral participants does not create a vacant slot that might be occupied by a further participant. However, it helps avoiding their prepositional coding. Thereby, a further peripheral participant can be associated more easily since YM abhors cumulating several adjuncts on a single main verb.

YM generally distinguishes between the incorporation of body parts and the incorporation of other entities. While body parts are mostly incorporated as instruments, other nouns are generally incorporated in the undergoer role. Body parts are relational and always refer to an animate being in the context, be it linguistically present or not. Apart from the case mentioned in section 9.3.1.2.2, this is always the actor. Non-relational entities that are incorporated do not need to bear interparticipant relations to other participants in the situation. However, they may hold established relations to the secondary undergoer. As we have shown, these may be established simultaneous or future possessive relations as well as local relations. In these cases, the part is incorporated while the whole is promoted as the 'new' direct object of the incorporative construction. However, the function of possessor promotion is only weakly present in YM incorporation and restricted to lexicalization. It may, thus, be a weak lexical counterweight to the YM syntactic characteristics of person backgrounding and relation prominence proposed in LEHMANN & SHIN & VERHOEVEN 2004[P].

10. Other Mayan languages

In this section, some Mayan languages are reviewed with respect to the function fulfilled by incorporation in them. It will be shown that none of these languages uses incorporation with a similar range of functions as YM. The Mayan languages investigated only display undergoer incorporation; none of them could be found to incorporate instruments. On the contrary, some of these languages possess a special operation to promote instruments, an instrumental voice. This operation is analyzed in the relevant languages and opposed to the YM strategy.

91 MITHUN & CORBETT (1999:64f) identify a similar process for Mohawk (Iroquoian).
10.1. Undergoer incorporation

10.1.1. Non-morphological incorporation

Several Mayan languages, among them Huastec (Huastecan), Kanjobal (Greater Kanjobalan, Kanjobalan), Mam (Eastern Mayan, Mamean), and Quiché (Eastern Mayan, Quichean), have incorporation of the undergoer. The incorporated noun is generally not possessed, determined or modified. There are, however, frequent exceptions to this, as in E375. The relatively sloppy reduction of an NP to a noun stem corresponds with a rather loose bond of the incorporated nominal with the verb. It remains outside the verb, but forms a syntactic unit with it equivalent to an intransitive verb. This is manifested by morphological intransitivization of the verb, i.e. formation of the antipassive (equivalent to the introversion of section 9.1). This may entail a change in cross-reference marking (depending on the ergative-split) such that the agent is marked by the absolutive after intransitivization. Compare the following examples from Huastec (E373), Quiché (E374), Mam (E375), and Kanjobal (E376). In E376, a is a non-incorporative paraphrase of b; in the other examples, both a and b illustrate incorporation.

92 The same process is reported to exist in Jacaltec and Kekchi (SMITH-STARK 1978). However, no relevant data have been available to us.

93 All Mayan examples cited remain in the orthographies used in the sources, while the glosses have been partly adapted to our conventions, to facilitate comparison.
Noun incorporation and participation

b. ma →-b’iincha-n qa-jaa
   REC.PST ABS.3.SG-make-AP PL-house
   ‘he constructed houses’ (ENGLAND 1983:219)

E376. a. š-→-a-lo-t-oq in-pan
   KAN PST-ABS.3-ERG.2-eat-go-OPT POSS.1-bread
   ‘you ate my bread’

b. š-at-lo-wi pan
   REM.PST-ABS.2-eat-INTR bread
   ‘you ate bread’ (MITHUN 1984:852)

Incorporating the undergoer into the verb entails its demotion and presents the verbal action as a typical activity. As it is regularly accompanied by antipassivization, it is a valency-reducing operation. Huastec, Quiché, Mam, and Kanjobal do not use a transitivizing device to relate the ‘unitary concept’ to an additional participant. Thus, incorporation has no function with respect to participant association in these Mayan languages.

10.1.2. Morphological incorporation

Chontal (Greater Tzeltalan, Cholan) may integrate the undergoer morphologically into the verb. According to KNOWLES (1984), incorporation produces a nominal (nomen actionis), not an intransitive verb (cf. E377.b). This form may be verbalized by the addition of the –in or -t-a(n) suffixes (E377.c/d). Although such suffixes generally appear on transitive verbs, these examples do not take a direct object.

E377. a. æ’a lah-e-→ wah
   CHON ERG.2 pat-IMPF-ABS.3 tortilla
   ‘you make tortillas’

b. æ’a lah-→=wah
   ERG.2 pat-NR=tortilla
   ‘your tortilla making’

c. æ’a lah-→=wah-in-→
   ERG.2 pat-NR=tortilla-IMPF-ABS.3
   ‘you make tortillas’

94 The Tzeltalan languages of the Greater Tzeltalan branch, Tzotzil and Tzeltal, do not have productive noun incorporation (Volker Gast, p.c.).
95 Compare Samoan (section 8.1.1), which may form a nomen agentis with similar compounds.
96 the only relevant ones given in KNOWLES 1984. It is also not clear whether the subject clitic
10.2. Instrument promotion

Several Mayan languages, among them Jacaltec (Greater Kanjobalan) and Quiché, possess verbal operations which promote the instrument from an adpositional phrase to absolutive function. Compare E378 from Jacaltec for such an operation.

E378. a. x-ϕ-speb’a naj te’ pulta
   JAC CMPL-ABS.3-ERG.3-close DEM.CL1 DEM.CL2 door
   yu te’ xila
   by DEM.CL2 chair
   ‘he closed the door with the chair’

b. te’ xila x-ϕ-peb’a-n te’ pulta yu naj
   DEM.CL2 chair CMPL-ABS.3-close-AP DEM.CL2 door by DEM.CL1
   ‘he closed the door with the chair’ (lit. ‘the chair was used by him to close the door’) (CRAIG 1978:56)

In E378.a the instrument appears as an adjunct introduced by a denominal instrumental preposition. In E378.b the instrument is promoted to absolutive function. This version is considered more natural than E378.a. The characteristics of the instrumental voice construction are the sentence initial position of the instrument,97 the intransitive (“antipassive”) marking of the verb (with -n(i)) and the demotion of the agent into a prepositional phrase.98

In Quiché, too, the instrument may be promoted to absolutive function. The morpheme -b’e can be suffixed to any root or derived transitive verb stem in order to derive an instrumental verb stem. In the base version of E379.a, the patient is the direct object, while the instrument is in a prepositional phrase whose head is the preposition -ee(c), whose basic meaning is ‘with’, but which also serves as a general marker of oblique relations.

97 Sentence initial position is generally used for clefting in Jacaltec. However, CRAIG 1978:56 reports that the instrumental NP in examples like E378.b does not carry contrastive emphasis and is usually translated into Spanish by consultants with no particular emphasis. However, if the agent appears in the same position, it is clearly emphasized.

98 Apparently, the erstwhile direct object becomes a kind of secondary object.
Noun incorporation and participation

E379. a. x-∅-rami-j lee cheeʔ lee achiq
QUI ASP-ABS.3.SG-ERG.3.SG-cut-TR the tree the man
ch-ee jun chi'ich'
LOC(POSS.3.SG)-with a machete
'the man cut the tree with a machete'

b. chi'ich' x-∅-rami-b'e-j lee achiq
machete ASP-ABS.3.SG-ERG.3.SG-cut-INSTR-TR the man
r-ee lee cheeʔ
POSS.3.SG-with the tree
'the man used a machete to cut the tree' (MONDLLOCH 1981:15)

In E379.b, after derivation of the verb with -b'e, the relations are inverted: now the instrument is the absolutive, while the patient is governed by that preposition. The patient is, thus, demoted and no longer cross-referenced on the verb. Instead, the derived absolutive is cross-referenced on the verb, as can be clearly seen in E380.b. Moreover, it obligatorily changes its position from sentence-final to preverbal position. In the passive voice the instrument – and not the demoted absolutive – becomes the subject.

E380. a. ša: q'aye:s š-∅-a:-kuna-b'e-x
QUI just herbs CMPL-ABS.3.SG-ERG.2.SG(IN)-cure-INSTR-ACT POSS.1.SG-with
'you just used herbs for curing me' (MONDLLOCH 1981:295)

b. at k-at-qa-śib'í-b'e-x
2.SG(IN) INCMPLE-ABS.2.SG(IN)-ERG.1.PL.-frighten-INSTR-ACT
(r-e:č) le: ahiq
3.SG.POSS-GEN the boy
'we used you to frighten the youth' (MONDLLOCH 1981:297)

The same operation is reported from Pocomam, Teco and Mocho. Ixil, Cakchiquel and Tzutujil possess a similar process of instrument promotion, but without changing the argument structure of the verb (CRAIG 1978, MONDLLOCH 1981:15).

10.3. Summary: comparison to Yucatec Maya

In none of the Mayan languages examined does incorporation display the range of functions in participation as observed for YM in section 9. Several languages (Quiché, Mam, Kanjobal and Huastec) only possess a weak form of non-morphological undergoer incorporation,

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99 The author gives this somewhat unusual example with an animate instrument to show its cross-reference marking on the verb. With the usual third person instruments the cross-reference marker is simply zero (cf. E380.a).
which comes along with intransitivization, i.e. antipassive formation of the verb. This in itself is different from YM, because although YM does detransitivize incorporatives, it does not employ any morphological process to this end.\footnote{100}{apart from the tone change mentioned in § 9.2.1, which we do not consider morphological}

There is, furthermore, no possibility in the other Mayan languages of retransitivizing the incorporative complex to accommodate a further participant. Neither do body parts seem to play a significant role in this type of incorporation, so that there is no possessor promotion by incorporation of a body part. While Chontal does have morphological incorporation, this is neither productive nor does it play a role in the rearrangement of a situation.

Some Mayan languages (Jacaltec, Quiché, Pocomam, Teco, Mocho, Ixil, Cakchique) do not demote the instrument by incorporation, as does YM especially with body parts. On the contrary, they possess special derivational processes to promote the instrument to absolutive function. YM either codes the instrument as a prepositional adjunct or incorporates it into the verb,\footnote{101}{Compare also LEHMANN & SHIN this volume, section 5.1.10 for a typological characterization concerning concomitant coding in YM.} but it does not have an instrumental valency operation to promote an instrument. There are two derivational processes with similar functions, the usative and the applicative derivation (which we saw in section 9.2.1), but none of them can be applied to instruments. Thus, YM seems to differ significantly from other Mayan languages, not only with respect to the function of incorporation in participant association, but also with regard to the coding of the instrument relation.

11. Typological generalizations

11.1. General remarks

The first and most widespread function of incorporation is to present an action performed on an undergoer as a unitary concept, focusing on the activity as a whole and not on the undergoer and its affection. The situation is presented as typical with respect to a given social and cultural context. This function recurs in most (if not all) incorporating languages (cf. MITHUN 1984, MITHUN & CORBETT 1999). As regards the association of participants, incorporation at this level only represents an alternative way of coding a participant, viz. instead of being a syntactic dependent, the nominal in question is part of the verb. The number and kind of participants does not change in comparison to the paraphrasing non-incorporative construction. Insofar, the process contributes nothing to the rearrangement of a situation as focussed on in this paper.

So far, incorporative constructions are typically intransitive. Our investigation set in at the point where the incorporative complex is related to a further participant by some change
in participant structure with regard to the (transitive or intransitive) base verb. Transitivizing an incorporative verb opens a slot for a further participant (a secondary undergoer) to be accommodated in its valency. Incorporation of a body part may give rise to adverbal coding of its possessor. The latter may take the vacated complement function of its body part. Viewed from this angle, incorporation is part of a set of operations of rearrangement of a situation, and the role of the incorporated participant may contrast with those of participants with syntactic status.

11.2. Participant roles incorporated

Depending on the role of the participant incorporated, different construction types emerge. Incorporation of the undergoer vacates the respective syntactic slot to be filled by another participant, while incorporation of a peripheral role like the instrument does not (necessarily) affect the participant in undergoer function (although such a change is possible after strong lexicalization of the incorporative).

All languages investigated show undergoer incorporation, and most of them display incorporation of peripheral roles to some extent. Among the peripheral roles, first and foremost the instrument is incorporated; but we also find incorporation of location, manner, time etc. Especially Nahuatl and Samoan display rich possibilities of incorporating different peripheral semantic roles. In addition, Guaraní and Nahuatl incorporate undergoer and theme subjects if they are inalienable posses of highly empathic participants. The latter take on the vacated syntactic function of their body part. Mayali even allows for the incorporation of absolute (non-related) participants as actor or theme of an intransitive verb (cf. E294 and E297). Moreover, it may incorporate the comitative object of a comitative applicative verb.

After incorporation, the semantic relation between the participant and the situation core is no longer explicit. Instead, all roles are structurally neutralized by simple juxtaposition of verb stem and noun stem. It has been shown that the incorporability of a participant decreases with its increasing control. When a participant is incorporated into a verb, it assumes the role of a general undergoer or even of a semantically unspecific argument. Methodological consequences of this include the difficulty of exactly determining the semantic role of an incorporated participant, of choosing the adequate paraphrase involving a corresponding external participant or even of coming up with such a paraphrase in the first place.

As for the interdependent role features of control and affectedness, the instrument has traits of both. The possibility of being incorporated (e.g. in YM, Samoan, Nahuatl) as well as of being coded as the direct object in an applicative construction (e.g. in Quiché) speaks to its affectedness in the situation and its similarity to an undergoer. The possibility of being coded as a promoted absolutive (with a demoted or omitted animate agent, as e.g. in Jacaltec), as well as the fact that instruments are always instruments of the actor, is based on its controlling features and its affinity to the actor.
11.3. Participant roles promoted

Furthermore, we observe the roles of the participants promoted after incorporation of the undergoer. In YM object incorporation is often followed by retransitivation of the incorporative complex, so that a secondary undergoer can be adjoined as a direct object. Nahuatl and Mayali may also combine incorporation and applicative formation. The difference between YM on the one hand and Nahuatl and Mayali on the other hand lies in the interdependence of the two processes. In YM the processes of incorporation and applicative derivation are strongly interrelated. With the bases in question, the incorporation of one participant is a precondition for the subsequent association of a further participant through applicative formation, and this is indeed typically performed subsequent to incorporation. In Nahuatl and Mayali, on the contrary, these processes are in most cases independent from each other. In these languages, the same verb may occur either with an incorporated noun alone, or with an applicative suffix alone, or with both processes (subsequently) applied. In these languages, thus, the function of associating a further participant is fulfilled by applicative formation alone.

The participants promoted by applicative formation are frequently beneficiaries in Mayali and Nahuatl, thus animate participants that are partly affected by the situation. Mayali also promotes animate comitatives by applicative formation. In YM, on the contrary, the participants promoted are not sensitive to the feature of animacy. They are generally locations. Apart from possessor promotion, animate participants are concerned as metaphorical extensions of these (prototypically anempathic) roles after lexicalization (or lexical change) of the respective verbs.

However, YM does not appear to be unique in its functional combination of incorporation with applicative formation. Other languages that also use the strategy of incorporation to accommodate a further participant include Olutec and Chukchee. These may also promote locations, as is demonstrated in E381 for Olutec and in E382 for Chukchee.

E381. a. min=yak=ka'-am-e:t          tzümî kamyon-jem.
   \( A2(ERG)=CAUS\text{-}\text{descend}\text{-}IRR\text{-}PL.SAP \text{ load } \text{ truck-LOC} \)
   ‘You (pl.) are going to bring the load down from the truck.’

b. min=yak-tzümî-ka'-am-e:t         kamyon
   \( A2(ERG)=CAUS\text{-}load\text{-}descend\text{-}IRR\text{-}PL.SAP \text{ truck} \)
   ‘You (pl.) are going to unload the truck.’ (Zavała 2000, § 2.2.2)

E382. a. atlag= \( \text{mätqamät} \) (kawkaw=\( \text{\text{\$k}} \) kili=\( \text{\text{nin}} \).
   \( \text{father=ERG butter(ABS)} \text{ bread=LOC spread.on=3SG:3SG(AOR)} \)
   ‘The father spread the butter on the bread.’

b. atlag= e \( \text{kawkaw mätqarkele=\text{\text{\$\text{n}}} \)
   \( \text{father=ERG bread(ABS)} \text{ butter(INC)=spread.on=}3SG:3SG(AOR) \)
   ‘The father buttered the bread.’ (Polinskaia & Nedjalkov 1987:240)
However, in contrast to YM, these languages do not morphologically mark an applicative derivation in these constructions. In Olutec, the respective base verbs remain transitive after incorporation of the direct object, a strategy that is otherwise used with ‘body-part-of-undergoer’ incorporation (cf. e.g. section 8.2.3.1 for Guaraní and section 8.3.2.1.1 for Nahuatl). In Chukchee, there is an intermediate step of detransitivization entailed by incorporation, where the incorporative verb carries intransitive cross-reference morphology. Subsequent transitivization is indicated on the verb only by transitive cross-reference morphology (SPENCER 1995:452ff).

11.4. Incorporation and possession

Following Kroeberr 1909 and Sapir 1911, there have been a number of linguists underlining the high proportion of body parts incorporated and their important role in the function of incorporation. The incorporation of body parts may be related to a grammatical alienability distinction in the possessive constructions of a language. Among the languages investigated, YM, Guaraní and Nahuatl are structured to a significant degree by both the alienability contrast and noun incorporation. Mayali incorporates inalienable nouns such as body parts by default and in this way highlights their special status in contrast to alienable nouns. In other languages like Warray (Gunwinjguan, Harvey 1996), Anindilyakwa (Non-Pama-Nyungan) and Mohawk (Iroquoian, Mithun 1996), possession and incorporation interact in important ways. In all these languages, incorporation is strongly associated with the inalienability of body parts (cf. Chappell & McGregor (eds.) 1996). In incorporation we find chiefly those body parts that are categorized as inalienable, generally those that may be controlled by their possessors and those with salient spatial properties.

11.4.1. Incorporation and indirect participation

In our previous work (Lehmann & Shin & Verhoeven 2004[D]), we emphasized that YM does not possess techniques to associate peripheral participants as free adjuncts, let alone to cumulate them on a single main verb. Instead, the language tends either to code a variety of participants as a possessive attribute to the undergoer nominal or to join them as a central participant in a purpose clause. Here we have tried to show that incorporation in combina-

102 YM and Chukchee appear indeed to be similar in fulfilling the function of rearrangement of argument structure by a combination of incorporation and applicative formation (cf. Comrie 1985). This combination of operations resembles applicative formation based on transitive verbs in other languages (e.g. Bantu, German). Incorporation in Chukchee is, however, much more regular and pervasive than in YM, so that the function of rearrangement of argument structure is much more prominent in Chukchee (Spencer 1995) than in YM (Lehmann & Verhoeven 2005).
tion with a subsequent applicative derivation is another important device to accommodate several participants in one clause.

Samoan favors indirect participation in the association of participants, too. However, although incorporation is an established and intensively used device in Samoan, it is not very often used to associate further (peripheral) participants in the way YM does. Incorporation mainly remains at the level of representing a unitary concept. The incorporative complexes are not used to form new lexemes with the opportunity to add a further participant to the valency.

The results of LEHMANN & SHIN & VERHOEVEN 2004[D] and of the present paper reveal an interesting functional distribution between indirect participation and incorporation as two strategies of accommodating participants in the expression of a situation. In the earlier study, we found that indirect participation is essentially reserved for highly empathic participants. This is the case because indirect participation implies the coding of a participant as a possessor, and prototypical possessors are highly empathic. In the present paper, we found that incorporation is largely limited to those roles that are either not sensitive to empathy (patient/undergoer) or prototypically (location) or exclusively (instrument) anempathic. These are just those roles which do not appear in indirect participation because they cannot be construed as possessors. To this extent, then, indirect participation and incorporation are in complementary distribution over the set of participant roles. Note that this holds with respect to the incorporated participant. It does not concern additional participants that may be accommodated as direct objects after transitivization.

11.4.2. Incorporation and person prominence

A further function recurrent with incorporation, e.g. in Guaraní and in Nahuatl, is possessor promotion to (direct) object or subject function. Incorporation of a body part or of other entities intimately related to their animate possessors vacates their syntactic slot to be filled by the possessor, which is in general a highly empathic being. This entails the centralization of the empathic possessor from its former position of a possessive attribute of the body-part noun and its integration into the thematic strand. Thus, incorporating and, consequently, backgrounding the body part provides for the promotion of a highly empathic participant to a higher syntactic function (cf. also MITHUN’s (1984) type II of case manipulation). Such a process has been recognized as a function of incorporation in several other languages, among them West Greenlandic (van Geenhoven [ms]), Warray, Mohawk, Olutec (ZAVAŁA MALDONADO 1999) etc. The process is functionally similar to the promotion of the possessor to the indirectus function, an areal trait of many Indo-European languages (cf. HASPELMATH & KÖNIG 1998, LEHMANN & SHIN & VERHOEVEN 2004[P]).

YM does not possess a structural device specialized to fulfil this function. However, as described in section 9.3.1.2.2, there are some transitivized incorporatives that take the possessor of the incorporated body part in direct object function. Since these are lexicalized, they compensate the YM syntactic characteristics of person backgrounding and relation prominence at the lexical level.
11.5. Typological characterization of Yucatec Maya

11.5.1. Contribution of noun incorporation to participant association

Noun incorporation in YM can be characterized by the following three features:
Participants in diverse semantic roles (mainly undergoer and instrument, more rarely location) are incorporated; the result is always an intransitive verb.
Subsequently, the incorporative complex is commonly (re)transitivized by applicative derivation and takes a ‘further’ participant as a direct object.
The nature of this ‘further’ participant depends on the participant incorporated. If this was the undergoer, then the secondary undergoer may be a former circumstant, or it may be a new participant that bears no direct semantic relation to the base verb. If it was an adjunct, then retransitivization merely restores the valency of the base verb.
Thus, YM is able to accommodate three participants in a transitive frame without relying on either the indirect object or the adjunct function, which are both weakly developed in the language. Instead of coding (peripheral) participants such as various types of location, the addressee, the stimulus etc. in a dative or prepositional phrase, YM joins them as objects in a transitivized construction. This tendency clearly correlates with the predominance of government over modification as a general feature of YM dependency relations (cf. LEHMANN 2003, ch. 6.1).

Several incorporatives owe their capacity to associate a further participant to their strong lexicalization. Such incorporatives are at the pole of compounding (cf. section 7.4.1). By means of lexicalization, a new undergoer slot is provided which was not present in the base verb. Such a lexical device for participant accommodation recurs in YM with other kinds of compounding, viz. those mentioned in section 9.2.1. A compound of the structure ‘specifier + verb_stem’ (cf. S10), where ‘specifier’ is an adverb or another verb stem, may be used both as an intransitive (E383.a) and a transitive verb (E383.b, E384.b). The object may be the same as that of the base verb (E383), or it may be different (E384, where the verbal meaning in b has changed considerably in comparison to a).

E383. a. Pedro-é’ chéen h háan k’anal-tóok-nah-ih
YM Peter-TOP just PST fast quick-burn-CMPL-ABS.3.SG
‘Peter burned (the milpa) too early’ (MEP_0011)

b. Pedro-é’ t-u k’anal-tóok-t-ah u kòol
Peter-TOP PST-SBJ.3 quick-burn-TRR-CMPL POSS.3 milpa
‘Peter burned his milpa too early’ (MEP_0012)

103 The derivational steps are the same as with noun incorporation: compounding leads to an intransitive verb designating a unitary activity, and subsequent transitivization permits joining an undergoer.
E384. a. Ch’in tèen le bòolah-o’!
   YM  pelt me  DEF ball-D2
   ‘Throw the ball to me!’ (EMB_0019)

   b. t-u tohol-ch’in-t-ah u yatan t’ u yotoch
   PST-SBJ.3 banish-pelt-TRR-CMPL POSS.3 wife  LOC POSS.3 home
   ‘he threw his wife out of the house’ (EMB_0015)

The capacity of the incorporative construction to accommodate an additional participant is properly due to the operation of transitivization, i.e. the formation of the applicative. Here, we may compare German prefix verbs such as ver-folgen ‘persecute’, an-schauen ‘look at’, über-gießen ‘douse’ etc., which bear a similar function in directing an action towards a (further) participant, construing it as a general undergoer.\(^\text{104}\)

11.5.2. Association of peripheral participants in YM

The perspective here has been on noun incorporation as a further strategy of associating peripheral participants in YM. Noun incorporation competes with other strategies of participant association which have been investigated in detail in LEHMANN & SHIN & VERHOEVEN 2004[D] and 2000[U], viz. those of direct and indirect participation. They are ordered in S16 according to the tightness of the participant’s relation with the main verb. With the strategies of indirect participation, there is no longer a direct relation between participant and verb, but the relation is mediated through a central participant (strategy 4) or a subordinated verb (strategy 5).

\(^{104}\) Cf. also BAKER’s (1988) analysis of some Bantu applicatives as preposition incorporation. KRAMER & WUNDERLICH 1999, too, draw a comparison between Bantu applicative formation and YM incorporation plus transitivization.
S16. Association of peripheral participants in YM

<table>
<thead>
<tr>
<th>syntactic coding</th>
<th>incorporated noun</th>
<th>(in)direct object</th>
<th>prep. object</th>
<th>possessor of other participant</th>
<th>syntact. funct. in subordinate clause</th>
</tr>
</thead>
<tbody>
<tr>
<td>tightness relation to main verb type of participation</td>
<td>morphological</td>
<td>syntactic</td>
<td>syntactic</td>
<td>none</td>
<td>none</td>
</tr>
<tr>
<td>/</td>
<td>direct participation</td>
<td>direct participation</td>
<td>indirect participation</td>
<td>indirect participation</td>
<td></td>
</tr>
</tbody>
</table>

There are relations of grammaticalization between strategies (2) and (1), between strategies (5) and (3) as well as between strategies (4) and (3). The direction of grammaticalization corresponds to the order in which it is mentioned; it is always from right to left in S16.

While – as has been shown in LEHMANN & SHIN & VERHOEVEN 2004[D] and [U] – SAE languages stay in the middle part of S16, using predominantly strategies (2) and (3), YM displays greater variation in using most of the strategies to a certain degree, depending on the functional context. Strategies (1) and (2) are interrelated, as incorporation is frequently combined with applicative formation. Since strategy (3) is underdeveloped in YM, the language shifts to the strategies located to its right and left in S16. Thus, we can note a behavior that is partly complementary between the role-independent use of a single strategy in one language type and the use of different strategies that are arranged on a scale, in another.

Other Mayan languages abide mainly in positions (2) to (5), as has been shown in section 10 of the present work for strategy (2), but furthermore in LEHMANN & SHIN & VERHOEVEN 2004[P] for strategies (2), (4) and (5).

Indices

Abbreviations

Morpheme glosses and syntactic categories

<table>
<thead>
<tr>
<th>index</th>
<th>glosses</th>
<th>syntactic categories</th>
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<td>meaningless element</td>
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SBJ subject
SBR subordinator
SG singular
SPEC specific
SS same subject
SUBJ subjunctive
TERM terminative
TNS tense
TOP topic
TR transitive suffix
TRR transitivizer
UNSPEC unspecified

Languages
CHON Chontal
CHUK Chukchee
CNAH Classical Nahuatl
GER German
GUA Guarani
HNAH Huauhtla Nahuatl
HUA Huastec
JAC Jacaltec
KAN Kanjobal
KOR Korean
MAM Mam
MNAH Michoacán Nahuatl
OLU Olutec
ONO Onondaga
QUI Quiché
SAM Samoan
TAK Takelma
TNAH Tetelcingo Nahuatl
TURK Turkish
YM Yucatec Maya

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89-114.


AEF  Amalia Ek Falcon,

EMB  Ernesto May Balam,

FBC  Fidencio Briceño Chel,

MEP  Maximo Ek Pat,

NMP  Norma May Pat

RMC  Ramón May Cupul

SBM  Sebastián Baas May, all from Yaxley, Quintana Roo, Mexico

GJ  Gerd Jendraschek, University of Toulouse

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