

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 is often finer variation 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 devices in other languages.¹

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1. Introduction

1.1. Overview

In earlier work (Lehmann & Shin & Verhoeven 2000 [D] and 2000 [U]), we analyzed diverse strategies of coding peripheral participants. 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.

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 diverse 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 presented. Section 2 provides the theoretical background of the functional domain of concomitance. In the main section of the paper (§ 4), the strategies of coding different concomitant functions are set out and examples from various languages are provided. The structure of § 3 is designed in such a way that it can be applied, as an onomasiological framework of description, to the domain of concomitance in other languages. Finally, § 4 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, Yidj, and Yucatec Maya. The data of German, Korean, Japanese, Turkish and some Chinese examples have been checked by native speakers.² The data and analyses for the other languages are taken from published sources; morpheme glosses and translations of examples have been adapted. Some of these sources, unfortunately, 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.³ 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. As in Korean, the linguistic manifestation of honorification is very important. 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. 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 verbal arguments are cross-referenced on the predicate for person, number and case. 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.

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 Shèngchāo Lǐ, Peter Merker and Yǎfāng Qí for the Chinese data.

³ This yields the orthographic shape ‘CVC_{tone}’. The C_{tone}s are *-b* ,high‘, *-j* ,high falling‘, *-v* ,mid rising‘, *-∅* ,mid‘, *-s* ,mid low‘, *-g* ,mid low aspirated‘, *-m* ,low glottalized‘, and *-n* ,low rising‘ (cf. Harriehausen 1990, ch. 2).

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-Altai languages is 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.⁴

Lezgian is a member of the Nakho-Daghestanian language family. It is spoken by more than 400,000 people in southern Daghestan 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 an isolating language and has four tones. Mandarin is not easy to classify in terms of word order, but it may be undergoing a change from an SVO to an SOV word 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 Lǐ (SL), Peter Merker (PM), and Yǎfāng Qí (YQ).

Thai, also called 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 **Yidj** was originally spoken by members of the Yidjndj, Gunjandj and Mađandj tribes in North Queensland, Australia. Yidj is a Pama-Nyungan language and genetically closest to its neighbour Dya:bugay. It is basically agglutinative and almost exclusively suffixing. Clause structure is dependent-marking. There is a system of ten cases

⁴ The transliteration system involves the symbols <ə> = [ɤ] and < > = [u].

for nominal word classes. Pronouns inflect in an accusative paradigm, whereas 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 500,000 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 general 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.

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 *Schlüssel* ‘key’ in E1 is an instrument.

E1. Der Schlüssel öffnete die Tür.
GER ‘The key opened the door.’

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 *Schlüssel* 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 diverse 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 *tertium 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**. This concerns the internal linguistic structure of situations: They are constituted by a set of entities, called **participants**, which⁵ 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 a hierarchy that reflects the degree of **empathy** the speaker feels for the entities on the dif-

⁵ We refrain from adapting the gender of participants.

ferent levels. This hierarchy, called *animacy hierarchy* (Comrie 1981, Ch. 9) or *empathy hierarchy* (Kuno 1987), is represented in F1.

F1. *Empathy hierarchy*

SAP	Non-SAP					
human	non-human					
animate		in- animate				
individual object			substance			
object			location			
entity					proposition	

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 when the participant is actually more deeply involved in a connected situation than in the situation at hand (cf. Lehmann 1991:207).

Central participants are maximally involved; **peripheral participants** are loosely involved. Central participants are constitutive components of the situation. 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-

ripheral 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.

The most important parameter distinguishing central participants is **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 **actor**, the other one is the **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.

3. Outline of the functional domain of concomitance

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 *with* or *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 *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 the fact 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.
 GER 'He broke the window with a hammer.'
- E3. Er kam mit Julia nach Hause.
 GER '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.

- E4. Peter kam mit dem Zug.
 GER 'Peter came by train.'
- E5. Peter bastelte ein Schiff aus Papier.
 GER '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 X* 'with X' would be something like 'und X ist dabei' ('and X is there, too') or 'unter Dabeisein von X' ('X being present, too'). This paraphrase contains, in a nutshell, a number of crucial features of concomitance which may be made explicit as in F2:

F2. *Diagnostic properties of concomitance*

- 1 There is a situation S with its set of central participants.
- 2 There is an additional participant C whose nature may vary.
- 3 C is peripheral to S.
- 4 C's participation in S is in some way oriented towards some central participant.
- 5 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 reviewed 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 concomitance formed in this way.

3.3. Classification of concomitant functions

3.3.1. Partner and companion

Simply speaking,⁶ 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.

- E6. a. John and Sylvia met.
 b. John met with Sylvia.

Only asymmetric reciprocal situations are ones of concomitance. 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 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).

⁶ For more precision in the definition of reciprocity, see Maslova 2000.

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.⁷ 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.⁸

E7. bin ts'o'k-ok u bèeh-il yéetel in pàalil-tsiil
 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 **confactive** (cf. Stolz 1994).

E8. Sie kam mit einer Tasse Kaffee zurück.
 GER '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 E61 below).

E9. bulmba qjira: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 § 3.4.3.

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.

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.

⁷ *Nubo* 'I marry (a man)' vs. *in matrimonium duco* 'I marry (a woman)'

⁸ Brackets will be used in the interlinear gloss to enclose a concomitant construction or a paradigmatically related construction.

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.
 GER ‘Peter fetched a box of beer on the bicycle.’

For animate beings, the prototypical means of locomotion are their legs, feet and wings. 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; in the latter, they are typically artefacts. 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 the English language.

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

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 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 1973:57-58).

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 E127 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 core⁹ (‘the opening was by force’). In no case, however, does a

⁹ 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.”

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.

A circumstance has a set of participants of its own. As a specific case, one of its participants – crucially the actor – may be identical to a participant (again the actor) of the main situation. 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). And of course, the circumstance clause may be desententialized if subjects are identical, which yields a structure like in E16.c.

- E16. a. Erwin löste das Problem dadurch, daß / *indem Erna den Kommissionsvorsitzenden bestach.
‘Irvin solved the problem by having Linda bribe the committee chairman.’
b. Erwin löste das Problem dadurch, daß / indem er den Kommissionsvorsitzenden bestach.
‘Irvin solved the problem by bribing the committee chairman.’
c. Erwin löste das Problem durch Bestechung des Kommissionsvorsitzenden. ‘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 enti-

ties 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 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.

T1. *Features of concomitants*

feature \ concomitant	empathic ←		→ anempathic		
	human	animate	object	mass	abstract
PARTNER	████████	████████			
COMPANION	████████	████████	████████		
VEHICLE		████████	████████		
TOOL			████████	████████	
MATERIAL			████████	████████	
MANNER					████████
CIRCUMSTANCE					████████

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]. Agents have [+ INTENTION], in addition to actors in general. 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, the agent's control is never 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.

F3. *Control of concomitants*

[+ CONTROL]		PARTNER
		COMPANION
		VEHICLE
[+/- CONTROL]		TOOL
		MATERIAL
		MANNER
[- CONTROL]	▼	CIRCUMSTANCE

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,¹⁰ U the undergoer and S the situation.

T2. *Subcategories and abstract predicates of concomitant relations*

cognitive role	subrole	abstract predicate
C is COMITATIVE of A	C is PARTNER of A in S	C associates with A in S
	C is COMPANION of A in S	C accompanies A in S
C is INSTRUMENT in S	C is VEHICLE in S	A uses C for locomotion
	C is TOOL in S	A uses C in manipulating U

¹⁰ We neglect here the association of the partner or the companion with a non-actor.

	C is MATERIAL of U in S	A uses C in creating U
	C is MANNER of S	C applies to S ¹¹
	S' is CIRCUMSTANCE of S	A uses S' in 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 delimit 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 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.

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 causal, conditional, coordinative, 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[K]). 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.

¹¹ Technically: X(S), i.e. 'X' is a predicate applied to S.

- E17. a. Linda opened the door 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 purposive 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.

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 zhūo cāngyíng.
 CHIN I [use chopstick] catch fly
 'I catch flies with chopsticks.' / 'I use chopsticks to catch flies.'

The interpropositional relation between *yòng* and *zhūo* is not expressed in E18, and diverse 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 indicated. 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 *zhūo* 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 relation or certain local relations, 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 in E19 for Managalasi, a language of the New Guinea Highlands.

E19. Naumijaho apej-u-jine 'aiju nunijaho ape-na va-'e.
 MANAG [string get-PST]-when [knife my get]-and go-SS
 Ijǐ '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 sugarcane and ate it.' (Thompson & Longacre 1985:176)

A language in our sample which is characterized by the decomposition of complex situations is Hmong. Cf. E138.a below as a typical example.

3.4.2. Concomitant relation and interparticipant relation

The relations holding in a situation may be subdivided into participant and interparticipant relations. **Participant relations** are such that are mediated by the main predicate. An **interparticipant relation** is a direct relation between two participants irrespective of the 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 by which of the two relations they lend priority in coding. In Lehmann & Shin & Verhoeven 2000 [D], we concentrated on possessive and local interparticipant relationships. Participant roles 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 proprietive¹², which we are going to see in § 4.5.3, is a case essentially dedicated to this function.

¹² For the general functions of the proprietive, cf. Evans 1995, ch. 4.3.5, Maslova 1998, ch. 5.5.5.1, Stolz 2001[X].

3.4.3. Concomitance and possession

A concomitant is, in principle, a participant of its own. To the extent, however, that it is in the sphere of one of the more central participants (property 4 of F2), the concomitant relation is an interparticipant rather than a participant relation. To express this in English, a prepositional phrase introduced by *with* may be used as an attribute, as in E20.

- E20. a. An old man came with a dog.
 b. An old man with a dog came.
 c. Linda spoke to an old man with a dog.
 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.¹³ 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.

A concomitant that depends on another participant instead of on the situation core may be used as a point of reference for the identification for that other participant. This is so in E21.

- E21. Linda spoke to the old man with the dog.

This alternative is 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 the old man 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, as in E23.a. While the primary function of the concomitant is in predication, it does have a special affinity to the possessum, as we saw in § 3.4.2.

- E23. a. the old man's dog
 b. the old man with the dog

In E23.a, the old man is the possessor of the dog and is used for reference to the dog. In E23.b, the dog is the companion of the old man and is used for reference to him. The cognitive relation between the man and the dog, however, appears to be the same in both cases. In such circumstances, then, the comitative relation is the converse of the possessive relation (see Stolz 2001[X]).

The same is true if nominal expressions in the proprietive (or even the comitative) case are used as the predicate, as in E24.

¹³ The Yidj examples E86f below are similar.

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

Such constructions do not fulfill condition 1 (cum 5) of F2 as there is no situation that would be distinct from the concomitance. Naked concomitance without anything else is indistinguishable from possession.

The converse relation of the proprietive – a typological manifestation of the comitative subrole – to the possessive has, of course, been known. What we postulate here, more specifically, is the following proportion:

actor : proprietive : concomitant = undergoer : genitive : sympatheticus.¹⁴

Speaking in prose: The concomitant is associated most closely with the actor, and its adnominal manifestation is the proprietive NP as an attribute to the actor. The sympatheticus is associated most closely with the undergoer, and its adnominal manifestation is the genitive (or possessive) NP as an attribute to the actor.

In this study, we will concentrate on concomitance as it combines with a(nother) predicate.

3.4.4. Concomitance and coordination

Pursuing the last point further, semasiological analysis of concomitance relators 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 E25.a into a coordinative construction like E25.b.

- E25. 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 satis-

¹⁴ To recall the paradigmatic relation of the sympatheticus to the possessive, cf. the following Yucatec Maya example (from Lehmann et al. 2000[D], ch. 4.3) with its English translation:

T-in k'op-ah u ho'l le máak-o'.

PST-SBJ.1 SG hit-CMPL [POSS.3 head DEF person-D2]

‘‘I hit the man on the head.’’

factory account of the relationship between concomitance and coordination would require complementing our study of concomitance with one of coordination.¹⁵

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 E26.a, the undergoer is direct object; in E26.b, it is an instrumental adjunct.

- E26. a. Erna warf Steine (gegen das Fenster).
 GER '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 4 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 passive 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.

¹⁵ On this matter, see Stassen 2000 and Stolz 1998.

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 E27 represents the concomitant predication strategy. Here, the concomitant predicate is *péi* or *gēn*.

E27. Lisi **péi/gēn** tàitai qù yīyuàn.
CHIN 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**,¹⁶ otherwise, as in E27, it is a **coverb**.

Adpositional marking: There is a concomitant case relator at the structural level of an adposition, e.g. *mit* in E28. The relator *mit* forms an adpositional phrase with the concomitant NP, viz. *mit ihr* in E28.

E28. Peter fährt [**mit ihr**] an die See.
GER ‘Peter goes to the seaside with her.’

Case marking: The concomitant NP bears a case marker – generally a suffix – which signals its function. E29 illustrates this strategy for Turkish. The concomitant relator is the case suffix *-la* that forms a cased NP with the concomitant NP.

E29. Kapı -yı anahtar-**la** aç-tı-m.
TURK door-ACC [key-with] open-PST-1.SG
 ‘I opened the door with a key.’ (Kornfilt 1997:227)

Verb derivation: The main verb is derived in such a way as to take a concomitant as a direct complement. In E30, 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.

E30. waguḍa-ḡgu yabu:ṛ gali-**ḡal**-ju
YID man-ERG [girl(ABS) go-TRR-PST]
 ‘The man went with the girl’ (= The man took the girl) (Dixon 1977:431)

¹⁶ In Haspelmath & König 1995 (eds.), the term ‘converb’ is used. For the terminology of ‘gerund’ and ‘converb’, cf. Haspelmath 1995[c], § 7.

Incorporation: The main verb contains an incorporated concomitant noun, as in E31. In this case, there is no concomitant relator, and the concomitant construction is the incorporative verb.

E31. t-u pech'-k'ab/chek'-t-ah le ch'ik-o'
 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 *iron* in E32 (see § 4.4.6 and § 4.5.6).

E32. 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. *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. Criteria for an unambiguous 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 T3.

T3. *Strategies of concomitance*

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

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 coverbs¹⁷ to associate the reciprocal partner. The relevant Chinese verb is *gēn* ‘follow, accompany, with’, as in E33.

- E33. a. Tā gēn dírén zuò dòuzhēng.
 CHIN he [follow opponent] do fight
 ‘He fights with the opponent.’ (Bisang 1992:181)
- b. Wǒ gēn tā shuōhuà.
 I [follow he] talk
 ‘I talk with him.’ (Paul 1982:79)

¹⁷ For the function and syntactic category of coverbs in Chinese, cf. Li & Thompson 1974a, 1981, ch. 9, and Paul 1982.

While *gēn* may function as a coordinate conjunction in constructions with a companion such as E66.b below, in E33 it marks the partner of a reciprocal relation. Verbs that appear in reciprocal constructions include *dǎjià* ‘trash’, *shàngliàng* ‘debate’, *taǎolùn* ‘discuss’, *tántán* ‘talk, discuss’, *chǎo* ‘quarrel’ etc. In constructions in which *gēn* 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 E33.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 E34, 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).

E34. Wǒ gēn-zhe tā shuōhuà.
CHIN 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 E35.¹⁸ The coverb takes an animate complement and, together with it, may either precede or follow the main verb.

E35. Npawg hlob nrog Yawm Pus kam kam txog siav.
HMONG brother old [with Yaw Pu] fight fight arrive breath
‘The elder brother fought with Yaw 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 copula¹⁹ *gala* ‘be behind’, which takes its argument in the postessive case. It is being grammaticalized to a mere postposition meaning ‘with’, as in E36 (cf. Haspelmath 1993, ch. 12.2.3).

E36. Ča-z kwe-q^h galaz k’wal-er degišar-iz k’an-zawa.
LEZ we-DAT [you.all-POESS with house-PL change-INF] want-IMPF
‘We want to exchange apartments with you-all.’ (Haspelmath 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 (E38) and Yucatec Maya (E39) use prepositions to join the reciprocal partner (see § 5.1.10 for details on the Yucatec Maya preposition). E37 is ambiguous between a reciprocal reading (‘against her mother’) and a comitative reading (‘together with her mother’).

¹⁸ 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.

¹⁹ Properly speaking, a local existence verb.

E37. She fought with her mother.

E38. Max streitet mit Moritz.
GER ‘Max quarrels with Moritz.’

E39. 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 E40, the reciprocal partner is joined by the preposition *kàb* ‘with, together with’, and in E41, by the preposition *vó’i* ‘along with, in company of’.

E40. Cǎn lĕn pây kàb nố๓.
THAI I play card [with brother]
‘I play cards with my brother.’ (Warotamasikkhadit 1972:42)

E41. Cô ấy thích nha’y vó’i bố.
VIET she like dance [COM father]
‘She likes to dance with her father.’ (TNC)

In Turkish, the postposition *ile* ‘with’ marks the reciprocal partner (E42).

E42. 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 E48 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 E43.a. Or else they may follow non-last members in a series of coordinated NPs²⁰, in which case they have a coordinative function like English ‘and’, as in E43.b (cf. Sohn 1994, ch. 2.1.1.4.4).

E43. a. Toli-n n 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.’

²⁰ For the various functions of coordination, cf. Payne 1985.

- b. Toli-wa/-hako/-lang Suni-n n 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 E44 are structurally equivalent to E43.a and b. In the case of ‘meet’, the concomitant NP may, alternatively, be marked by the dative *-ni* (E44.c). The semantic difference between the additive and the dative versions in E44 is that the actor in the former case meets the concomitant intentionally whereas in the latter case he meets her accidentally.

- E44. 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 E45f.

- E45. a. Toli-n n 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-n n cal non-ta.
 [dog-ADD Toli-TOP] often/well play: PRS-DECL
 ‘The dog and Toli play often/well together.’
- E46. 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 E47 (Maslova 1998:383f).

E47. met irk-in paipe-uö-n'e 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 E48.a may be used as a colloquial alternative to E42. If the complement of the comitative-instrumental suffix *-(i)le/-(i)la* is a pronoun, as in E48.b, then it is in the genitive (cf. Kornfilt 1997, ch. 2.1.2.1.18.1).

E48. a. Elif-le görüş-tü.
 TURK [Elif-with] meet-PST(3.SG)
 'He/she met Elif.'

b. O-nun-la savaş-tı.
 [3.SG-GEN-with] fight-PST(3.SG)
 '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. E49 shows an example from Yukaghir.

E49. ta:t n'e-kim ej-l'el-ŋi.
 KOLYU CA 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.²¹

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

²¹ For the reciprocal verb derivation in Kayardild, cf. Evans 1995, ch. 7.4.3. and 9.3.1.

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. E50-E51 illustrate this for German and Yucatec Maya.

E50. a. Maria hat einen alten Mann geheiratet.

GER 'Mary married an old man.'

b. In der Stadt bin ich meinem Freund begegnet.

'Downtown I met my friend.'

E51. t-in núup'-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 (E52.a/b/c); in the intransitive use, they are coded as a prepositional object (E52.a'/b'/c').

E52. 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 E52.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 E52.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.²²

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 indicated. 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 E53, is most common. It is a gerund of a stem *teli-* ‘accompany’, which is no longer used as an independent verb.

- E53. a. *ku-nun atul-ul teli-ko phathi-e ka-ss-ta.*
 KOR 3.SG-TOP [son-ACC accompany-GER] party-LOC go-PST-DECL
 ‘He went to the party with his son.’
- b. *Toli-nun Suni-lul teli-ko cal non-ta.*
 Toli-TOP [Suni-ACC accompany-GER] well play: PRS-DECL
 ‘Toli likes to play with Suni.’

Comparing E53.b with E45.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 E53.b, for instance, this might mean that Toli takes care of Suni.

²² 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.

If the comitative is lower in empathy than the actor – in the simplest case it is an animal or a thing –, then the complex sentence 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 E54.a and unlike E45.a, E54.b only has a non-reciprocal, i.e. a comitative, reading.

- E54. a. *ku-nūn kae-lūl teli-ko/mol-ko kongwon-e kass-ta.*
 KOR 3.SG-TOP [dog-ACC accompany-GER/lead-GER] park-LOC go: PST-DECL
 ‘He went to the park with the dog.’
- b. *Toli-nūn kae-lūl 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 (E55.b). Instead, the complex sentence strategy rules alone. A suitable verb meaning ‘carry’, ‘take’ or ‘have’ must be chosen, as in E55.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 E55.c.

- E55. a. *ku-nūn kkochtabal-ūl (hana) tūl-ko/kaci-ko wass-ta.*
 KOR 3.SG-TOP [flower:bundle-ACC one carry-GER/have-GER] come:PST-DECL
 ‘He/she came with a bunch of flowers.’
- b. **ku-nūn kkochtabal-kwa/-hako/-ilang wass-ta.*
 3.SG-TOP [flower:bundle-ADD/-ADD/-ADD] come:PST-DECL
 ‘He/she came with a bunch of flowers.’
- c. *ku-nūn kkochtabal-kwa/-hako/-ilang sēnmul-ūl*
 3.SG-TOP [flower:bundle-ADD/-ADD/-ADD] present-ACC
tūl-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 E56, the verb *ture* ‘lead’ is generally used. Confectives are joined by verbs meaning ‘have’ or ‘carry’, as in E57.a. The additive case is excluded (E57.b).

- E56. *Taro-wa Hanako-o ture-te kaimono-ni it-ta.*
 JAP Taro-TOP [Hanako-ACC lead-GER] shopping-LOC go-PST
 ‘Taro went shopping with Hanako.’

- E57. a. kare-wa koohii-o mot-te kaet-ta.
 JAP 3.SG.M-TOP [coffee-ACC carry-GER] return-PST
 ‘He came back with coffee.’
- b. *kare-wa koohii-to kaet-ta.
 3.SG.M -TOP [coffee-ADD] return-PST
 ‘He came back with coffee.’

In Lezgian, the concomitant predicate *galaz* already introduced in section 4.2.1 is chiefly used to code a human companion (E58). There is another concomitant predicate *gwaz* for the coding of an animate (E59) or inanimate companion (E60). The latter is the converbal form of the local copula *gwa* ‘be at’ and takes an absolutive argument (cf. Haspelmath 1993, ch. 12.2.3).

- E58. I kolkhoz-r-a lezgi-jr.i-q^h galaz azerbajžan-r.i,
 LEZ this kolkhoz-PL-INNESS [Lezgian-PL-POESS with] Azerbaijan-PL(ERG)
 ermeni-jr.i stxawil.e-ldi zehmet č’ugwa-zwa.
 Armenian-PL(ERG) fraternity-SRDIR work pull-IMPF
 ‘Azerbaijanis and Armenians work fraternally together with the Lezgians in these collective farms.’ (Haspelmath 1993:225)
- E59. Gada ġürč-äj sa ġizil.di-n k’ek gwaz xta-na.
 LEZ boy hunt-INEL [one gold-GEN rooster with] return-AOR
 ‘The boy returned from hunting with a golden rooster.’ (Haspelmath 1993:226)
- E60. VIII asir.d-a lezgi čil-er.a-l arab-ar
 LEZ 8 century-INNESS Lezgian land-PL-SRESS Arab-PL
 tur-ni zur gwaz ata-na.
 [sword-and violence with] come-AOR
 ‘In the 8th century, the Arabs came to the Lezgian lands with sword and violence.’ (l.c.)

Finally, the concomitant predicate *awa-j*, as in E61, may code companions to places (cf. E9 above). *Awa-j* is a participle of the local copula *awa* ‘be in’ (also appearing in E97 below).

- E61. Rahman.a balk’an ġacu weq’-er awa-j č’ur.a-l tuxwa-na.
 LEZ Rahman(ERG) horse [green grass-PL be.in-PART] pasture-SRESS lead-AOR
 ‘Rahman led the horse to a pasture with green grass.’ (Haspelmath 1993:99)

While the postpositional *galaz* in E58 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 E59 – E61 are such verbs (cf. Haspelmath 1993, ch. 17.6.2). The verb forms

kaciko ‘take, have’ in E55.a and *motte* ‘carry, have, take’ in E57.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:ə* ‘be’, a complex coverb *cì:ə-mù:əy-nùŋ* ‘be-one-tight, forming a unit with’ is formed to express the sense ‘together with’. It appears in E62 (cf. Bisang 1992:427).

- E62. khnom cəŋ t̀u srok-khmae(r)
 KHMER I will go Cambodia
- cì:ə mù:əy nùŋ mùt(r)-səmlap khmae(r) khnom
 [be one with friend Khmer I]
- ‘I would like to go to Cambodia with my Khmer friends.’ (l.c.)

Hmong here uses the same coverb *nrog* ‘be with, accompany, follow’ that we encountered in reciprocal constructions. In preverbal position, as in E63, *nrog* may only be used with an animate companion (cf. Bisang 1992:258).

- E63. a. Npawg yau txawm nrog npawg hlob nyob.
 HMONG brother young then [with brother old] stay
 ‘The younger brother stayed (together) with the elder brother.’ (o.c. 258)
- b. Koj puas yeem nrog kuv mus?
 you INT agree [with I] go
 ‘Do you agree to go with me?’ (o.c. 276)

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 E64, while the verb *cầm* ‘take’ specifies a confective relation, as in E65. However, Vietnamese prefers the adpositional phrase strategy (see E79f).

- E64. Chị ấy đi theo bố.
 VIET she go follow father
- Ông ấy đi Pháp, đem theo con gái.
 he go France [take follow daughter]
- ‘She follows her father. He goes to France, taking his daughter along.’ (Bisang 1992:312)
- E65. Anh ấy đến trên tay cầm (một) bó hoa.
 VIET he come [LOC hand carry one bundle flower]
 ‘He came with a bunch of flowers in the hands.’ (TNC)

Mandarin again uses the verb *gēn* ‘follow, accompany’. The alternative constructions of E66.a and b are due to the differential symmetry between the actor and comitative roles in the situation. In E66.a, the comitative subconstruction is close to the main verb, so that the actor alone controls the main situation. In E66.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.

- E66. a. Wǒ xiǎng míngtiān gēn tā yíkuàir chūqù.
 CHIN I want tomorrow [follow he] together go.out
 ‘Tomorrow, I would like to go out together with him.’ (Bisang 1992:181)
- b. Wǒ gēn tā xiǎng míngtiān yíkuàir chūqù.
 [I follow he] want tomorrow together go.out
 ‘Tomorrow, he and I would like to go out together.’ (Bisang 1992:181)

Besides, the coverb *hé* ‘mix > with’ (cf. Li & Thompson 1981:368) can be used instead of *gēn*, as in E67 and E68.b.

- E67. Bié hé wǒ kǎiwánxiào.
 CHIN PROHIB [with I] joke
 ‘Don’t joke with me.’ (Li & Thompson 1981:364)

The constructions in E68 show confective situations. In this case, the use of *gēn* or *hé* is excluded. Instead, verbs like *ná* ‘take’, *dài* ‘bring’ (E68.a), *duān* ‘carry’, *jiā* ‘add’ (E68.b) etc. are commonly used to specify the concomitant relation of a thing to the actor.

- E68. a. Tā dài le yī bēi kāfēi huilai.
 CHIN he [bring PF one cup coffee] back:come
 ‘He came back with a cup of coffee.’ (SL)
- b. Tā hē kāfēi jiā táng hé/gēn niúǎi.
 he drink coffee [add sugar] [with/follow milk]
 ‘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 (E66.b and E68.b), so that they can function in coordination.

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.

- E69. táan u tàal-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)
- E70. he’ u páah-tal a bis-ik-en-e’x
 YM DEF.FUT SBJ.3 possible-PROC SBJ.2 carry-INCMPL-ABS.1.SG-2.PL
 xàan t-a wéetel-e’x-e’ ?
 also [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 connective, as in E71.

E71. k-u tàal le mèn-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 *nùŋ*, which has somehow been clipped from the complex *ci:ə-mù:əy-nùŋ*²³ 'be-one-tight' that was seen in § 4.3.1 and appears in E72.

E72. yùp nih mùt(r)səmləŋ n̄u nùŋ khnom.
 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.

E73. phǒm paj duu nǎŋ kàb phýan phǒm.
 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 E74.

E74. hi na-ngangu dàngu nyungga.
 KAM CNJ 3.SG.NOM-eat [with I]
 'so he'll eat with me.' (Klamer 1998:297)

German like Yucatec Maya and English has a catch-all preposition *mit*, which is used both in stative (E75.a) and in dynamic (E75.b) situations, both with empathic (E75.a/b) and anempathic (E75.c/d) comitatives, both in concomitance with the actor (E75.a/b/c) and with the undergoer (E75.d).

- E75. a. So etwas wird es mit uns nicht geben.
 GER 'This is not going to happen as long as we are there.'²⁴
- 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.'

²³ The morpheme *nùŋ* may also be used as a locative marker meaning 'in, on', and may also have the function 'for' (cf. Bisang 1992:431).

²⁴ Cf. E84.c from Kayardild for this use of a comitative phrase.

This preposition may be used without a complement, in the sense of Engl. *along*, as in E76 (cf. Zifonun 1999). The companion then remains implicit and has to be inferred from the context. In an intransitive construction, as in E76.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’. E76.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 E77.

- E76. a. Hans geht mit zum Zahnarzt.
 GER ‘John goes along (with someone) to the dentist.’
 b. Heinrich_i verließ am nächsten Tag die Stadt. Luise reiste mit (ihm_i).
 ‘The next day, Henry left the city. Luise traveled with him.’ (o.c.)

- E77 a. Friedrich schickt Hans mit zum Zahnarzt
 GER ‘Fred sends John along to the dentist.’
 d. Eva packt den Kuchen mit in das Paket.
 ‘Eva packs the cake into the package together with the rest.’ (o.c.)

In E78.a, the unfilled argument slot of *mit* once more implies the undergoer as the companion of Elise. This time, however, the undergoer is reflexively identical with the actor (cf. Zifonun 1999). This analysis is supported by the non-elliptic variant construction of E78.b.

- E78 a. Hans nimmt Elise mit zum Zahnarzt.
 GER ‘John takes Elise along to the dentist.’
 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 *vớ*́*i* ‘along with, in company of’ is usable for a human companion, as in E79.a, as well as for an animate or an inanimate companion, as in E79.b/c.

- E79. a. Tôi đi xem phim vớ*́*i cô ấy.
 VIET I go look film [COM she]
 ‘I went to the movies with her.’ (TNC)
 b. Cô ấy đi dạo cho*́*i vớ*́*i con chó.
 she go go walk [COM dog]
 ‘She walked with her dog.’ (TNC)
 c. Anh ấy đến vớ*́*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 *vớ'i* is optional, as in E80. Thus, the referent of the unfilled argument slot of *vớ'i* has to be inferred from the context. In E80, the elder brother addressed in the first clause is the companion of the speaker-agent in the following clause (Thompson 1987:272).

E80. Anh đi cho'i, tôi cùng đi vớ'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 (E81.a). The coordinative version E81.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.

E81. 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, E81.c has the same structure as E45.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 E82.b is ambiguous between a collective and a distributive reading (cf. Hinds 1988: 201-202).

E82. 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)

- E86. a. wagu:ɖa buɲa:y gali-ŋ
 YID man(ABS) [woman-COM] go-PRS
 ‘The man is going with the woman’ (Dixon 1977:109)
- b. wagu:ɖa ɲina-ŋ waga:l-ɖi
 man(ABS) sit-PRS [wife-COM]
 ‘The man is sitting with his wife.’ (Dixon 1977:303)
- E87. ɲayu ɖana-ŋ ɖugi:
 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 *dàngu* ‘with/and’, which we have seen in § 4.3.2, is actually rarely used in comitative constructions. Instead, the derivational verb affix *-dà* 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 E88 (cf. Klamer 1998 ch. 7.2.2).

- E88. 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)

Yidjɲ uses a transitivizing verb derivation to adjoin a variety of participants (cf. Dixon 1977, ch. 3.8.5, 4.3.3 – 4.3.7). An intransitive base is transitivized with the suffix *-ŋa-l* (or one of its allomorphs) and now governs an erstwhile peripheral participant in absolutive function. This covers the comitative function, as in E89, so that we get a transformational relation to the comitative case seen before (E86f).

- E89. a. waguɖa-ŋgu buɲa gali:-ŋa-l
 YID man-ERG woman(ABS) go-TRR-PRS
 ‘The man is going with / taking the woman.’ (Dixon 1977:109, 293)
- b. waguɖa-ŋgu wagal ɲina:-ŋa-l
 man:ERG wife(ABS) sit-TRR-PRS
 ‘The man is sitting with [his] wife.’ (Dixon 1977:303)
- c. ɲayu ɖugi ɖana:-ŋa-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 (E89.a/b) and with anempathic (E89.c) companions, in dynamic (E89.a) as well as in stative (E89.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., § 2.3.2.3, present a scale of incorporability of participants with diverse roles. In the order of increasing incorporability, it takes the following form:

agent < comitative < $\left\{ \begin{array}{l} \text{experiencer} \\ \text{recipient} \\ \text{beneficiary} \end{array} \right.$ < local roles < instrument < theme < patient.

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 confective may be incorporated, as in E90 (see Lehmann & Verhoeven, this vol., § 3.4.2.3).

E90. Yi-yiwk-yi-rrurnde-ng.
MAY 2/(3)-honey-COM-return-NONPST
'You are taking the honey back.' (Evans 1997:410)

The constraint valid in Mayali – comitative may be incorporated only if inanimate – confirms the cross-linguistic rule.

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-PROPR]_{intr.v} meaning 'be (provided) with X, have X' (illustrated by E24; see Maslova 1999:150f), and a dynamic variant [[X]_N-PROPR.INCH]_{intr.v} 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 a human, or marginally an animate one, whereas the concomitant predication strategy may be used with a human, an animal, or with 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, for 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 E91, 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.

E91. kɯ-nɯn mok-pal-ul cip-ko (kəl-ə) ka-ss-ta.
 KOR 3.SG-TOP [wood-leg-ACC lean-GER] walk-GER go-PST-DECL
 ‘He walked on crutches.’

An animate means of locomotion is always linked by the verb *thako* (E92.a); the instrumental is ruled out in this situation (cf. E120 below). The same verb is also used to specify a technical means of locomotion, as in E93.a/b, and is preferred to the instrumental variant to be discussed below.

- E92. Cholsu-nūn mal-ul tha-ko kongwŏn-e ka-ss-ta.
 KOR Cheolsu-TOP [horse-ACC ride-GER] park-LOC go-PST-DECL
 ‘Cheolsu went to the park on horseback.’
- E93. a. kŭ-nūn kicha-lul tha-ko ka-ss-ta.
 KOR 3.SG-TOP [train-ACC ride-GER] go-PST-DECL
 ‘He went by train.’
- b. na-nūn onul cacŏnkŏ-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 E94.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 E94.b and *meko* ‘load (on the shoulder)’ in E94.c. These verbs govern their complement in the locative case.

- E94. a. kŭ-nūn cim-ul cacŏnkŏ-/mal-e sit-ko unpanhaess-ta.
 KOR 3.SG-TOP baggage-ACC [bicycle-/horse-LOC load0-GER] transport:PST-DECL
 ‘He transported the baggage on the bicycle/horse.’
- b. kŭ-nūn cim-ul mŏli-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. kŭ-nūn cim-ul ŏkke-e me-ko unpanhaess-ta.
 3.SG-TOP baggage-ACC [shoulder-LOC load2-GER] transport:PST-DECL
 ‘He transported the baggage on his shoulder.’

Besides, the constructions with the instrumental case marking are also available in expressions of transport (see E121). In Korean, compared to the means of locomotion (E92f), a means of transport is conceived as a location.

In Japanese, too, if the means of locomotion is an animate being, as in E95.a, the use of the gerundive *notte* ‘riding’ is more common than the variant with an instrumental case (as in E122.a below). A technical means of locomotion can also be joined by *notte*, as in E95.b. In this case, however, the instrumental variant (E122.b) is preferred.

- E95. 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 tookyoo-e it-ta.
 3.SG.F-TOP [train-LOC ride-GER] Tokyo-ALL go-PST
 ‘She rode on a train to Tokyo.’ (YN)

An animate or technical means of transport is expressed by the gerundive *nosete* ‘loading’, as in E96.

- E96. kare-wa uma-ni / zitsensya-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 predication strategy, too. In E97, the converb *awaz* joins a technical means of locomotion.

- E97. Alidi-z balk’an ina tu-na mašind-a awa-z
 LEZ Ali-DAT horse here leave-AOC [car-INESS be.in-IMC]
 q fi-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.’ (Haspelmath 1995[C]:423)

Awaz is the converbal form of the generic local copula *awa* ‘be in’, which generally governs an NP in the inessive. *Awa* is also used as a possessive verb in the sense of ‘have’ (cf. Haspelmath 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 (E98.a) or a technical means of locomotion (E98.b); but in the case of a body part, the coverb *yòng* ‘use’ is employed, as in E98.c.

- E98. a. Tā qí-zhe mǎ huílai le.
 CHIN 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 E99. 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 E98.a/b.

- E99. a. Nǐ néng yòng zìxíngchē bǎ dōngxi yùn guòlai ma?
 CHIN you can [use bicycle] ACC things transport VEN INT
 ‘Can you fetch/get the things on the bicycle?’ (SL)
 b. Nóngmín yòng mǎ yùn mùtòu.
 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 (E100.a) and

for a body part used for locomotion (E100.b). Another such coverb is *cih* ‘ride, get on’, as in E101.

E100. a. ʔo:pùk khnom t̃̀u thù:-ka:(r) daoy la:n.
 KHMER father I go work [follow car]
 ‘My father goes to work by car.’ (Bisang 1992:428)

b. k̀ə̀t daə(r) daoy c̃̀:ŋ.
 he go [follow foot]
 ‘He goes on foot.’ (Bisang 1992:428)

E101. khnom cih kəŋ t̃̀u m̃̀:l srok-phù:m(i) cùt-kha:ŋ.
 KHMER I [ride bicycle] go see environs neighbouring
 ‘I am taking the bike to see the neighboring areas.’ (Bisang 1992:429)

Thai uses the coverb *ʔaw* ‘take’ for means of locomotion, as in E102.

E102. kháw ʔaw ródfai paj kruŋthēeb.
 THAI he [take train] go Bangkok
 ‘He is taking the train to Bangkok.’ (Bisang 1992:375)

Vietnamese offers a choice of several instrumental relators for vehicles. E103 shows the motion verb *đi* ‘go’ in coverb function. Compared with this, the verb *dùng* ‘use’ is the more general relator for vehicles. This verb may code both an animate (E104.a) and a technical means of locomotion (E104.b). With this coverb, the goal of locomotion always has to be mentioned (cf., on the contrary, E114).

E103. Tôi đi xe đi học.
 VIET I [go car] go learn
 ‘I am taking the car to school.’ (Bisang 1992:317)

E104. a. Anh ấy dùng ngựa^a đến Sài Gòn.
 VIET he [use horse] go.to Saigon
 ‘He rode a horse to Saigon.’ (TNC)

b. Tôi dùng xe đạp đến Sài Gòn.
 I [use bicycle] go.to Saigon
 ‘I traveled to Saigon by bicycle.’ (TNC)

The verb *dùng* may also be employed to join an animate or a technical means of transport, as can be seen in the following example:

E105. Anh ấy dùng xe đạp / ngựa^a cho^ʔ nu’ó’c uống.
 VIET he [use bicycle / horse] transport drinks
 ‘He transported the drinks on the bicycle / horse.’ (TNC)

Alternatively, means of locomotion (or transport) may be marked by the generic instrumental preposition *bằng* ‘with’ (see § 4.4.2). Prepositional phrases are postverbal in ver-

nacular 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 E106. A technical means of locomotion is generally expressed by use of the preposition *mit* 'with', as in E107.

- E106. a. Sie kam zu Pferde / auf dem Esel.
 GER '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.'
- E107. a. Sie fährt mit dem / im Rollstuhl.
 GER 'She uses a wheelchair.'
- b. Sie fliegt mit dem Flugzeug.
 'She is going by plane.'

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:

- E108. Er läuft erstaunlich schnell zu Fuß / auf den Händen / mit seinem Holzbein.
 GER 'He walks surprisingly fast on foot / on his hands / with his wooden leg.'

Likewise in English, objects used for locomotion are viewed as instruments (E109), while vehicles are rather locations (E110).

- E109. He walks with a cane. (Nilsen 1973:79)
- E110. 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 (E111.a) and a technical vehicle (E111.b).

- E111. 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 tàal yéetel hun-p'éeł máquina.
 PROG SBJ.3 come [with one-CL.INAN machine]
 'He is coming with a vehicle.' (MUUCH 227)

The constructions in E112 represent a situation with a body part as means of transport. Here the preposition *éetel* may again be used, as in E112.a. However, such a relation is more naturally expressed by the locative preposition *ti'/t-*, as in E112.b.

- E112. a. Pedroh-e' t-u k'óoch-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 *ɾaw* seen in E102, Thai may use the preposition *dooj* 'by' (E113) to adjoin a means of locomotion. The two relators do not differ much with respect to grammaticalization.

- E113. kháw paj kruŋthêeb dooj ródfai.
 THAI he go Bangkok [with train]
 'He is taking the train to Bangkok.' (Bisang 1992:375)

For Vietnamese, E114 features the generic instrumental preposition *bằng* 'with'. It is used both for animals (E114.a), for technical means of locomotion (E114.b) and for body parts used as means of locomotion (E115.a).

- E114. a. Anh ấy đi bằng ngựa[?]a (đến vu[?]o[?]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 by plane (to Tokyo).' (TNC)

- E115. a. Anh ấy có thể[?] đi bằng tay.
 VIET he can go [INST hand]
 'He can walk on his hands.' (TNC)
 b. *Anh ấy có thể[?] đi vớ*i* tay.
 he can go [COM hand]

The instrumental preposition may also be employed to code a technical or an animate means of transport, as in E116.

- E116. Anh ấy cho[?] nu[?] ó[?] c uống bằng xe đạp / ngựa[?] a.
 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 *vo[?]i*, which is used for comitative relations (cf. E115.b with E79 and E154.b). Thus, in E117, the prepositional phrase *vo[?]i ngựa[?]a* does not express a means of locomotion but a companion of the actor.

- E117. Anh ấy đến vu[?] ó[?] n hoa vo[?] i ngựa[?] a.
 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 E118. Compare the minimal pair E91 vs. E118, where the polysemous *mokpal* is first a technical instrument, then a body part.

- E118. kũ-nũn mok-pal-lo chẽnchẽnhi kəl-ə ka-ss-ta.
 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 E119.

- E119. kũ-nũn kicha-lo ka-ss-ta / wass-ta.
 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 E93.a, is more common than the instrumental variant. If the means of locomotion is animate, as in E120, the construction with *thako*, as in E92.a, is the only choice.

- E120. *Chølsu-nũn mal-lo kongwøn-e ka-ss-ta.
 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 (E121), but cannot be used for an animate means of transport, which usually requires the concomitant predication strategy (cf. E94.a).

- E121. kũ-nũn cacẽnkø-lo ւmsik-ւl unpan- / paetalhae-ss-ta.
 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 E122. However, in the former case the version with the verb *notte* ‘ride’ (see E95.a) is preferred and in the latter case the instrumental version (E122.b) is favored.

- E122. a. kanozyo-wa uma-de siro-e it-ta.
 JAP 3.SG.F-TOP [horse-INST] castle-ALL go-PST
 ‘She went to the castle on horseback.’ (YN)
- b. kanozyo-wa densya-de tookyoo-e it-ta.
 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 E123.a; but it is the default in marking a technical means of transport, as in E123.b.

- E123. a. [?]kare-wa uma-de mono-o hakon-ta.
 JAP 3.SG.M-TOP [horse-INST] thing-ACC transport-PST
 ‘He transported the things on the horse.’ (YN)
- b. kare-wa zitensya-de mono-o hakon-ta.
 3.SG.M-TOP [bicycle-INST] thing-ACC transport-PST
 ‘He transported the things on the bicycle.’ (YN)

Instead of the case marking strategy in E122.a and E123.a, the concomitant predication strategy is most commonly used if an animate being is used as a vehicle (cf. E96).

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

- E124. šl’upke-le anubuska-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 (E125.a), a body part (E125.b), and a vehicle (E125.c) as a means of locomotion. In certain cases such as E126, the body part may also be marked by the locative.

- E125. a. At-la gel-di.
 TURK [horse-with] come-PST(3.SG)
 ‘He came on horseback.’ (GJ & YT)
- b. Tahta bacağ-ı-yla bayağı hız-lı yür-ür.
 [wood leg-POSS.3-with] quite speed-ADJR walk-DISP(3.SG)
 ‘He walks very fast with his wooden leg.’ (GJ & YT)

- c. Bugün Oktay bisiklet-le üniversite-ye gel-di.
 today Oktay [bicycle-with] university-ALL come-PST(3.SG)
 ‘Today Oktay came to the university by bicycle.’ (GJ & YT)

E126. 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, Yidiñ may still use the comitative case mentioned in § 4.3.3, as in E127.

E127 ḡayu gana guwa gali:-na mandi: ḡubu:-y
 YID I(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, Yidiñ possesses an instrumental case whose allomorphs are *-la ~ -da ~ -:l ~ -:.* Its functions cover first the instrumental function proper including the means of locomotion, as in E128, second the undergoer of the antipassive, and third the local functions of locative and allative (cf. 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.

E128. bama bangi:lan warḡa:n-da gada:ḡ 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 E129. E129.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 (E129.b).

E129. 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 transitivity suffix of Yidj is relatively insensitive as to the participant role of the absolutive argument it creates. In E130, it is used to join a means of locomotion (cf. E127).

E130 η ayu \dot{q} ubu gali:- η al mandi:
 YID I(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 Yidj.

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 E131.

E131. a. Táan in kuchpacht-ik in nal.
 YM PROG SBJ.1.SG load:back:TRR-INCMPL POSS.1.SG corn
 'I am carrying my corn on my back.' (BRICK 0027)

b. Pèedroh-e' t-u k'óochho'lt-ah hun-kùuch si'.
 Pedroh-TOP PST-SBJ.3 carry.on.shoulder:head:TRR-CMPL one-load firewood
 'Peter carried one load of firewood on his head.' (SBM 0226)

Both the verb *kuch-pacht-t* (E131.a) and *k'óoch-ho'l-t* (E131.b) contain an incorporated body-part noun, viz. *pacht* 'back' (E131.a) and *ho'l* 'head' (E131.b), referring to the means of transport. This construction is more common than the variant with the instrumental preposition (E112.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 E132.

E132. a. Wir sind zur nächsten Bahnstation geradelt.
 GER '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* ‘crawl’ (all fours), *kriechen* ‘crawl’ (belly), *fliegen* ‘fly’ (wings), *fahren* ‘drive’ (land or sea vehicle).

We have seen a similar case in E94 for Korean, viz. the verbs for transporting something with a body part: *ita* ‘load/carry on the head’, *meta* ‘load/carry on the shoulder’, *t Ita* ‘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 predication 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 they are marked by the corresponding locative case relators. In German, English, Japanese, 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 (E133.b with the meaning ‘crutch’, E134), but not for body parts (E133.a and E133.b with the meaning ‘wooden leg’).

- E133. a. **ku namca-nun pal-ul kaki-ko kul-ul cal ssun-te.*
 KOR D3 man-TOP [foot-ACC take-GER] script-ACC well write-EVID
 ‘The man is said to write well with his foot.’
- b. *ku-nun mok-pal-ul kaki-ko mun-ul chyöss-ta / *cha-ss-ta.*
 3.SG-TOP [wood-leg-ACC take-GER] door-ACC hit:PST-DECL/kick-PST-DECL
 ‘He banged against the door with a crutch.’
 *‘He kicked against the door with his wooden leg.’
- E134. a. *?uli-nun cöckalak-ul kaki-ko pap-ul mök-nun-ta.*
 KOR 1.PL-TOP [chopstick-ACC take-GER] boiled.rice-ACC eat-PRS-DECL
 ‘We eat rice with chopsticks.’
- b. *ku-nun mangchi-lul kaki-ko cha-lul pusu-öss-ta.*
 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 E135, or for other default instruments, as in E136.a. It is more common if special emphasis is laid on the use of the particular instrument, as in E136.b.

- E135. *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)
- E136. a. *?watasitati-wa hasi-o tukat-te gohan-o tabe-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’ (E137) and *xuas* ‘use, employ, with’ (E138), the latter of which is more grammaticalized and consequently more common.

- E137. *koj muab tes tuav diav mas!*
 HMONG you [take hand] hold spoon IMP:PEJ
 ‘Hold the spoon with your hands!’ (Bisang 1992:218)

- E138. 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 *yòng* ‘use’ and *ná* ‘take’, as in E139f. They may be used both for body parts and for other instruments and are interchangeable in E139 and E140.

- E139. a. fāmen yòng shǒu chī-fàn
 CHIN they [use hand] eat-food
 ‘They eat with their hands.’ (Li & Thompson 1981:597)
- b. Tā yòng kuàizi chī-fàn.
 he [use chop.stick] eat-food
 ‘He eats with chop sticks.’ (SL, Bisang 1992:184)

- E140. Lisi ná dāo qiē ròu.
 CHIN Lisi [take knife] cut meat
 ‘Lisi takes a knife to cut meat / Lisi cuts meat with a knife.’ (SL, Luo 1999:4)

Kamera, too, joins this group with a coverb *wàngu* ‘use, apply’, which appears in E141.

- E141. 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 *praə* ‘employ’, as in E142. 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.

- E142. kɔət praə kambɔt kat sac-crù: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 verb in situations of manipulation, *yò:k ... (mò:k)* ‘take... (VENITIVE)’, whose second part is optional (cf. Bisang 1992:434f.) and which appears in E143.²⁵

E143. kòət yò:k kambɔt mò:k kat sac-crù: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 *lấy* ‘take’ is still used as a full verb, as in E144.a. Here, the main clause and the purposive clause are linked by the conjunction *để* (cf. Bisang 1992:321-322). In E144.b, the same item functions as an instrumental coverb.

E144. a. Nó lấy cuốc để cuốc vườn.
 VIET he take hoe CNJ hack garden
 ‘He takes a hoe to hack the garden.’ (Bisang 1992:322)

b. Vua lấy thanh kiếm ấy đánh thắng giặc.
 king [take CL sword DEM] hit win enemy
 ‘The king defeated the enemy with this sword.’ (Bisang 1992:318)

Furthermore, there is the coverb *dùng* ‘use’, which appears as an instrumental marker in sentences such as E145.

E145. a. Chúng tôi dùng đũa ăn cơm.
 VIET we [use chop.stick] eat rice
 ‘We eat rice with chop sticks.’ (Bisang 1992:317)

b. Mỹ dùng máy bay ném bom Việt Nam.
 America [use airplane] bomb Vietnam
 ‘America bombed Vietnam with bombers.’ (TNC)

Thai uses two verbs to join an instrument of manipulation, *cháj* ‘employ, use’ (E146) and *lấy* ‘take’ (E147). Only the latter is possible with body parts, as in E147.b.

E146. sùdaa cháj phimdiid phim còdmáaj.
 THAI Sudaá [use typewriter] type letter
 ‘Sudaá uses the typewriter to type letters.’ (o.c. 374)

E147. a. phǒm ?aw mǐid khǎa kháw.
 THAI I [take knife] kill he
 ‘I’ll kill him with a knife.’ (o.c. 373)

b. naaj khǎaw ?aw hǔa chon kampheej.
 Mr. Khaaw [take head] toss wall
 ‘Mr Khaaw bangs his head against the wall.’ (o.c. 373)

²⁵ Cf. Bavarian and Upper German *er nimmt ein Messer her* ‘he uses a knife’.

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

In Korean and Japanese as illustrated in E133 – E136, the morphology of the concomitant predicate clearly marks it as syntactically subordinate, so that the structure here corresponds to 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 E141 is clearly being grammaticalized to a coverb and further to a preposition, so here again we can assume that the instrumental expression is structurally subordinate to the main clause.

Things are more complicated in Hmong (E137f), Mandarin (E139f), Khmer (E142f), Vietnamese (E144f) and Thai (E146f). 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 could be coordinative, or if the first verbs are grammaticalized to coverbs, the first clause could 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 one, which would be semantically superordinate; or the first 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 E147. 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. On the basis of 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 E148, is again marked by the same preposition.

- E148. a. Er hat sich das Gesicht mit Ruß beschmiert.
 GER ‘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 E149, and for other instruments, as in E150.

E149. a. Maria-e' túun bo'bóoh-t-ik hòolnah 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. kex tuméen ma' k il-ik yéetel k ich
although because NEG SBJ.1.PL see-INCMPL [with POSS.1.PL eye]
‘although we don’t see him with our eyes.’ (FCP 141)

E150. káa t-u k'ax-ah u chàan t'ùup bòonol-e'
YM CNJ PST-SBJ.3 tie-CMPL SBJ.3 little youngest.sibling tinted-CNTR
yéetel hun-xéet' nòok'
[with one-piece dress]

‘and he tied his tinted little finger with a piece of cloth’ (HK'AN 0075.1)

Thai uses a preposition *dúaj* for default instruments, both body parts, as in E151.a, and other objects, as in E151.b (cf. E146). A mass used as an instrument, as in E151.c, is marked by the same preposition.

E151. a. Sùdaa mɔɔŋ dúaj taa.
THAI Sudaá see [with eye]
‘Sudaá sees (sth.) with her eyes.’ (Bisang 1992:374)

- b. Sùdaa phim còdmăaj dúaj phimdiid.
Sudaá type letter [with typewriter]
‘Sudaá writes a letter with a typewriter.’ (Bisang 1992:374)

- c. hóm khâa khon khon nán dúaj jaa-phíd.
I kill personCL DEM [with venom]
‘I kill him with poison.’ (Bisang 1992:374)

Similarly, Khmer uses a postverbal prepositional phrase with *nùŋ* for instruments that do not exceed expectations, as in E152.

E152. kòət kat sac-crù:k nùŋ kambɔt.
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 (see E42), as in E153.

- E153. Adam bir sopa ile bir kurd-u öl-dür-dü.
 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 *bằng*, which appears in the variant E154.a of E145 and which we have already seen in E114. The preposition *bằng* also marks body parts as a tool, as in E155. The preposition *vớ’i*, on the other hand, as in E154.b, is excluded from the expression of a means of manipulation.

- E154. a. Chúng tôi ăn cơm bằng đũa.
 VIET we eat rice [INST chop.stick]
 ‘We eat rice with chop sticks.’ (Bisang 1992:317)

- b. *Chúng tôi ăn cơm vớ’i đũa.
 we eat rice [COM chop.stick]

- E155. Anh ấy có thể² viết / vẽ bằng chân.
 VIET he can write / paint [INST foot]
 ‘He can write/paint with his foot.’ (TNC)

4.5.3. Case marking

Korean may use its instrumental case in *-()lo* both for body parts, as in E156, and for other instruments, as in E157. Compare E156 with E133 and E157 with E134 (cf. Sohn 1994, ch. 2.1.1.4.3).

- E156. a. ku 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.’
- b. ku-nun mok-pal-lo mun-ul chyæss-ta / cha-ss-ta.
 3.SG-TOP [wood-leg-INST] door-ACC hit:PST-DECL / kick-PST-DECL
 ‘He banged against the door with a crutch.’
 ‘He kicked against the door with his wooden leg.’
- E157. a. uli-nun cœkalak-ulo pap-ul mœk-nun-ta.
 KOR 1.PL-TOP [chop.stick-INST] boiled.rice-ACC eat-PRS-DECL
 ‘We eat rice with chop sticks.’
- b. ku-nun mangchi-lo mos-ul pak-ass-ta.
 3.SG-TOP [hammer-INST] nail-ACC drive.in-PST-DECL
 ‘He drove in a nail with a hammer.’

The situation in Japanese is again similar. The examples E135f, which were somewhat forced with gerunds, become quite natural with the instrumental case, which may be employed both for body parts, as in E158, and for other instruments, as in E159.

- E158. kanozyo-wa 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)
- E159. a. watasitati-wa 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. kare-wa kanaduti-de kuruma-o kowasi-ta.
 3.SG.M-TOP [hammer-INST] car-ACC break-PST
 ‘He smashed the car with a hammer.’ (YN)

Likewise in Yukaghir, the instrumental case *-(l)e* is normally employed in these situations, as shown in E160f.

- E160. tude juko:l šašqul-e čaŋda-s’
 KOLYU [his little-ANR finger-INST] touch-PFV:INTR:3.SG
 ‘He touched it with his little finger.’ (Maslova 1998:130)
- E161. a. ta:t ša:l-e čolha-j-de-ge el+u:žu.
 KOLYU CA [stick-INST] touch-PFV-3.SG-DS NEG+move(3.SG)
 ‘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 E162.

- E162. 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 (E162.a) and for body parts (E162.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 E129. 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 E163. In E163.b, it is a mass that serves as an instrument.

- E163. 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, let it go out, cover it with grass.’ (Evans 1995:153)

The associative case *-nurru* was already seen to fulfill a comitative function (E84). It is also used if an instrument has a temporary, contingent relation to the situation.

- E164. *bi-rr-a yalawu-jarr yakuri-na mijil-nurru.*
 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 expressed by the superessive case (E165.a), the inelative case (E165.b) or the addirective case (E165.c).

- E165. a. *Dax.di linejka.d-al c’ar-ar č’ugu-na.*
 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!’ (Haspelmath 1993:449)
- c. *Axpa ada wil.i-n naq̄w-ar ġweč’i jağlux.di-wdi miḡ-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.’ (Haspelmath 1993:92)

The addirective may also be used for a body part in instrument function, as in E166.

- E166. *Q̄adim.a ġil.i-wdi ada-z acuq’un teklif-na.*
 LEZ Q̄adim(ERG) [hand-ADDIR] he-DAT sit-MSD propose-AOR
 ‘Q̄adim offered him to sit down with his hand.’ (Haspelmath 1993:92)

Alternatively, body-part nouns in instrument function may occur in the absolute case, as in E167. The verbs in E167, ‘touch’ and ‘kick’, belong to a group which involve a default body part (hand and foot). If this is expressed, it is in the absolute case and forms a constituent with the verb (cf. Haspelmath 1993:275-278).

- E167. a. *Ada za-k ġil ktad-zawa.*
 LEZ Ada(ERG) I-SBESS [hand] touch-IMPF
 ‘Ada is touching me with his hand.’ (Haspelmath 1993:276)

- b. Ali.di kic'e q'ül ecä-na.
 Ali(ERG) dog-INESS [foot] kick-AOR
 'Ali kicked the dog with his foot.' (Haspelmath 1993:278)

Turkish consistently uses the comitative-instrumental case marker to indicate an instrument, no matter whether a body part (E168.a), an artefact (E168.b) or a mass (E168.c).

- E168. a. Ayak-lar-ı-yla resim yap-ma-yı bil-ir.
 TURK [foot-PL-POSS.3-with] picture make-INF-ACC know-DISP(3.SG)
 'He can paint with his feet.' (GJ & YT)
- b. Araba-yı cekiç-le parçala-dı.
 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 Yidj, tools (E169.a) and body parts (E169.b) alike are marked by the instrumental case already introduced in § 4.4.3.

- E169. a. bama-:l dūgi 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. gaṅara-ṅgu ṅuṅu buriburi waṛi: baḍa: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 Kambara comitative preposition has a variant in a verb suffix, as we saw in § 4.3.4, the instrumental coverb *wàng(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 indirect-object suffixes on the derived verb. E170 is the counterpart to E141. The instrument NP may or may not follow the derived verb directly, and even if it follows, as in E170.b, it may be separated from the instrumental derivational suffix by the agreement suffixes just mentioned, which refer to another NP in the clause. This countericonic order of elements points to an advanced degree of grammaticalization and/or lexicalization of this device (cf. Klamer 1998, ch. 7.2.1).

- E170. 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)
- b. Ku-palu-wà-nja ài da ahu-mu nyumu.
 1.SG.NOM-hit-use-3.PL.DAT wood ART dog-2.SG.GEN you
 ‘I hit with a stick your dogs.’ (Klamer 1998:292)

In Yidj, 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. E169.a) contains a transitive verb. This first has to be de-transitivized by the antipassive suffix *-ɟi*. This demotes the erstwhile undergoer of the verb, so that transitivization by *-ŋa-l* can now promote the instrument to absolutive function (cf. Dixon 1977, ch. 4.3.6 - 4.3.8). In this way, the construction in E169.a is transformed into E171 (cf. Dixon 1977, ch. 4.3.6).

- E171. bama-:l galban gunda:ɟiŋa:l ɟugi-:l
 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’] (Dixon 1977:294)

Yucatec Maya does not have an instrumental valency operation.²⁶

4.5.5. Incorporation

Instruments, preferably body parts, are incorporated in many languages.²⁷ Yucatec Maya is one of them. E172 and E173 show incorporation of a body part and a tool, respectively.

- E172. a. t-u yóotʼ-kʼab-t-ah le pàakʼl-oʼ
 YM PST-SBJ.3 squeeze-hand-TRR-CMPL DEF orange-D2
 ‘he squeezed the orange’
- b. káa t-u koh-chekʼ-t-ah le mùula-oʼ
 CNJ PST-SBJ.3 push-foot-TRR-CMPL DEF mule-D2
 ‘and he kicked the mule’ (HNAZ 0068.02)

²⁶ There are two derivational processes with similar functions, the usative and the applicative derivation. The first 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 second 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.

²⁷ Cf. Seiler 1974:58-65 on an extensive system of body-part prefixes on verbs in Southern Paiute and related languages.

K'ab 'hand' is by far the most commonly incorporated noun, followed by *chek*' (suppletive form of *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 *che*' 'stick' and *tunich*' 'stone'²⁸ are found in an incorporative construction that implies an instrument, as in E173.

- E173. a. káa k'eb-che'-t-ik yéetel x-bakche'
 YM CNJ:SBJ.2 half.open-tree-TRR-INCMPL with F-husking.tool
 'You rib it (e.g. an ear of corn) open with the husking tool.' (Sullivan 1984:149)
- b. péets'-tunich-eh !
 press-stone-IMP
 'fix it by putting a stone (up) on it!'

While Lezgian does not have incorporation as such, the constructions of E167 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 E174 and E175.

- E174. a. He hammered the nail.
 b. They knifed him.
 c. She trapped coyotes. (Givón 1984:97)
- E175. a. Er hat den Ball (ins Tor) geköpft.
 GER 'He shot the ball (into the goal) with his head.'
- b. Zuerst mußst du dir den Staub aus den Haaren kämmen.
 '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.'

²⁸ anthropologically probably the next most typical instruments after the body 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: *applaud* (both hands), *paint*, *wink*, *pinch*, *slap* (one hand), *blow* (mouth), *kick* (one foot), *trample* (both feet), *bite* (teeth). If the default body part is used, mentioning it is redundant (E176.a vs. b). The instrument is normally only mentioned if there is something special about it (E176.c, d, e).

- E176. a. Er malt (ein Bild).
 GER '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 E177.a and b:

- E177. 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'. E178 illustrates the minimal pair formed by *ch'ak* and *k'os*.

- E178. 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 of 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 to 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 diverse 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 E188 and E198 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 again may form a complex sentence with the gerund *kaciko* 'taking', as in E179. This is, however, only a secondary option.

- E179. ku-nun cong-i-lul kaci-ko pae-lul mantul-øss-ta.
 KOR 3.SG-TOP [paper-ACC take-GER] ship-ACC make-PST-DECL
 '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 E180. The same relation may be expressed by the verb *ná* 'take'. Thus, no formal distinction is made between tool and material (cf. E139f).

- E180. Tā yòng/ná zhǐ zùo 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 E181.

E181. muab ntoo ua tsev.
 HMONG [take wood] make house
 ‘build a house of wood’ (Bisang 1992:268)

In E180 and E181 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 *daoy* which we found for locomotion, as represented in E182 (it may also use an ablative preposition, see E189) (cf. Bisang 1992:428 and 432f).

E182. tù: nih thu: daoy 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 E183 (cf. Bisang 1992:365, 375).

E183. Sùdaa tham túgkataa càag phâa.
 THAI Suda make doll [from cloth]
 ‘Suda made a doll of cloth.’ (Bisang 1992:375)

This coverb shows up in the same functional context in which other languages use an ablative case relator as illustrated in § 4.6.2 and § 4.6.3.

Vietnamese again possesses two strategies to code the material relation. The constructions of E184 show the complex sentence strategy with the coverb *dūng*.

E184. a. Anh ấy dūng tre lām nhà.
 VIET he [use bamboo] make house
 ‘He built a house of bamboo.’ (TNC)

b. Tôi vớ i con gái dūng giấy gấp (một) tấi tấu.
 I with daughter [use paper] fold one ship
 ‘With my daughter, I have made a ship of paper.’ (TNC)

Besides, adpositional marking (E191) is available as a preferred alternative.

4.6.2. Adpositional marking

Yucatec Maya once more uses its instrumental preposition *éetel*. E185 is a prototypical example of a mass used as material. E186 shows a material which is not a mass.

- E185. 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)
- E186. peroh wáah a k'áat
 YM but if POSS.2 wish
 a bèet u hòol túun le nah-o' yéetel àak'-e'
 SBJ.2 do POSS.3 hole then DEF house-D2 [with liana]-CNTR
 'But if you want to make the door with lianas,' (NAH 117)

German differentiates between instrument and material. In E148, the mass is used as an instrument, while in E187 it is a material. The preposition switches from *mit* 'with' to *aus* 'out of'.

- E187. a. Er hat ein Haus aus Ziegelsteinen gebaut.
 GER 'He built a house from/out of bricks.'
- b. Er hat ein Spielzeug aus Holz gebastelt.
 'He made a toy of wood.'

The comitative/instrumental preposition *mit* may also be used to adjoin a material for the production of something, as in E188. However, this construction differs semantically from the variant with the ablative preposition *aus* (E187.a). In E188, 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'.

- E188. Er hat ein Haus mit Ziegelsteinen gebaut.
 GER 'He built a house with bricks.'

Like German, Khmer may use the ablative preposition *ʔɔmpi* 'from, of' to express a material relation, as in E189 (cf. E182).

- E189. tù: nih thv̀: ʔɔmpi: ch̀:
 KHMER cabinet DEM make [from wood]
 'The cabinet is made of wood.' (Bisang 1992:433)

As an alternative to the coverb seen in E183 to express the material used, Thai may use all the instrumental prepositions we have seen in the other functions. E190 illustrates only the most common instrumental preposition *d̀uaj* 'with'.

- E190. d̀eɛŋ tham khǒŋ-lên d̀uaj máaj.
 THAI Deng make thing-play [with wood]
 'Deng made a toy of wood.' (Bisang 1992:375)

In Vietnamese the preposition *bằng* ‘with’ is generally used to express a material relation to the undergoer, as in E191. Vietnamese prefers this strategy to the complex sentence strategy with the coverb *dùng* ‘use’ seen in E184.

- E191. 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 cái tàu bằng giấy.
 I and daughter fold ship [INST paper]
 ‘I and my daughter have folded a ship of paper.’ (TNC)

4.6.3. Case marking

Korean, Japanese, and Yukaghir may employ their instrumental case suffixes to mark the material used in the production of something. In Korean, this strategy is preferred to the concomitant predication illustrated by E179 above. In Japanese, the instrumental would preferably be used to focus on the material (E193.a, E194.a). If this is not intended, a *genitivus materiae* may be used to background the material (E193.b, E194.b). Korean does not have this option, but instead a compound noun can be used (E192.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.

- E192. a. ku-nun cong-i-lo pae-lul mantul-ess-ta.
 KOR 3.SG-TOP [paper-INST] ship-ACC make-PST-DECL
 ‘He made a ship of paper.’
- b. ku-nun cong-i-pae-lul mantul-ess-ta.
 3.SG-TOP paper-ship-ACC make-PST-DECL
 ‘He made a paper ship.’
- E193. 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.’
- E194. 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)

E195. tet ennume tet qodo:-be a:-k šöji-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 Yidiñ, too, the instrumental case suffix is used to express a material of which something is made, as in E196.

E196. ɲaŋɟi duguɾ balga:l ɟirga:da
 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 E197.

- E197. 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-lık ev inşa et-ti.
 [wood and glas-ABL] one summer-ADJR house build AUX.TR-PST(3.SG)
 ‘He built a holiday house of wood and glas.’ (GJ & YT)

It is also possible to use the generic comitative/instrumental marker *-(i)la*, as in E198.

E198. bu ev tuğla-yla yap-ıl-mış-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 E197 and E198 that equals the one observed for German in E187.a vs. E188: 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 E199, in one of its functions, viz. the ablative function (cf. Haspelmath 1993, ch. 7.2.2.12).

E199. Werg-er.i-kaj awu-nwa-j čigirtma ajal-r.i-z gzaf k’an-da-j.
 LEZ [nettle-PL-SBEL]make-PF-PART čigirtma child-PL-DAT much like-FUT-PST
 ‘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 Yidiñ transitivity operation (see § 4.5.4) comprises this function, too, since it otherwise bears a transformational relation to the instrumental case (see E196).

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 *càag* in Thai, the prepositions *aus* in German and *ʔəmpì* in Khmer, and the suffixes *-dan/-tan* in Turkish and *-kaj* in Lezgian.

The second alternative occurs in Korean, Japanese, Vietnamese, Yidiñ, and Yukaghir, in which the material is treated as an instrument and coded by an instrumental case marker. For 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.²⁹ 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 E200.a/b. Otherwise, more specific verbs may be employed instead of *yòng*. In E200.c, e.g., the verb *fèi* is a suitable relator for the manner *dà lìqì*.

- E200. a. Wǒ yòng qiáng bǎ tā tuī dào hé-lǐ.
 CHIN I [use violence] ACC he push go.to river-interior
 ‘I pushed him into the river mightily.’ (Bisang 1992:185)
- b. Wǒmen yòng Déyǔ jiāoliú.
 we [use German] communicate
 ‘We communicate in German.’ (SL)
- c. Zhè-jìan shì tā fèi dà lìqì cái bànchéng.
 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 coverb *dùng* to express a manner of a situation, as in E201 (see E206.b below for the adpositional alternative).

²⁹ Cf. Lehmann & Shin & Verhoeven 2000 [D] for a typological study on this topic.

E201. Dũng sự[?] quen biết tôi được làm việc ại cơ[?] quan nhā nu[?]ở[?]c.
 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, *kaciko*, may be employed to join an abstract entity as a manner, as illustrated in E202. This is, however, less common than the instrumental case suffix (see E208).

E202. ku-nun hangsang ɔngttungha-n saengkak-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 *yéetel* to join a manner to the main situation, as in E203f.

E203. 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’áay yéetel óok’ot h k’a’m u bèeh-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)

E204. káa bin h ho’p’ u nohoch-tal yéetel tòoh 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). E205 presents some examples for German.

- E205. a. Peter hat mit lauter Stimme ein Lied gesungen.
 GER ‘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 *vớ*i** and the instrumental preposition *bằ*ng** may be used to specify a manner of the situation, as in E206. Compared with the con-

comitant predication strategy (E201), the variants with adpositional marking are more commonly used in modern Vietnamese.

- E206. a. Chi hát vó'i/ bằng niềm vui.
 VIET she sing [COM / INST gladness]
 'She sings cheerfully.' (TNC)
- b. Vó'i/ bằng sự quen biết tôi đượ²c làm việc tại cơ² quan nhà nư²ố²c.
 [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 *-de*, as in E207 (cf. Hinds 1988, ch. 2.1.1.4.11).

- E207. a. kanozyo-wa kone-de kaisya-ni hait-ta.
 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-INST] communication-do:PRS
 'We communicate in German.' (YN)

Korean, too, uses the instrumental case suffix *-()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 E208.

- E208. a. ku-nun ppa^lu-n soklyek-ulo kəl-ə ka-ss-ta.
 KOR 3.SG-TOP [fast-AT speed-INST] walk-GER go-PST-DECL
 'He walked with speed.'
- b. Suni-nun khun-n soli-lo nolae-lul pulə-ss-ta.
 Suni-TOP [big-AT voice-INST] song-ACC sing-PST-DECL
 'Suni sang a song in a loud voice.'

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 proprietive *-wuru* 'having' to express an abstract entity as manner of a situation, as in E209. The instrumental and associative cases, although commonly used to express the other instrumental/comitative relations, are not employed here.

- E209. ngaakawuru dahin-a kunawuna bakii-ja bayi-wuru-wa-th.
 KAY why that-NOM child:NOM altogether-ACT anger-PROP-INCH-ACT
 '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 *-(i)lA*, as in E210 (cf. Kornfilt 1997, ch. 2.1.1.4.11).

- E210. Hasan Ayşe-yi heyecan-la kucakla-dı.
 TURK Hasan Ayşe-ACC [enthusiasm-with] embrace-PST(3.SG)
 ‘Hasan embraced Ayşe with enthusiasm.’ (o.c. 233)

In Lezgian, both the superdirective and the addirective case are available for the expression of a manner, as exemplified in E211.

- E211. a. Ada k’ewi wan.ce-ldi ‘Ja dide!’ laha-na.
 LEZ he(ERG) [firm voice-SRDIR] O mother say-AOR
 ‘He said with a firm voice: “O mother!”’ (Haspelmath 1993:101)
- b. Čna jeke hewes.di-wdi Varšavjanka mani luhu-z başlamiš-na.
 we:ERG [great enthusiasm-ADDIR] Varšavjanka song say-INF begin-AOR
 ‘We began to sing the “Varšavjanka” with great enthusiasm.’ (o.c. 92)

The most common use of the superdirective case *-ldi* ‘onto’ is the instrumental sense. This function is extended to the expression of a manner relation, as in E211.a. In E211.b, the manner phrase is marked by the addirective case *-wdi* ‘in the direction of a location near/by’ (cf. Haspelmath 1993, ch. 7.2.2.7. and 7.2.2.16).

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’. E212 illustrates this strategy for Ute (cf. Givón 1984, ch. 3.8.2).

- E212. a. mamá-paĝáy’wa-y
 UTE woman-walk-IMM
 ‘(he) is walking like a woman’ (o.c. 80)
- b. piĝ-’apáĝa-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’. E213.a and b are in a paraphrase relationship.

- E213. a. Er eilt nach Hause.
 GER ‘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’éneeb* ‘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 E214.a.³⁰ It is therefore one of the concomitant roles enumerated in T2.

³⁰ Hence, our notion of circumstance essentially includes König’s (1995:66) notion of ‘instrumental’.

- E214. a. He got into the army *by lying about his age*. (Thompson & Longacre 1985:188)
 b. *While (we were) eating*, we heard a noise outside the window. (o.c. 189)

The circumstance must be delimited against simultaneous situations as expressed by certain kinds of temporal clauses, e.g. in E214.b. 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 domain of nexion (interpropositional relations). 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, E214.a entails E215.

- E215. 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. Concomitant predication

Chinese chiefly uses a juxtapositive construction of the main clause and the circumstance clause, as in E216. Just as in the earlier cases of concomitance (§§ 4.2 – 4.7), the inter-clausal relation is ambiguous between a concomitant and a purposive interpretation.

- E216. a. Tā tīng shōuyīnjī xué Yīngyǔ.
 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 jiǎn féi
 he [ride vehicle] reduce fat
 ‘He loses weight by riding the bicycle.’ or ‘He rides the bicycle to reduce his weight.’ (SL)

The construction may be disambiguated in favor of concomitance by introducing the concomitant clause by the verb *tōngguò* ‘pass, go through, through’, as in E217.a. Here the circumstance clearly forms a subordinate clause. However, the same operation applied to E216.b does not yield a satisfactory result, since E217.b is questionable. All in all, the construction with the verb *tōngguò* is less common in the colloquial language than the juxtapositive version of E216.

- E217. a. Tā tōngguò tīng shōuyīnjī xuéxī Yīngyǔ.
 CHIN he [pass hear radio] learn English
 ‘He learns English by listening to the radio.’ (SL)
- b. [?]Tā tōngguò qí chē jiǎn fēi
 he [pass ride vehicle] reduce fat
 ‘He loses weight by riding the bicycle.’ (SL)

Simultaneity of two situations is expressed by the discontinuous reduplication of the noun *biān* ‘side’, as exemplified in E218.

- E218. Tā biān tīng shōuyīnjī biān xué Yīngyǔ.
 CHIN he side hear radio side learn English
 ‘He learns English while listening to the radio.’ (SL)

E218 expresses no instrumental relation of the first to the second situation, but only simultaneity of the two situations. Chinese circumstance clauses are thus clearly distinct from simultaneous temporal clauses.

4.8.2. Adpositional marking

In German, a circumstance clause may be finite or nominalized. A nominalized circumstance is adjoined by the preposition *durch*, as in E219.a. The same preposition may be used in a complex conjunction to introduce the finite version E219.b, or else the conjunction *indem* may be used, as in E219.c. For simultaneous subordinate clauses, the conjunction is *während* ‘while’.

- E219. a. Der Politiker bereicherte sich durch die Sammlung illegaler Spenden.
 GER ‘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. *đi xe đạp* in E220.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 E220.

- E220. a. Anh ấy giảm 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) đài.
 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 reduplication of the morpheme *vũ’a* ‘and at the same time, just, right now (then)’, as in E221.

- E221. Anh ấy *vũ’a* uống *vũ’a* 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 E222. For the alternative of forming a gerundive see E229 below.

- E222. a. Hùulyoh-e’ ayiik’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 tùus.
 Julian-TOP PST-SBJ.3 defeat-CMPL DEF enemy-PL with lie
 ‘Julian defeated the enemy (by) lying.’ (EMB)

4.8.3. 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 E223.a, the circumstance clause is nominalized by the suffix *-koto*, and the nominalized circumstance is marked by the instrumental case *-de*. In E223.b, the suffix *-te* forms a subordinate adverbial clause expressing a circumstance.

- E223. a. Taro-wa zidensya-ni noru-koto-de karada-o kitaer-u.
 JAP Taro-TOP [bicycle-LOC ride-NR-INST] body-ACC train-PRS
 ‘Taro trains his body by riding the bicycle.’ (YN)
 b. Taro-wa zidensya-ni not-te karada-o kitaer-u.
 Taro-TOP [bicycle-LOC ride-GER] body-ACC train-PRS
 ‘Taro trains his body by riding the bicycle.’ (YN)

The construction with the suffix *-nagara* ‘while’ in E224.a represents a complex situation with a simultaneous temporal relation. In contrast to the suffix *-de* E223.b, the suffix *-nagara* codes only the simultaneity between the two situations. It is therefore odd in a situation like E224.b which suggests an instrumental relation between the two situations.

- E224. a. kare-wa wain-o nomi-nagara sinbun-o yomu.
 JAP 3.SG-TOP [wine-ACC drink-SIM] newspaper-ACC read:PRS
 ‘He drinks wine while reading the newspaper.’ (YN)
- b. [?]Taro-wa zidensya-ni nori-nagara karada-o kitaer-u.
 Taro-TOP [bicycle-LOC ride-SIM] body-ACC train-PRS
 ‘Taro trains himself while riding the bicycle.’ (YN)

In Korean, the suffix *-()myənsə* ‘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. E225.a is therefore ambiguous in this regard, while E225.b is disambiguated by world knowledge.

- E225. a. cə yəca-nən radio-ləl təl-umyənsə kongpu-ləl ha-n-ta.
 KOR D3 woman-TOP [radio-ACC hear-SIM] study-ACC do-PRS-DECL
 ‘She learns by listening to the radio.’ or ‘She learns while listening to the radio.’
- b. kə-nən hangsang cacənkə-ləl tha-myənsə undong-əl ha-n-ta.
 3.SG-TOP always [bicycle-ACC ride-SIM] sport-ACC do-PRS-DECL
 ‘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 E226.

- E226. Minsu-ka ca-l tongan-e Suni-nən chaek-əl ilk-əss-ta.
 KOR [Minsu-NOM sleep-AT while-LOC] Suni-TOP book-ACC read-PST-DECL
 ‘Suni read a book while Minsu was sleeping.’

In the Lezgian E227, the secondary situation is nominalized by the masdar, and the circumstance thus nominalized is marked by the superdirective case *-ldi*.

- E227. Abur.u q̃uš-ar.i-z xür.ü-n nük’-er.a-l hužum-ar
 LEZ they(ERG) bird-PL-DAT [village-GEN sparrow-PL-SRESS attack-PL
 awu-n.a-ldi kümek-ar ga-na.
 do-MSD-SRDIR]help-PL give-AOR
 ‘They helped the birds by attacking the village’s sparrows.’ (Haspelmath 1993:101)

In Turkish, the gerundial marker *-(y)ArAk* is most commonly used to indicate a circumstance, as in E228.

- E228. a. Ahmet çok çalış-arak hedef-in-e ulaş-tı.
 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 E229.

E229.	Hùulyoh-e'	tùus-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)					

4.8.4. Other processes

A circumstance is a specific situation of its own. The processes of incorporation, conversion and lexical fusion are therefore excluded for 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.

4.8.5. Summary

The paradigm of concomitance strategies that code the circumstance is reduced to concomitant predication, adpositional marking and case marking.³¹ 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.

³¹ No data are available for Yukaghir.

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, *yōng*, 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 concomitants. 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 prepositional marking and concomitant predication. 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, *dūaj*, 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 consistent 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, *bằng*, 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.

5.1.10. Yucatec Maya

In past publications, we had occasion to highlight the functional and structural richness of Yucatec Maya in diverse 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 *éetel* ‘with’. This is a secondary preposition derived in the following way: The relational noun *éet* ‘companion’ is combined with the suffix *-el* to derive an abstract relational noun *éet-el* ‘company’. This takes a possessive complement – that is, first of all, a possessive clitic – to indicate whose company it is, for instance *a wéetel-e’x* (POSS.2 0-company-2.PL) ‘your(PL) company’. This possessed nominal in turn depends on the preposition *ti’* ‘LOC’ to yield, for instance, *[t-[a wéetel-e’x]_{NP}]_{PrepP}* ‘in your company’, which means ‘with you’. The introductory preposition and possessive clitic are generally missing in the third person, so that *yéetel*³² simply means ‘with’. Yucatec Maya is the only language in the sample to exhibit 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

³² *yéetel* is either ‘ \emptyset -company’ or ‘POSS.3-company’, depending on the analysis; cf. Lehmann 1998, ch. 3.2.1.1.1.4.3.

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, *ti'* LOC, Yucatec prepositional phrases modify nothing. Consequently, the language makes little use of adjuncts. On the other hand, the one 'real' preposition *ti'* gets a high functional load. It is combined with most of the denominal prepositions to convert them into modifiers. *Éetel* is a case in point. Any other preposition that might concur with *éetel* would have to obey to the same constraints.

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

E230. *pets'* *hu'n* *t-a* *k'ab*
 YM *press.down* *paper* [LOC-POSS.2 *hand*]
 'press the paper down with your hand' (Barrera Vásquez et. al. 1980, s.v. *pets'*)

In Colonial Maya, the preposition *ti'* ranged even wider, witness examples like E230. The expansion of *éetel* since that time must probably be understood as a response to Spanish *con*.

As for the complex sentence strategy, apart from the usual motion verb constructions, Yucatec has no verb serialization. Since verb serialization seems to prevail in languages 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 concomitant 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 E229. However, unlike gerunds in other languages, this is just a verb form the subject slot of which 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 interpositional 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.

As the second most important strategy in our functional domain, Yucatec does have prominent 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 2003). As we saw in § 3.4.3, 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. Cf. E231 is one example in many.

E231. le x-ch'uppàal chowak-tak u múuk' yòok-e'
 YM 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 2003, 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 § 3.3.6.³³ However, both languages and strategies differ in this respect. The 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 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 syncretizes 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

³³ Cf. Aristar 1997, where the principle that case relations are sensitive to empathy is generalized.

instrument of manipulation and, secondarily, the companion and the instrument of locomotion. This structural variety is to be observed both within any one language 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).

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 independent 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 *dùng*, which are employed for vehicle, tool, material and manner (and consequently as synonymous as possible), or Thai *dúaj*, which only marks tool and material. We take this, once more, as evidence for the unity of the domain.

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 complex sentence 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.

5.2.2. Grammaticalization of concomitance

As was already anticipated in T3, the participant relation that connects a participant with a situation core may be grammaticalized to different degrees. At the start of the scale, the relator is manifested at the lexical level and then expressed by a verb form, including a converb. Such a relator constitutes a little situation core (‘use’, ‘mount’ etc.) of its own. Since we then have two situations, they must 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 again 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. 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.

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.

The sources of this grammaticalization process have not been investigated systematically. We may name the following: Transitive verbs such as Chinese *yòng* ‘use’, Khmer *daoy* ‘follow’ are employed as concomitant markers. 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. Yucatec Maya *éetel* ‘with’ has the original meaning ‘company’ and is derived from the relational noun *éet* ‘companion’, again a concept central to the whole functional domain.

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 a couple of basic verbs. The semanto-syntactic functions associated with these valency slots are, at the typological level, ‘actor’, ‘undergoer’ and ‘indirectus’.³⁴ ‘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’. From 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 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 con-

³⁴ 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]

stituent 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, ambivalence 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. The situation whose core it is becomes a secondary situation to the main situation, one that may be 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’. Depending on which of the two poles is focused on, the relation is systematically ambiguous. On various occasions (cf. E18 for Chinese and E144 for Vietnamese), we noted the close paradigmatic relationship between the instrumental and the purposive relation. It may be formalized as in F4:

F4. *Instrument and purpose*

S_1 by means of $S_2 = S_2$ 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 reached. 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 is exactly the condition that holds for all of concomitance including the circumstance role.

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 interpositional 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 beneficiary. The latter process was not investigated here. We are, however, in a position to postulate a principled relationship between case relations and interpositional relations: An interpositional 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

∅	meaningless element	CA	connective adverbial
1	first person	CAUS	causative
2	second person	CL	classifier
3	third person	CMPL	completive
A	subject of a tr. verb	CNJ	conjunction
ABL	ablative	CNTR	continuator
ABS	absolutive	COM	comitative
ABSOL	absolute	COP	copula
ABSTR	abstract marker	D1	first person deictic
ACC	accusative	D2	second person deictic
ACT	actual	D3	third person deictic
ADD	additive	DAT	dative
ADDIR	addirective	DECL	declarative
ADEL	adelative	DEF	definite
ADJR	adjectivalizer	DEM	demonstrative
ALL	allative	DISP	dispositive
AN	animate	DU	dual
ANDAT	andative	EP	epistemic
AOC	aorist converb	ERG	ergative
AOR	aorist	EVID	evidential
APASS	antipassive	EXIST	exist(ential)
APPR	apprehensive	F	feminine
ART	article	FUT	future
ASSOC	associative	GEN	genitive
AT	attributor	GER	gerund

HUM	human	PF	perfect
IMC	imperfective converb	PFV	perfective
IMM	immediate	PROHIB	prohibitive
IMP	imperative	PL	plural
IMPF	imperfective	POESS	postessive
INAN	inanimate	POSS	possessive
INCH	inchoative	POT	potential
INCL	inclusive	PROC	processive
INCMPL	incompletive	PERFV	perfective
INEL	inelative	PROG	progressive
INESS	inessive	PROP	proprietary
INF	infinitive marker	PRS	present
INFR	inferential	PST	past
INST	instrumental	PT	particle
INT	interrogative	PURP	purposive
INTR	intransitive	QUOT	quotative
LOC	locative	RECP	reciprocal
M	masculine	REL	relationalizer
MABL	modal ablative	S	subject of an intr. verb
MLOC	modal locative	SAP	speech act participant
MPROP	modal proprietive	SBESS	subessive
MSD	masdar	SBJ	subject
N	noun	SG	singular
NEG	negative	SIM	simultaneous
NOM	nominative	SRDIR	superdirective
NP	noun phrase	SRESS	superessive
NR	nominalizer	SS	same subject
O	object of a tr. verb	SUBJ	subjunctive
OBL	oblique	TAM	tense/aspect/mood
ORIG	origin	TOP	topic
PART	participle	TRR	transitivizer
PEJ	pejorative	VEN	venitive

Languages

ENG	English	KOLYU	Kolyma Yukaghir
CHIN	Chinese	KOR	Korean
GER	German	LEZ	Lezgian
HMONG	Hmong	MANAG	Managalasi
JAP	Japanese	MAY	Mayali
KAM	Kambera	THAI	Thai
KAY	Kayardild	TURK	Turkish

UTE	Ute	YID	Yidij
VIET	Vietnamese	YM	Yucatec Maya

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CHAAK	Tun, Bernardino 1931, <i>The Ch'á'cháak Ceremony</i> . Transcribed by Manuel J. Andrade. Chicago: University of Chicago Library (Microfilm Collections of Manuscripts on Cultural Anthropology, No. 262, Series XLIX, Text No. 35, pp. 211-215).
HK'AN	Dzul Poot, Domingo 1991, <i>Cuentos Mayas</i> ; Tomo II. Mérida, Yuc.: Maldonado & INAH-SEP (segunda ed.), 53-114.
HNAZ	Andrade & Máas Collí 1991, <i>Cuentos Mayas Yucatecos</i> ; Tomo II, Mérida: Universidad Autónoma de Yucatán, 64-127.
MUUCH	Ppol Kaaw, Esteban 1989, <i>Xunáan mùuch</i> . Recorded by Christian Lehmann in Yaxley.
NAH	Pool Kaaw, Estéban 1989, <i>How a traditional house is built</i> . Recorded by Christian Lehmann in Yaxley.
PEEK'	Dzul Poot, Domingo 1985, <i>Cuentos Mayas. Edición bilingüe: Español – Maya</i> . Mérida, Yuc.: Maldonado & INAH-SEP, 93-102.
BRICK	Bricker, Victoria et al. 1998, <i>A dictionary of the Maya language as spoken in Hocabá</i> , 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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