1 Introduction

The present volume is a collection of detailed description of grammatical relations in thirteen genealogically and geographically diverse languages. The research on grammatical relations gained a new impetus in the last ten years due to the publications of a number of important articles and collected volumes, as well as multiple workshops and conferences on individual aspects of grammatical relations. First, capitalizing on the by then largely accepted idea of construction-specific and language-specific nature of grammatical relations, Bickel (2010b) and Witzlack-Makarevich (2011) suggested a new framework for accounting of all sorts of variations in grammatical relations. This approach shapes the present volume, it is discussed in greater detail in the following sections. Second, a large number of studies dedicated to referential properties of argument, referential hierarchies and their effects on grammatical relations were published, so that this topic experienced a kind of revival after its initial popularity in the 80s following Silverstein’s and Bossong’s work on split alignment and differential object marking (Silverstein 1976, Bossong 1982, 1985). The recent contributions on this topic include de Hoop and de Swart (2008), Bickel and Witzlack-Makarevich (2008), Dalrymple and Nikolaeva (2011), Iemnolo (2011, 2010, 2013), Sinnemäki (2014), and Bickel et al. (2015b). The effects of arguments’ referential properties on grammatical relations became more regularly considered also when they result in a more complex interplay of referential properties of several arguments, i.e. the scenario effects, as e.g. in Zúñiga (2007), Gildea and Fernando (2016), Haude and Zúñiga (2016), and Witzlack-Makarevich et al. (2016) and in the studies on individual languages, e.g. Rose (2009, 2015). Third, two large-scale projects and the resulted collected volumes drew researchers’ attention to the variation in grammatical relations with three-argument or ditransitive verbs (Malchukov et al. 2010b) and to the cross-linguistic diversity of valency classes and valency frames alternations (Malchukov and Comrie 2015, Hartmann et al. 2013). The present volume capitalizes on these developments by motivating the contributors to provide in-depth accounts of grammatical relations in the languages they work on taking into account these new insights.

As the so-far existing description of grammatical relations vary greatly with family specific traditions and theoretical frameworks, we aimed at a greater comparability of individual
accounts by providing the contributors with a unified framework and an open-ended questionnaire (given in the Appendix) to guide the data collection. In what follows, I first provide a brief overview of the history of research on grammatical relations (Section 2). I then present the individual aspects of this framework, discuss in how far they have been adopted by individual authors, and highlight possible challenges (Section 3–Section 5).

2 Grammatical relations: A brief history of research

The term grammatical relations is used to denote the relations between a clause or a predicate and its arguments. The two traditional major types of grammatical relations are subject and direct object, indirect object is a grammatical relation present in some approaches, but absent in some others. These categories are among the most basic concepts of many models of grammar and are often regarded, either explicitly or implicitly, as universal. Moreover, a cursory glance at the recently published grammatical description makes it clear that these concepts are also fundamental in language descriptions.

What is understood under grammatical relations? Or more concretely, in a concrete clause how does one know what is a subject and what is an object? Traditionally, this question has been answered by referring to surface morphological criteria (case marking and agreement) and to the constituent order. For instance, a description of Armenian say “[t]he grammatical subject [...] is usually expressed in the unmarked Nominative case, and usually the verb agrees in number and person with this subject.” (Dum-Tragut 2009: 319). Starting from the 1970s, when more and more grammatical descriptions on languages with ergative structures became available, it became clear that in many languages, morphological criteria do not identify grammatical relations in the same way as they do in the familiar European languages. The inventory of grammatical relation tests or identifiers was extended beyond morphological marking and constituent order and started to include a variety of syntactic criteria based on such phenomena as equi-NP deletion, raising, conjunction reduction, passivization, the behavior of the reflexives, etc. (cf. Li 1976 and Plank 1979).

The discussion of a larger set of tests or identifiers of grammatical relations made clear some cases they provide conflicting evidence. A popular response to such conflicts was to pick out one or a small selection of construction(s) from a range of possible phenomena. This construction or this selection of constructions was then treated as providing the only correct diagnostic for “real” or “deep” grammatical relations. A good example of this way of identifying grammatical relations is provided by Anderson’s (1976) discussion of Káte (Trans New Guinea). This language is characterized by the ergative pattern of case marking but the accusative pattern of verb agreement. As the morphological marking provides conflicting evidence as to what should be treated as the subject, Anderson suggests to consider a particular type of clause marking observed in clause-chaining. This pattern is characterized by marking all but the last chained clause with special verb forms indicating the relative temporal relation of each clause to the following one (sequential or simultaneous) and whether the subject of the so marked clause is identical to the subject of the following clause (this pattern of marking is known as switch-reference marking, see e.g. Stirling 1993). This construction was used by Anderson (1976) to argue that Káte has a subject after all and it can be identified on the basis of the
switch-reference marking. This approach of picking the presumably only correct construction can be also found in recent publications, as e.g. in (Barðdal and Eythórsson 2005).

Typically, grammatical relations identified on the basis of language-specific constructions, such as the switch-reference marking in Kâte, were then equated with subjects and objects familiar from European languages identified using some other indicators. That is, grammatical relations were identified by different criteria in different languages (e.g. by case marking and raising in one language and by reflexive binding and conjunction reduction in another language). This approach was criticized as suffering from ‘methodological opportunism’, i.e. a situation when a researcher picks “language-specific criteria when the general criteria do not exist in the language, or when the general criteria give the “wrong” results according to one’s theory” (Croft 2001: 30).

A natural alternative to methodological opportunism in the study of grammatical relations is to consider all morphosyntactic properties of arguments without prioritizing among them. Under this approach, the various morphosyntactic features and properties of arguments do not necessarily converge on a single set of grammatical relations in a language (e.g. one subject and one object or one ergative and one absolutive). Instead, every single construction can, in principle establish a different grammatical relation. Thus, instead of viewing grammatical relations as uniform categories, one regards them as construction-specific categories (cf. Comrie 1978, Moravcsik 1978, Van Valin 1981, 1983, 2005, Croft 2001, Bickel 2004, 2010b, Witzlack-Makarevich 2011, among many others). And to the extent that constructions are language-specific, this also entails that grammatical relations turn out to be language-specific phenomena (Dryer 1997).

The construction-specific and language-specific view of grammatical relations has become more and more accepted in the current linguistic typology and recent grammatical descriptions tend to provide in-depth accounts of the morphosyntactic constructions defining grammatical relation (e.g. Haspelmath 1993, Nikolaeva and Tolskaya 2001, van de Velde 2006, Genetti 2007, Klamer 2010, Forker 2013, Schackow 2014). There also have been a number of surveys of the way grammatical relations are established or structured by case marking and agreement (e.g. Haspelmath 2005, Comrie 2013a, Siewierska 2004, 2013) and, recently, a handbook has been published targeting the morphosyntax of ditransitive objects (Malchukov et al. 2010b). What has been lacking is a recent systematic collection of surveys of grammatical relations in the world’s languages which would exhaustively discuss the whole range of morphosyntactic phenomena relevant for them, specifically including syntactic phenomena (i.e. beyond case and agreement morphosyntax). Our goal with the present volume was to fill this gap by compiling detailed accounts of grammatical relations in geographically, genealogically, and typologically diverse languages of the world, prepared by experts working on individual languages and using the same framework. To insure the comparability of individual accounts in the present volume, before answering the questions of the questionnaire and writing the respective chapters the authors were suggested to study the framework to grammatical relations outlined in Bickel (2010b) and further developed in Witzlack-Makarevich (2011) as a guideline. An overview of this framework was distributed among the contributors. An extended version of this overview and a survey of the contributions is is given below.
The approach to grammatical relations guiding the contributors of the present volume is characterized by a radical shift of attention from such generalized notions as subject or pivot to single characteristics or properties of the relevant morphosyntactic phenomena. Thus, grammatical relations are reconceptualized as equivalence sets of arguments which are treated the same way (i.e. “aligned”) by an argument selector (any morphosyntactic construction or pattern of marking or rule) under certain conditions. These three aspects of grammatical relations will be discussed in detail in what follows. Section 3 elaborates on the nature of arguments. Section 4 provides an overview of conditions on argument selectors. Section 5 introduces the concept of argument selectors and present the ones discussed in the contributions to this volume.

3 Arguments

In the present framework, arguments are compound categories made up both a generalized semantic role S, A, P, T, and G (Sections 3.2) and lexical and referential specifications (3.4). Before discussing various argument types, it is necessary to be able to distinguish arguments from non-arguments, I will dwell on this issue in Section 3.1. The number and nature of arguments is intimately linked to the verb and verbs co-determine the way arguments are marked or behave. Not all of this variation is regularly captured in typological studies and individual descriptions of grammatical relations. Often, one focuses an specific verb classes as exemplars. Section 3.3 addresses this source of variation.

3.1 Arguments vs. adjuncts

The distinction between arguments and adjuncts has been around at least since Tesnière (1959) (see Farrell 2005: 29–31 and Haspelmath 2014 for recent overviews) and in theory it is rather straightforward: A dependent expression is an argument of a predicate if its role in the situation is assigned by this predicate, this is not the case for adjuncts (see also e.g. Hartmann et al. 2013, Haspelmath 2014, and Schikowski et al. 2015). Essential to the above definition is the semantic nature of the distinction between arguments and adjuncts. This is different from the approaches which regard this difference as either semantico-morphosyntactic or purely morphosyntactic and attempt to apply various morphosyntactic tests to distinguish between arguments and adjuncts. For instance, a frequently applied test is the obligatory expression of arguments by means of referential phrases and optional expression of adjuncts. Another common test is whether an argument triggers agreement on the verb.

An obvious problem with various morphosyntactic tests of argumenthood is their limitation to a subset of languages, e.g. to languages with obligatory filled argument positions, as e.g. English, or to languages which have agreement on the verb, as e.g. German. But even in such languages one quickly runs into problematic cases: In English, optional expressions occurring with certain verbs seem to be arguments nonetheless, as e.g. in He is eating (a pizza) (cf. Comrie 1993). In Chintang (Sino-Tibetan), all verbs that can agree with two arguments can also agree with just one argument (Schikowski et al. 2015: 670). Further recurrent cases problematic for (semantico-)morphosyntactic approaches to the distinction between arguments and adjuncts are discussed in Haspelmath (2014) and Farrell (2005: 28–38).
As there are no morphosyntactic criteria of argumenthood applicable to all languages, one would need to apply various criteria from language to language to distinguish between the arguments and adjunct (see the discussion in Haspelmath 2014). Apart from the fact that there is no straightforward way to determine which criterion to pick, one runs again into the problem of methodological opportunism mentioned in a different context in Section 2: A linguist searches for language-specific morphosyntactic criteria and picks those which provided the result closest to the linguist’s intuition. Finally, it is fundamentally circular to use morphosyntactically identified arguments to describe grammatical relations, i.e. morphosyntactically process applicable only to some arguments and not to the others.

As has been mentioned above, the way arguments and adjuncts are distinguished in the present framework is exclusively semantic and independent of whether and how a dependent is expressed. This way we avoid the difficulties associated with (semantico-)morphosyntactic approaches outlined in the previous paragraph. Though the basic intuition behind the semantic argument/adjunct distinction is relatively clear, difficulties arise as soon as one tries to distinguish the two in individual cases. In response to this, a number of tests have been suggested in the literature to make the decision easier (for an overview, see Comrie 1993). In contrast to the morphosyntactic tests mentioned above, these tests attempt to identify whether the role of a dependent expression in a situation described by a predicate is indeed assigned by this predicate.

One common type of tests are constructions with pro-verbs (also known as anaphoric verbs) used in such phrases as do so, do it or do the same thing in English (see Helbig and Schenkel 1991:37 for examples from German and Haspelmath 2014 for many more examples from other languages). A clause with an adjunct can be paraphrased in such a way that an adjunct is expressed in a different clause with a pro-verb do so etc., replacing the verb together with its arguments but excluding any adjunct:

(1)  a. He worked and did so at home.

→ at home is an adjunct

b. *He aimed and did so at Lucky Luke.

→ at Lucky Luke is an argument

Along the same line, do so can be used anaphorically for at least a verb and its arguments, as in the following examples (for further examples and discussion see Culicover and Jackendoff 2005):

(2)  a. Robin read the book on the train, while Leslie was doing so on the bus.

   do so = reading the book; on the bus = adjunct

b. *Robin put a book on the couch, while Leslie was doing so on the table.

   do so = putting a book; on the table = argument

Whereas the test above might be applicable in many though not all languages, some other tests are more language specific. For instance, in English the prepositional phrase to + NP can be both an argument and an adjunct. With verbs such as go (to X), X is an argument. This is evident from the fact that go assigns a goal role even in the absence of the preposition to, as
for instance in *Where did she go?*, where *where* must be interpreted as a goal. This is different from motion verbs which take no goal argument, as for instance *walk*: *Where did she walk?*, in which *where* can be either a location or a goal.

As the above discussion shows the distinction between arguments and adjuncts requires a thorough lexical-semantic analysis of individual verbs, a task that is ultimately orthogonal to and independent from the present project on grammatical relations. Obviously, it was impossible to carry out such an analysis for every verb in all the languages participating in this project. In preparing this volume, we recommended the authors of individual chapters to limit their attention to the verbs their were certain about and if possible explicitly state for which groups of verb they were unable to distinguish arguments from adjuncts with reasonable certainty.

### 3.2 Generalized semantic roles

Once arguments have been distinguished from adjunct, one needs to further distinguish between individual arguments to describe morphosyntactic features that apply to some but not all arguments. For this purpose we operate with generalized semantic argument roles, which capture semantic similarities across finer predicate-specific roles. Generalized semantic argument roles are identified first by numerical valence: the sole argument of one-argument predicates, the two arguments of two-argument predicates, and the three arguments of three-argument predicates. In case of the sole argument of one-argument predicates, there is no need to distinguish it from anything else; this argument is abbreviated as S.1


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1 The abbreviation S, A, P, T, and G used in the questionnaire distributed to the authors and subsequently in the present volume have been common in typology since the 1970s. However, as has been recently shown by Haspelmath (2011b), these notions are used in very different senses in the literature. Note that S, A, and P in the present usage differ from both (i) purely syntactic or semantically-grounded syntactic categories applied by Dixon (1994) and adopted in many reference grammars following this approach and (ii) from prototypical representatives of one-, two-, and three-argument predicates (e.g. arguments of such predicates as ‘kill’ or ‘break’ as the prototypical representatives of two-place predicates) in the spirit of Comrie (1981). These differences are sometimes overseen by the authors of descriptive grammars who equate the S, A, and P of various approaches, as e.g. in Liljegren (2016: 11).
(3) Lexical entailments defining generalized semantic roles

a. A vs. P: A accumulates more lexical entailments than P on the following properties:
   • causing an event (e.g. A hits P, A kisses P, A goes to P)
   • volitional (e.g. A hits P, A kisses P)
   • sentient (e.g. A sees P, A looks at P, A loves P, P pleases A)
   • independently existing (e.g. A bakes P, A makes P)
   • possessing another participant (e.g. A has P, P belongs to A)

b. G vs. T: G accumulates more lexical entailments than T on the following properties:
   • stationary relative to movement of another participant (e.g. A gives T to G, A loads T onto G, A covers G with T, A cuts G with T)
   • receiving or being exposed to an experience (e.g. A shows T to G, A tells T to G)

‘A’ stands here for the A argument of two-argument predicates only. Three-argument predicates have an \( A_{ditr} \) argument (Bickel and Nichols 2009, Bickel 2010b), and this is distinguished from T and G in the same way as A is distinguished from P arguments. Many, perhaps most, languages treat \( A_{ditr} \) in exactly the same way as the A argument of two-argument predicates, but this needs to be established for each language. Note, however, that the difference may be relevant only for a subclass of predicates (e.g. the A of two-argument predicates may be marked as dative under certain conditions, while this option may be absent from \( A_{ditr} \); or ergatives may be compulsory on \( A_{ditr} \) but not on A).

Most contributors to the present volume adopted the presented framework. On the other hand, a few authors introduced their own notations of argument roles. Among the authors who adopted an alternative notation of argument roles, Marianne Mithun in her article *Grammatical Relations in Hiligaynon* operates largely with finer semantic roles, such as beneficiary, location, experiencer and instrument, instead of the generalized argument roles of S, A, and P. Due to a thorough discussion of individual verbs and a clean distinction between syntactic arguments and semantic arguments and adjunct, this notation can be matched to the generalized argument roles adopted in the present framework. Though not explicitly discussed, the reluctance to adopt the suggested framework might be motivated by the fact that as many other languages with Philippine systems of grammatical relations, Hiligaynon is characterized by pervasive alternations in argument structure signaled morphologically, so that what seems to be various types of semantic adjunct has the syntactic argument status in some alternations, as is evident in the choice of case marking and argument-like agreement on the verb. The situation is reminiscent of what is meanwhile frequently described as symmetrical voice languages (cf. Himmelmann 2005, Foley 2008, Sonja 2014), though the author herself does not use this term. Though the affixes signaling the change of the argument structure on the verb are pervasive and extremely productive and in many respects, they function similarly to applicatives, causatives, and reciprocals in other languages, they are derivational and not inflectional: not all possible combinations of verb roots and argument changing affixes exist, e.g. some roots have no transitive forms, some have just one, some have two or three. In addition, the meanings of the lexemes related through these alternations in argument structure are not always identical. This special voice system seems to provide the reason why the framework of argument
roles and argument/adjunct distinction suggested in the present volume has not been entirely adopted in the contribution on Hiligaynon.

In the contribution on Mandinka, Denis Creissels also applies a different notation system for referring to various arguments and adjuncts: For language-specific reasons it is more economical to describe rules and restrictions relevant to grammatical relations by referring to core terms (abbreviated as C, C1, and C2) and peripheral or oblique terms (abbreviated as X). Core terms all share the following characteristics: They obligatorily precede the verb in contrast to non-core term, which always follow it, they are obligatorily expressed (even with an indeterminate or anaphoric reading) in assertive and interrogative independent clauses. Despite this deviation from the suggested framework, Creissels’ contribution also allows a straightforward matching to the semantic arguments vs. adjuncts: With the exception of a limited number of movement verbs, the NPs in preverbal position are always semantic arguments (Creissels’ C, C1, or C2), whereas adjuncts can only occupy the postverbal position (X). Semantic arguments in the postverbal position are always identical to adjuncts with respect to their coding or behavioral properties. For the vast majority of one-argument verbs, S corresponds to C; for the vast majority of two-argument verbs A corresponds to C1 and P corresponds to C2. Finally, the verbs which deviate from these patterns are listed explicitly in this contribution.

3.3 Predicate classes

The framework identifies generalized semantic roles such as S, A, P, A\_ditr, T and G for most predicates in each language. The advantage is that these roles are not limited to what one might want to think of as (universally) prototypical or canonical meanings. On the other hand, the logical consequence of this view is that the same generalized semantic argument role might have different morphosyntactic properties depending on which predicate it is the argument of. This point can be illustrated with the following examples from Chechen, in which S, A and P arguments have different case marking and agreement depending on the verb they are arguments of. Whereas the majority of one-argument predicates require its S argument to be marked by the absolutive case, as in (4a), some predicates have its S argument in a different case, for instance in the dative case, as in (4b). I would like to emphasize that following the approach to generalized argument roles sketched in Section 3.2 this difference in case marking (and agreement for that matter) is irrelevant for considering both the sole argument of ‘fall down’ in (4a) and of ‘be hot’ in (4b) as S.

(4) Chechen (Nakh-Daghestanian; Russia; Molochieva p.c.)

a. \(\langle S\text{-ABS}\rangle\)

\(so\ abs \ ohw-v-uzh-u.\)

1sABS down-V-fall-PRS

‘I fall down.’

b. \(\langle S\text{-DAT}\rangle\)

\(suuna\ jouxa\ j-u.\)

1sDAT hot J-be.PRS

‘I am hot.’
Similarly, apart from the most common \(\langle\text{A-erg P-abs}\rangle\) pattern illustrated with (5a), the arguments of two-argument predicates can be marked by various cases, as (5b)–(5c) show:

(5) a. \(\langle\text{A-erg P-abs}\rangle\)

\[
\text{as } \text{wazh} \quad b-u'-u.
\]

1sERG apple(B).ABS B-eat-PRS

‘I eat apples.’

b. \(\langle\text{A-abs P-lat}\rangle\)

\[
\text{so } \text{hwo-x taxan qiet-a}.
\]

1sABS 2s-LAT today meet-PRS

‘I meet you today.’

c. \(\langle\text{A-dat P-abs}\rangle\)

\[
\text{suuna Zaraa} \quad j-iez-a.
\]

1sDAT Zara(J).ABS J-love-PRS

‘I love Zara.’

As the above examples show, various predicates require different case marking, e.g. some one-argument verbs assign the absolutive case to the S argument, others assign the dative case to the S argument, etc. Thus, an adequate account of grammatical relations needs to capture not only the information about the generalized argument roles, but also the reference to specific predicates they are arguments of. As frequently several predicates share the same behavior or marking pattern, it makes sense to generalize across verbs with identical properties and group them into classes when describing grammatical relations. The relevant classes of verbs are close to the traditional concept of valency classes (see Bernard et al. 2015 and the references therein), but it is important to emphasize that classifications of verbs in the present framework are defined by each argument selector separately. That is, there is no \textit{a priori} expectation that for example the predicate classes relevant for case marking are identical to the ones distinguished by agreement. A example is the distinction between various lexical subtypes of S that determine different agreement forms in Muskogean languages but which are largely irrelevant for case marking in the same languages (cf. Broadwell 2006 on Choctaw, also cited in Bickel 2010b).

For some research questions one might be interested in just the arguments of one most representative predicate class and their morphosyntactic properties (as e.g. in Comrie 2013a) and the details of the arguments of other verbs might be negligible. Also in the linguistic descriptive work, it is often the case that the majority of reference grammars are compiled around these most representative classes, with other classes being treated only marginally. Several ways of determining such most representative one-, two-, and three-argument predicate classes are thinkable.\(^2\) Some approaches chose predicates with specific semantics (see the discussion of such approaches in Haspelmath 2011b). In the present framework we suggest to chose the open, most productive class with the largest number of members in the lexicon as the most representative class.

Determining the most representative two-argument predicate class according to these guidelines is probably always straightforward. In a sample of 140 languages studied in Bickel et al.

\(^2\) Witzlack-Makarevich (2011, Section 7.2) and Bickel et al. (2014) use the term \textit{default class}. 
(2014) for the purposes of non-default case assignment this was always the case. The most representative one-argument predicate class is often unproblematic as well, the only major exception present languages discussed under the rubric of *split S* systems and different subtypes thereof (e.g. languages with the so-called ‘active alignment’ or ‘stative-active languages,’ see Merlan 1985, Dixon 1994, Levin and Rappaport Hovav 1995, Van Valin and LaPolla 1997, Croft 1998, Donohue and Wichmann 2008). Some solutions of treating such cases in the present framework are discussed in Witzlack-Makarevich (2011: 118–136). Finally, three-argument predicates tend to be substantially less frequent in the lexicon than other predicates and the small sets one finds often have heterogeneous morphosyntactic properties (see Malchukov et al. 2010a). In such cases no clear most representative predicate class can be postulated.

All the contribution to the present volume discuss various predicate classes and their effect on argument selection. Many papers are structured in a familiar way: the most representative classes are considered first and then any deviations from the established patterns are discussed for each argument selector separately. Apart from the frequently discussed predicate-conditioned difference in argument marking, several papers discussed how individual predicates restrict other argument selectors. For instance, in Sanzhi Dargwa (Diana Forker’s contribution) antipassive formation is only possible with one class of transitive verbs. Finally, as has been pointed out above, for several languages of the volume it is indeed problematic to establish the most representative three-argument class and such verbs are often considered on a one-by-one basis, as e.g. in Mandinka (Denis Creissels’ contribution).

### 3.4 Referential specifications of arguments

Apart from the generalized semantic role properties and lexical specifications of the predicate, argument marking or behavior often depends on arguments’ referential properties in the broad sense. The relevant categories are person, number, definiteness, topicality, specificity, animacy, part-of-speech properties, etc. The resulting situation has been investigated under a variety of labels. The most common general terms include ‘split’ (Silverstein 1976) or, more specifically, ‘split conditioned by semantics of NPs’ (Dixon 1994), ‘differential marking’ (Comrie 1989) or ‘differential argument marking’ (Witzlack-Makarevich and Seržant 2017). Among specific manifestations of differential marking, the best studied patterns are splits in the marking of the P argument commonly referred to as ‘differential object marking’ or ‘DOM’ (Bossong 1982, 1985, 1998) and of the A argument called ‘split ergativity’ (Comrie 1978, Dixon 1979) or ‘differential subject marking’ (de Hoop and de Swart 2008).

In several languages of the volume referential properties of arguments have effect on argument selection. They include the more frequently discussed effects on case and agreement marking, as in e.g. in Telkepe Neo-Aramaic (Eleanor Coghill’s contribution), in Katla (Birgit Hellwig’s contribution), and in Kubeo (Thiago Costa Chacon and Carol Genetti’s contribution), but also on other argument selectors, as e.g. on the antipassive formation in Sanzhi Dargwa (Diana Forker’s contribution) which is not available with first or second person patients.
4 Clause-level conditions

Whether a certain argument is selected by a particular selector is not only determined by the nature of the argument and its lexical or referential specifications. A number of other clause-level properties can influence the inclusion or exclusion of the argument as well, resulting in various additional splits. The conditions on splits can be of a number of types. The most wide-spread conditions include the following:

- tense-aspect-mood features
- the nature of the clause (subordinate vs. main clause)
- polarity
- scenario (co-presence of particular types of arguments in the clause)

Most conditions are well-established in the literature (see e.g. Dixon 1994, Bickel 2010b). What is less well-known is scenario conditions, and we illustrate this briefly here. In some traditions, scenario conditions are treated under the rubric of ‘hierarchical alignment’ (cf. Mallinson and Blake 1981, Nichols 1992, Siewierska 1998). The basic idea is that the process of argument selection takes into account not only the information about the referential properties if the selected arguments, as is the case with the familiar case of differential argument marking (see Section 3.4). Instead, also the other arguments present in the clause with their respective referential properties (i.e. the whole constellation of arguments (‘who is acting on whom’) affect whether arguments are selected by an argument selector or not. See Witzlack-Makarevich et al. (2016) for more examples on scenario-conditioned argument selection and the discussion of the differences between the scenario view and the interpretation of the individual cases in terms of referential hierarchies.

An example is Aguaruna. In this language, the S and A arguments are invariably in the nominative case. The P argument is marked in one of two ways. First, it can be in the unmarked nominative, such as yawaã ‘dog.NOM’ in (6a) and hutii ‘1pNOM’ in (6b):

(6) Aguaruna (Jivaroan; Overall 2007:336, 443f.)
   a. yawaã ii-nau maa-tʃa-ma-umɨ?
      dog.NOM 1p-POSS kill.HIAF-RECPST-POLINT-2s:PST
      ‘Have you killed our dog?’
   b. hutii ainau-ti atumi wai-hatu-ina-humi-i.
      1pNOM p-SAP 2pNOM see-1pP-p:IPFV-2p-DECL
      ‘You(pl.) see us.’

Second, the P argument can be marked with the accusative case, as in the following examples:

(7) Aguaruna (Overall 2007:146, 309, 326, 444)
   a. nĩ ii-na antu-hu-tama-ka-aha-tata-wa-i.
      3sNOM 1p-ACC listen-APPL-1pP-INTS-p-FUT-3-DECL
      ‘He will listen to us.’
   b. hutii a-ina-u-ti daka-sa-tata-hami-i ami-na.
      1pNOM COP-p:IPFV-SREL-SAP wait.for-ATT-FUT-1s>2sP-DECL 2s-ACC
      ‘We will wait for you.’
   DST be-PL:PFV-REL 1s-ACC see-1sO-INTS-PL-RECPST:3:DECL
   ‘They saw me.’

d. *ima biika-na-kl yu-a-ma-ha-i.*
   INTENS bean-ACC-RESTR eat-HIAF-RECPST-1s-DECL
   ‘I only ate beans.’

As (6b) and (7a) demonstrate, the P argument with identical referential properties (first
person plural pronoun) can be either in the nominative or in the accusative case. The referential
features of the argument in question alone cannot be the trigger of differential P marking.
Instead, the distribution of the two P argument markers is conditioned by the configuration
of the referential properties of both the A and the P arguments. It is possible to summarize
some of this distribution in terms of a referential hierarchy such as 1sg > 2sg > 1pl/2pl > 3,
as Overall (2009: 168–169) suggests, so that lower-ranking A require accusative marking on
higher-ranked P arguments. However, first person singular and third person A arguments
always result in P being marked by the accusative (7d), and this is not captured by the hierarchy.

Many authors of the present volume commented explicitly on the conditions of argument
selection, though not many seem to play a role. For instance, in Sanzhi Dargwa (Diana Forker’s
contribution to the present volume) argument selection by antipassive is only possible with a
limited number of TAM forms (the present progressive, the potential present, and the habitual
past), whereas other TAM forms (the aorist or the resultative) cannot be used in antipassive
constructions. Of the type discussed above scenarios are relevant in a few languages, namely,
in Movima (Katharina Haude’s contribution), Yakkha (Diana Schackow’s contribution), Sanzhi
Dargwa (Diana Forker’s contribution) and Mapudungun (Fernando Zúñiga’s contribution).

5 Argument selectors

In the framework adopted here, argument selectors refer to any morphosyntactic structure,
process, rule, constraint or construction that selects a subset of arguments (and non-arguments)
and treats them differently from other arguments (or non-arguments) of the clause. In order to
qualify as an argument selector a particular morphosyntactic structure, process or rule must
display a specific constraint as to which arguments it applies to, e.g., only to A, or to S, A, and
A_{ditr}, or only to S, A, P, A_{ditr}, T, and G, but not adjuncts. To illustrate the difference between
a genuine argument selector and a construction that resembles an argument selector but does
not qualify as one, consider the difference between the following examples:

(8) a. *Bob_i stumbled and \( \varnothing \_j \) fell.*
    b. *Bob_i stumbled and \( \varnothing \_j \) dropped the watermelon.*
    c. *Bob_i dropped the watermelon on the ground and \( \varnothing \_j \) got flustered.*
    d. *Bob_i dropped the watermelon on the ground and \( \varnothing \_{i,sj} \) burst.*

In all examples in (8), the second coordinate clause lacks an overt argument. In all cases, the
silent argument is either the S argument, as in (8a), or the A argument, as in (8b–d). These silent
controlleres are obligatorily interpreted as being coreferential with either the S or A argument
of the first clause. The interpretational constraint can even override pragmatic plausibility, as in (8d), where the second clause can only be interpreted as referring to the situation where Bob burst, however implausible this is in the real world.

Constructions such as the above constitute argument selectors because they impose a strict constraint on arguments. It is important not to confuse such selectors with similarly-looking phenomena which do not impose any syntactic constraints on obligatory coreference and whose interpretation relies wholly on previous discourse and our knowledge of the world. The following examples from Mandarin Chinese illustrate this (based on Comrie 1988 and LaPolla 1993; see also Bickel 2010b). The deleted argument in (9a) is interpreted as referring to the watermelon, as this is the most plausible scenario based on our world knowledge. The same is true for (9b), where the silent argument of the second clause is interpreted as referring anaphorically to the man, because watermelons normally do not get flustered (see Bickel and Yadava 2000 for examples from other languages). Crucially, the Chinese constructions illustrated by these data are not argument selectors.

(9) Mandarin Chinese (Sino-Tibetan; LaPolla 1993)
   a. Nei ge ren ba xigua diao zai dishang, sui le.
      that CLF person OBJ watermelon drop LOC ground break.to.pieces PFV
      ‘That man dropped the watermelon on the ground and it burst.’
   b. Nei ge ren ba xigua diao zai dishang, huang le.
      that CLF person OBJ watermelon drop LOC ground get.flustered ASP
      ‘That man dropped the watermelon on the ground, (and he) got flustered.’

In what follows, I will provide an overview of the most common argument selectors considered by the authors of the present volume highlighting the emerging patterns. I begin with various types of argument marking (Section 5.1). I then consider such phrase-structure related selectors as constituent order and the obligatory filled position (Section 5.2). Section 5.3 discusses a number of biclausal argument selectors, whereas Section 5.4 surveys diathesis alternations. Section 5.5 surveys a few other argument selectors discussed in the present volume.

5.1 Argument marking

Argument marking by means of case or agreement on the verb are by far the most frequently mentioned and well-studied argument selectors. These two selectors are also the ones most commonly used in textbooks to introduce the concept of morphosyntactic alignment (e.g. Payne 1997: 129).

The term case marking is used in this article in a broad sense as a cover term for any dependent-marking of argument roles on the level of the clause in Nichols’ (1986) sense. Recently the term flagging has started to be frequently used to refer to the case marking in the broad sense following Malchukov et al. (2010b). A large exemplar-based typological overview of the alignment of case marking on nouns and pronouns is provided in Comrie (2013a,b). Recently, Bickel et al. (2015a,b) provide even larger surveys of case marking which take into considerations splits in the alignment pattern. Finally, Haspelmath (2005, 2013) gives an overview of the alignment of case marking on the non-agent arguments of three-argument verbs. Verbal agreement with arguments is another frequently considered argument selector. Other terms used
to refer to this argument selector are cross-reference with nominal arguments, head-marking (at the clause level, as in Nichols 1986) or more recently also indexing (Haspelmath 2011a).\footnote{In contrast to the approach adopted e.g. in Nichols (1992: 52), Bickel and Nichols (2007) and Witzlack-Makarevich (2011), which consider only cases of grammatical agreement as real agreement, Haspelmath (2011a) calls any kind of bound person-number marking on the verb indexing.}

All languages in the present volume and to my knowledge all languages of the world use case marking in the above sense as an argument selector. At first, this claim might seem counterintuitive, as many languages are claimed not to be case languages. For instance, König (2008) in her survey of the case marking in the languages of Africa uses the term very similar to the way it is done here to also include adposition marking, i.e. as “a system of marking dependent nouns for the type of relationship they bear to their heads” (König 2008: 5). She mentions that neither Swahili (Atlantic-Congo), nor !Xun (Kx’a) are “case languages” (König 2008: 32). What this and similar claims imply is that case marking does not discriminate among the argument roles of the major predicate class. What these claims ignore is that case marking discriminates between some argument roles of the non-major predicate classes and to discriminate between arguments and adjuncts thus yielding the subsets \{S, A, P, A_{ditr}, T, G\} vs. \{some\} adjuncts. Thus, in Swahili the instrumental/comitative preposition na is used for some adjuncts and arguments of a small set of predicates (see Polome 1967: 136, see Mous and Mreta 2004 on other Bantu languages). Also !Xun has a comitative/instrumental preposition to mark some adjuncts (König and Heine 2010: 48).

In a similar fashion, some languages of the volume do not use case marking to distinguish between the argument of the major predicate classes, but they do mark arguments of minor predicate classes and adjunct. For instance in Mon (Mathias Jenny’s contribution), S, A, and P are not marked. None of the classes of three-argument verbs seem to qualify as the major one. Only the verb ko ‘give’ is the only one used with unmarked A_{ditr}, T, and G. Some other trivalent expressions are combinations of other verbs and the verb ko ‘give’, none of the argument is case-marked. The G argument of other trivalent verbs, P arguments of minor predicate classes, as well as various types of adjunct are marked with prepositions.

5.2 Phrase structure

Two argument selectors can be described as somehow referring to the phrase structure (cf. Bickel 2010b): they are a fixed linear position and an obligatory filled position for a subset of argument roles.

Constituent order is commonly mentioned as a construction identifying grammatical relations in e.g. Keenan (1976), Farrell (2005: 11), Dixon (1994: 49–52) and Bickel (2010b). It should be emphasized that constituent order less commonly can be considered an argument selector under the present approach. Though often a more common (or canonical or “preferred” in e.g. Farrell 2005: 82–83) order is mentioned as identifying grammatical relations, it is often a tendency, and not a strict rule: other constituent orders are possible under specific information-structural or pragmatic conditions.

Another restriction when considering constituent order as a selector stems from the fact that a fixed position allows a clear identification of \{S, A\} vs. \{S, P\} argument sets only in lan-
languages with verb-medial order or when some other terms with a fixed position allow a consistent identification of these subsets. In the verb-initial and verb-final languages there is no straightforward way to argue for the grouping of the S argument with either the A or the P arguments. With the orders SV and APV one could argue that either S and P are treated in the same way, since they both immediately precede the verb, or that S and A are treated in the same way, since they both occur as the first arguments of a clause. Similar options of analysis are available for the orders SV/PAV, VS/VAP and VS/VPA (see Dixon 1994: 49–50). The same challenge of identifying which arguments are treated the same way is even more obvious with three-argument verbs (see Malchukov et al. 2010a: 6). Though such restrictions related to the basic word order might make the relative order of S, A, P, and the verb less attractive for those approaches which seek to find further support for the categories of subject, direct object, ergative or absolutive, as the present approach is interested in all sorts of argument sets identified by argument selectors, also selectors which identify e.g. \{S, A, P\} or \{S, A, P, A_{ditr}, T\} are of interest.

Another two argument selector related to phrase structure is the obligatory overtly realized argument and the obligatory silent argument (see e.g. Bickel 2010b). Depending on the language-specific position of adjuncts and arguments, the obligatory overtly realized argument is often a prerequisite for identifying a specific constituent order as an argument selector (e.g. in a verb-final language with arguments and adjuncts preceding the verb and pervasive argument ellipsis there is no way to discriminate between argument and (subsets) of adjuncts). This argument selector have been reported as selecting the argument set e.g. \{S, A\} (i.e. the subject) in many Germanic languages including English and Icelandic (Thráinsson 2007: 504). On the other hand, various types of non-finite clauses might require a specific argument set to be silent, often under the condition of coreference with an argument in a different clauses, as e.g. in the control and raising constructions discussed in Section 5.3.

Of the languages considered in the present volume, a few have been reported to have a specific constituent order as an argument selector. For instance, in Mandinka (Denis Creissels’ contribution) the S, A, and P arguments of the largest predicate classes obligatory precede the verb and are thus discriminated from adjuncts. In addition, S and A arguments form a set, as they precede an obligatory predicative marker encoding TAM and polarity, whereas the P argument follows it. Thus the argument selector of constituent order forms the sets \{S, A\} vs. \{P\} vs. adjunct (among three-argument verbs no pattern can be identified as the dominant one). In addition, Mandinka also has the obligatory filled position as an argument selector, it applies to the set of argument roles \{S, A, P\} in both assertive and interrogative independent clauses.

On the other hand, many of the languages discussed in the present volume have neither of the two argument selectors. For instance, the basic word order in Mon (Mathias Jenny’s contribution) is verb medial (i.e. SV, AVP, and A_{ditr}). However, many clauses have other arrangements of constituents: fronting for pragmatic reasons is frequent and involves both topicalization and focusing of the fronted argument or adjunct. In addition, omission of known or retrievable arguments and adjuncts is frequent in Mon, so there is no argument selector of the obligator filled position. Thus, both preverbal and postverbal position can be filled both by arguments and adjuncts.
5.3 Biclausal argument selectors

The argument selectors discussed above operate within a single clause. On the other hand, certain types of discriminating treatment of some arguments in contrast to the others is only possible when two clauses are combined into a single sentence by various means of clause combining. For this type of argument selectors the term ‘pivot’ has been in use since Dixon (1979) (see also Dixon 1994: 11, 143 and Foley and Van Valin 1984) and it is common to speak of syntactical accusativity if a biclausal argument selector identifies the [S, A] set and of syntactic ergativity if a biclausal constructions singles out the [S, P] set. Below, I will present those biclausal argument selectors which are discussed in the volume and provide some typological background to embed them into the discussion of grammatical relations. I first consider what is traditionally known as control and raising constructions (Section 5.3.1), I then proceed with other types of biclausal argument selectors (Section 5.3.3) and finally consider relative clauses as argument selectors (Section 5.3.3).

5.3.1 Argument selectors with control and raising verbs

In contrast to the biclausal constructions to be discussed below which can have any predicates in the linked clauses, some types of clause linkage is only possible with specific, often rather limited sets of predicates in the main (or matrix) clause. These predicates are referred to as ‘control predicates’. They subcategorize for argumental dependent clauses (i.e. complement clauses are imbedded into main clauses) and often include verbs of perception, speaking, linking, and thinking (see e.g. Dixon 2006: 10 for a list of common control predicates). As in other biclausal constructions specifying argument selectors, these constructions involve obligatory coreference: The referential properties of the (overt or covert) controller in the matrix clause determine the referential properties of the silent controllee. It is primarily the interpretation of this silent controllee what identifies a set of arguments and discriminates it from other arguments and non-arguments. In turn, the controller does not specify an argument selector and is determined lexically by the matrix verb (see e.g. Comrie 1985 for a discussion of the so-called subject and object control verbs).

Argument selection by means of a control construction can take place it two ways. On the one hand, some control predicates may allow only a specific subset of arguments to function as a controllee in the embedded clause. This is the case in e.g. Telkepe Neo-Aramaic (Eleanor Coghill’s contribution to the present volume), in which some verbs take an infinitival embedded clause with [S, A] controllees. On the other hand, a specific control predicate may occur with two types of embedded structures: one for a limited subset of arguments, e.g. for [S, A] controllees only, and the other one for some other controllees. For instance, in Mon constructions with control verbs, such as məkɤ̀ʔ ‘want to’, hù mòc ‘not want to’, and tɛ̀h ‘have to’, the controller is coreferential with a controllee S or A, which is obligatorily omitted. The controller itself may or may not be overtly expressed, as in (10a) and (10b) respectively. If the non-clausal argument of the control verb is not coreferential with the [S, A] arguments of the controlled verb, a structure with the dummy causative kɒ ‘give, let’ must be used, as in (10c). This strategy is also used with the so-called object-control verbs, such as ‘order’ and ‘request’. In both cases, the controllee may or may not be overtly expressed:
(10) Mon (Austroasiatic; Mathias Jenny, this volume)

a. manih plày tùʔtiʔyaʔ kòhî le məkɤ̀ʔ [∅, tèk mit chak kòwəŋ ko mìʔ]
human young.man second MEDL ADD DES tie friend connect lover OBL Mi
kon plem] kòm raʔ.
Kon Plem also FOC
‘Also the second young man wanted to become friends and lovers with Mi Kon
Plem.’

b. ∅ i kəlaŋ cəm rûŋ khyot.khyot.plot.plot too hmaʔ? ∅, məkɤ̀ʔ? ∅, həɲòc dûp le [∅ i
listen try look certainly finish RSTR DES nod head ADD
həɲòc], ...

nod
‘Now listen carefully, and when [you] have looked at it thoroughly, if [you] want
to nod [your] head, nod it,...’

c. ʔuə məkɤ̀ʔ ko [(pèh) ??a].
1SG DES give 2 go
‘I want you to go.’ (lit. ‘I want to let you go.’)

A similar situation is observed in Sanzhi Dargwa (Diana Forker’s contribution to the present
volume): Whereas with some verbs, such as -aʔašː- ‘begin’, the controllee can only be the {S, A}
arguments, other verbs allow different structures depending on the controllee: -ikː- ‘want’ and
uruχle ca- ‘fear’ can either occur with the embedded verb carrying the infinitive suffix if the
controllee is the the {S, A} argument set, otherwise the embedded verb is in a special converb
form.

Another biclausal argument selector which is limited only to some matrix predicates is the
raising construction (or ‘matrix coding’ or ‘exceptional case marking’) (see e.g. Bresnan 1982).
In contrast to the control construction, the argument of the matrix clause plays no semantic
role in the predication of its clause. The construction with a raised argument alternates
with a construction with a so-called ‘expletive subject’ under appropriate conditions, as in the
following examples from English:

(11) English

a. Lisa, seems [∅, to be suffering from mercury poisoning].

b. It seems that Lisa is suffering from mercury poisoning.

Though theoretically the difference between control and raising constructions is clear, in
practice the distinction might be less than straightforward. A typical example is the discussion
of the status of the English aspectual verbs, such as begin, starting from Perlmutter (1968, 1970)
and continuing till present (see Fukuda 2007). For the present purposes the difference between
the control and raising verbs is not central: I am not aware of any cases where all control
predicates of a language select one set of arguments, whereas all raising predicates select a
different set of arguments.

In contrast to the control construction, raising is not frequently discussed in the present
volume. In fact, Givón (1997: 41) claims that raising is not very common in the languages
of the world. And indeed most contributions do not consider raising an argument selector.
For instance, Movima embedded clauses (Katharina Haude’s contribution) always contain an overtly expressed argument (encoded as the possessor of the nominalized predicate) in contrast to their main-clause counterparts, which can be dropped. Thus, there is no silent argument to begin with whose interpretation might be syntactically determined as coreferential with some argument of the matrix clause.

Most languages studied in the present volume do not have any kind of raising construction or it does not impose any restrictions on the silent argument. For instance, in Basque (Fernando Zúñiga and Beatriz Fernández’s contribution) the controllee argument of the raising verbs is preferentially an S, an A, or a A\_dit, argument, but other, non-coreferential interpretations of the gapped argument seem to be possible for at least some speakers, thus, this construction is not considered an argument selector for the purposes of present volume (see also Artiagoitia 2003: 653–657). The raising construction is mentioned for one predicate in Mapudungun, however, no evidence is provided that it is indeed a raising and not a control construction. Finally, only in Balinese (I Wayan Arka’s contribution), raising predicates, as well as control predicates impose an obligatory interpretation on the dropped argument of the embedded clause. In contrast to the more familiar cases of raising as an argument selector, the controllee is either the A or the P argument depending on the voice and is thus to some extent conditioned by the referential properties of arguments, such as topicality. A similar situation is discussed for Tagalog and Central Ojibwa in Bickel (2010b).

### 5.3.2 Argument selectors with other types of clause combining

Whereas the control and raising argument selectors described above are lexically restricted by matrix predicates, languages also employ other types of clause-linking not limited to specific predicates but still having either an obligatorily or optionally silent arguments in one of the clauses and syntactic rules imposing the way these silent arguments are to be interpreted. In addition, the controller in the main clause, which is not determined by the nature of the matrix predicate, can also be restricted to a subset of arguments and thus represent an argument selector. Traditionally this type of argument selection in biclausal constructions has a variety of names depending on the type of clause linking. For instance, the term ‘conjunction reduction’ is used to refer to the argument selection situation in coordinated clauses with a gapped argument. Conjunction reduction was illustrated with the English examples in (8) repeated in (12) for convenience. In all four sentences, the second coordinate clause lacks an overt argument. The interpretation of the silent argument is restricted in such a way that in all four cases the silent argument is interpreted as being obligatorily coreferential with either the S argument, as in (12a) and (12b), or with the A argument, as in (12c) and (12d) of the first clause even if the resulting interpretation is semantically highly implausible:

(12) a. Bob\_i stumbled and ∅\_i fell.

        b. Bob\_i stumbled and ∅\_i dropped the watermelon.

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4 Balinese is a symmetrical voice language, cf. Himmelmann (2005), Foley (2008), and Sonja (2014). Interestingly, intransitive verbs are preferentially used with the active voice for semantically agentive S arguments or with the undergoer voice for semantically patientive S arguments.
c. Bob_i dropped the watermelon on the ground and ∅_i got flustered.

d. Bob_j dropped the watermelon on the ground and ∅_i,j burst.

Traditionally, two major types of clause linkage are distinguished: coordination, which is a combination of two independent clauses, and subordination, which is a combination of an independent and a dependent clause. This traditional typology was later extended to include an intermediate type, which has characteristics of both subordination and coordination, this type was termed cosubordination (see Olson 1981 and Foley and Van Valin 1984). Later studies have shown that also this three-way typology might be too broad to capture similarities and differences among the individual types of clause-combining in the languages of the world and the three types do not define cross-linguistic type clusters or prototypes characterized by correlated bundles of properties, as one might expect (Bickel 2010a). Instead, when describing and comparing individual clause-linkage constructions it is suggested to employ a large set of more concrete analytical variables to ensure a more precise identification of individual cross-clausal constructions. As a language might have a number of biclausal constructions which figure as argument selectors, both for descriptive purposes to discriminate those constructions which operate on the basis of a limited set of arguments from the ones which are not restricted in this way and for comparative purposes to draw parallels in biclausal argument selectors across languages, a precise identification of the relevant types of clause-linking constructions is a desideratum. Detailed studies of clause-linking mechanisms are still not very common in language description relatively. And obviously, a thorough account of clause linking presents a project on its own and hoes beyond the scope of the present volume.

As an example of of argument selection in clause combining consider the simultaneous converb marked with a suffix -saŋ in Yakkha. The S and A arguments of the main clause and the converbial clause have to be coreferential, thus, both the controller and the controllee represent an argument selector.

(13) Yakkha (Sino-Tibetan; Diana Schackow, this volume)

a. yapmi, paŋ-paŋ=be [∅_i nak-saŋ] kheʔ-ma
   people house-house=LOC ask-SIM go-INF[DEONT]
   ‘The people have to go from house to house, asking (for food).’ (A=S)

b. sondu=ŋa [∅_i kisi-saŋ] luks-u:
   Sondu=ERG be-afraid-SIM tell-3.P[PST]
   ‘Frightened, Sondu told him: ...’ (S=A)

Though most contributions to the present volume mention at least one biclausal construction of the type discussed in this subsection (i.e. which is neither a complement, nor a relative clause), some languages do not have any argument selectors in such construction or no clause-linking constructions beyond mere juxtaposition of two main clauses to begin with. Thus, Katla (Niger-Congo or Katla-Tima, Sudan; Birgit Hellwig’s contribution) frequently juxtaposes

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5 A detailed description of this type of clause-linking structure and its differences and similarities to the many other Yakkha types of clause-linking are described in Schackow (2015: 436–440).
clauses and leaves interpretation of the semantics of the relationship between them to pragmatics, there are no constraints on the overt expression of arguments and the interpretation of the dropped arguments: they can be co-referential to any or none of the arguments of the preceding clause.6

5.3.3 Relativization site as an argument selector

Another cross-clausal construction which frequently figures as an argument selector is the relative construction. This construction is functionally different from other biclausal constructions in that a whole propositional expression is used to modify a noun phrase. The clause position that might be constrained to a subset of arguments is the relativization site within the relative clause.7

In many languages, relative constructions have no grammatical relation restrictions. For instance, in German the same construction is used on any relativization site be it an argument, as in (14a), or an adjunct, as in (14b). Also five of the languages discussed in the present volume (viz. Basque, Katla, Kubeo, Mon, and Sanzhi) do not have any restrictions on the relativization site.

(14) German (Indo-European)
   a. Der Mörder, [den ich erkannt habe], verfolgt mich.
      DEF.NOM killer who.ACC 1sNOM recognized have pursue 1sACC
      ‘The murder, who I recognized pursues me.’
   b. Ich sah den Garten, [in dem er die Leiche vergraben hat].
      1sNOM saw DEF.ACC garden in which.DAT 3sMASC.NOM DEF.NOM corpse
      buried have
      ‘I saw the garden where he buried the body.’

On the other hand, relative clauses with a relativization cite restricted to a particular subset of arguments are also common. Sometimes, languages have various relativization strategies with only some of them being restricted to a specific set of arguments. For instance, in Mandinka (Denis Creissels’ contribution) one possibility to form a relative clause (the head-internal strategy) is to use the relative particle miŋ within the relativized clause, either as a determiner or a pronoun, in the position corresponding to the relativized role. With this strategy and argument or non argument can be relativized upon. In the second strategy miŋ acts as a linker between the head noun and the relativized clause, within which the head noun is resumed by a pronoun. This strategy is available for P arguments of various predicate classes and adjuncts, but it is not available for S and A arguments.

6 To be fair, Katla has an emerging complementation construction, such phenomena are covered in the preceding section.

7 Relative construction is known to show considerable typological variation across languages and it goes beyond the scope of this thesis to enter into a detailed comparative discussion of the individual subtypes, for comprehensive surveys, see Lehmann (1984, 1986); Keenan (1985); Andrews (2007).
Referential scales and case alignment

(15) Mandinka

a. *mùs-ôo [mîŋ à̀ táa-tá fâr-ôo tò]  
   woman-D REL 3SG go-CPL.POS rice.field-D LOC  
   ‘the woman who went to the rice field’

b. *mùs-ôo [mîŋ yè fâñ-ô tàa]  
   woman-D REL 3SG CPL.POS cutlass-D take  
   ‘the woman who took the cutlass’

c. fâñ-ô [mîŋ mûs-ôo yè à̀ tàa]  
   cutlass-D REL woman-D CPL.POS 3SG take  
   ‘the cutlass that the woman took’

d. fâr-ôo [mîŋ mûs-ôo táa-tá jëe.]  
   rice-field-D REL woman-D go-CPL.POS there  
   ‘the rice field to which the woman went’

This strategy apparently contradicts the hypothesis of the Accessibility Hierarchy suggested in Keenan and Comrie (1977, 1979) and given in reduced version in (16), which was meant to capture cross-linguistic restrictions on possible relativization. Here, ‘>’ stands for ‘more accessible to relativization than’:

(16) Accessibility Hierarchy

subject > direct object > indirect object > oblique

Another possible counterexample is presented by Yakkha (Diana Schackow’s contribution), in which several relativization strategies (viz. headless relative clauses and internally headed relative clauses), allow only the {S, P} arguments as the relativization site, i.e. operate on the ergative basis. In the tradition of the discussion of 80s, one might have interpreted this case as an evidence for Yakkha having the subject and the subject being the {S, P} argument set (i.e. the absolutive, cf. the discussion of Dyirbal in Keenan and Comrie 1977: 82–85). However, leaving aside the more general problems with this view discussed above and in many contributions on the construction-specific nature of grammatical relations, Yakkha does not provide much evidence for the various argument selectors consistently picking the absolutive argument and thus for its possible analysis as the subject (see also Mithun’s discussion of this issue in the present volume).

As has been discussed in Bickel (2010b), in some languages the referential properties of arguments seem to be more prominent that the argument role in determining which arguments can be relativized. Bickel (2010b) discusses the cases of Movima (Haude 2006 and the contribution to the present volume), as well as of and Tagalog (Foley and Van Valin 1984, Kroeger 1993) and in which only the proximate argument can be relativized upon. The Austronesian language Balinese seems to fit this pattern. On the other hand, Marianne Mithun’s discussion of Hiligaynon (another Austronesian language, in many ways similar to Balinese) makes it clear that it is impossible to equate the absolutive argument, which is selected by many, though not all argument selector, with the topic status in the generally-understood sense. Though absolutive arguments are commonly referred to as ‘topics’ in the Austronesian linguistics, both they and the ergative arguments equally figure as topics in Hiligaynon.
5.4 Diathesis alternation

Following the Leningrad school of typology (Mel’čuk and Xolodovič 1970, Xolodovič 1974, Khrakovsky 1979, Mel’čuk 1994, 2006a,b) diathesis is understood as an attribute of a lexical unit, namely, the specification of how semantic argument roles of a predicate relate to syntactic roles. Adjusted to the present construction-specific approach this specification is understood as a relations between predicate’s arguments and their ability to be picked by various argument selectors (i.e. to be marked in a specific way, to participate in certain constructions, etc.). Every predicate might have a number of diatheses, so that one diathesis might have one of its argument selected by a specific construction (e.g. to serve as a relativization site), whereas another diathesis of the same predicate allows a different argument to be selected by the same construction. In contrast to diathesis, voice is a narrower concept referring exclusively to an inflectional category of the verb, that is, voice is a diathesis formally marked on the verb (Mel’čuk and Xolodovič 1970, Mel’čuk 1994, 2006b).

Only one of the diathesis is considered basic, this is the diathesis stored in the lexical entry. When any other diathesis is used, one speaks of ‘diathesis alternation’. It is generally assumed that the basic diathesis of every lexical unit can be doubtlessly established (Mel’čuk 1994: 10). However, the situation described as symmetrical voice systems in some languages might present an exception to this generalization (cf. Himmelmann 2005, Foley 2008, Sonja 2014 on Austronesian languages, see also the contributions on Balinese, Hiligaynon, and Movima).

Diathesis alternation is understood here as not affecting neither the meaning, nor the (semantic) valency of the verb. It is thus exclusively inflectional. Also, diathesis alternations apply to large classes of verbs and are frequently formulated as syntactic rules, rather than as idiosyncrasies in the morphosyntactic patterns of individual verbs, as is e.g. the locative preposition drop alternation found only with certain verbs of motion, as in *descended down the stairs* vs. *descended the stairs* (see Levin 1993: 43). In practice, however, it might be difficult to decide on whether the semantics of predicates is affected and thus on the inflectional vs. derivational status. For this reason some studies consider all sorts of alternations without differentiating between them, see the collection of papers in Malchukov and Comrie (2015), which mainly focus on alternations limited to small classes of verbs (cf. Haspelmath and Hartmann 2015: 65) but do not differentiate between the various types of alternations in principle.

Traditionally, patterns of diathesis alternation are described with reference to the grammatical relations of subject and objects. For instance, one way to characterize the passive diathesis is by stating that the active subject corresponds either to a non-obligatory oblique phrase or to nothing and the active direct object corresponds to the subject of the passive (see e.g. Haspelmath 1990, Shibatani 2004, Keenan and Dryer 2007; see Polinsky 2005 for a similar definition of the antipassive diathesis). This can be illustrated with the following examples from English. In traditional terms, the subject of the active clause *Bob* in (17a) corresponds to the adjunct *by Bob* in the passive clause (17b). At the same time, the direct object *me* of the active clause in (17a) corresponds to the subject *I* in the passive clause in (17b):

(17) a. *Bob pushed me.*
    b. *I was pushed (by Bob).*
What is the alternative to operating with the traditional grammatical relations of subject and object when describing e.g. the active-passive alternation? In what way can one observe selection of some arguments but not the other? In diathesis alternation construction, argument selection can be realized in two ways. First, some arguments (e.g. the P argument of a two-argument verb in the passive diathesis) acquires the properties which are otherwise attributed to some other arguments (e.g. to the \{S, A\} arguments). Second, some other arguments (e.g. the A argument of a two-argument verb in the passive diathesis) loses some or all of the properties it has in an active clause.\(^5\) The two processes are sometimes referred to as promotion and demotion (e.g. in Givón 2001: 126–141, Kazenin 2001) or foregrounding and backgrounding (e.g. in Van Valin 1980). They can be illustrated with the following examples of conjunction reduction in English. The semantic P argument of the passive clause can be both a controller and a contellee in clausal coordination with a silent argument. For instance, the overtly realized P argument *Bob* determines the reference of the gapped argument in the second clause in (18a). In the second coordinated clause, the P argument of a passive clause can also be gapped and its interpretation is then syntactically determined as being coreferential with a certain argument of the first clause, as in (18b). This is in contrast with the situation illustrated in (8), in which the S and A arguments of the active clause figure as both the controller and the contellee in the conjunction reduction construction:

(18)  
\begin{enumerate}
  \item *Bob* was pushed and Ø fell.
  \item *I* fell and Ø was taken to the emergency room.
\end{enumerate}

Languages and individual diathesis types in them vary as two whether and in which way arguments are selected. Some diathesis (e.g. applicatives) can promote virtually any argument or adjunct to be marked or behave as some other arguments, e.g. as the P argument. Others are more restrictive in terms of the terms which can be promoted and these diatheses figure frequently in the discussion of grammatical relations, especially passives and antipassives are often restricted in such ways (see e.g. Dixon 1994: 146–152, Farrell 2005: 62–74, Bickel 2010b).

Most contributions to the present volume discuss in great detail several types of diatheses which figure as argument selectors. For instance, in Kubeo (Tucanoan, Chacon and Genetti’s contribution) three types of diathesis figure as argument selectors viz. passive, causative, and applicative. On the other hand, as has been pointed our above, in some cases the status of a diathesis alternation as being a productive syntactic construction is questionable. For instance, the antipassive alternation is often lexically specified and is rather limited in terms of verbs it can occur with (Polinsky 2017). This is the situation observed in Sanzhi Dargwa (Diana Forker’s contribution to the present volume). Similar restrictions are observed with the middle construction in Mandinka (Denis Creissels’s contribution). Finally, Marianne Mithun’s detailed

\(^5\) Obviously, this presentation reflects the derivational view of the passive diathesis specifically and of diathesis alternation more generally common in linguistic typology, which consider diathesis alternations a syntactic operation (see e.g. Bresnan et al. 2015: 23–32 for arguments against this view in the LFG tradition). It is, however, also possible to capture the differences in the morphosyntactic properties of arguments in e.g. active vs. passive clauses by treating individual diatheses just as another condition on argument selection in line with e.g. tense or polarity of a clause. The only difference of this approach would be that the promotion and demotion do not figure as individual selectors.
discussion of the many voices in Hiligaynon makes it clear that in this Austronesian language they all are derivational.

5.5 Other argument selectors

A number of other, less common argument selectors are discussed in some contributions to the present volume. Quite a few contributions discuss secondary prediction as an argument selector in e.g. Hiligaynon, Mandinka (called gerundive incorporation), and Katla. Content question is claimed to represent an argument selector in Hiligaynon and Movima. Finally, many contributions explicitly mention the absence of some argument selectors prominent in the discussion of grammatical relations, e.g. though quantifier float is possible in Basque, Katla, Mon, and Movima, it is not an argument selector in these languages.

6 Conclusion

This introductory article provides a theoretical framework for the description of grammatical relations in the languages of the world both taking into account their construction- and language-specific nature, but also aiming for comparability of grammatical relations across languages. The individual contributions to the present volume discuss in detail both the more familiar argument selectors, but also the less common once. In addition, they highlight the way various properties of arguments and of the whole clause co-determine argument selection.

The small number of contributions to the present volume does not allow many generalizations. What they, however, show is that whereas in some languages the set of selected arguments form clusters, as e.g. in Katla (Birgit Hellwig’s) and Mon (Mathias Jenny’s contribution), in others they vary from construction to construction, as in Mandinka (Dennis Creissels’ contribution). Moreover, the emerging argument sets do not necessarily correspond to the traditional notions of subjects and objects (see e.g. Katharina Haude’s contribution): Taking into account the effects of referential properties and the various conditions on argument selection, the identified argument sets are even further remote from the idealized \{S, A\} set as the subject and the \{P+\} set as the direct object. Many more accounts with the same amount of detail as the ones presented in the present volume are needed to get a realistic picture of the distribution of individual types of arguments sets across the languages of the world and skewings in their distribution. Only when such accounts become available, large-scale comparative work on grammatical relations which can investigate the overall tendency of a language to e.g. ergativity or accusativity in languages will be possible.

Finally, some types of argument selectors have received a lot of attention recently with a number of large-scale typological studies investigating all sorts of effects of various argument and clausal properties interacting on argument selection. A case in point is case marking considered in a number of recent studies (Hartmann et al. 2013, Sinnemäki 2014, Bickel et al. 2014, 2015b,a). The increase in the degree of coverage and detail is massive in comparison to other argument selectors and previous accounts. To make a concrete example, compare for instance Comrie (2013a,b) – the dataset prepared before 2005 with some 170 languages collected in the exemplar based fashion and glossing over most of the language-internal variation apart from the noun vs. pronoun split – with the one studied in Bickel et al. (2015a) and covering over
600 languages and taking splits in case marking conditioned by both referential properties and properties of the clause into account.

The accounts of agreement are catching up (see e.g. Bickel et al. 2013, 2015c, Witzlack-Makarevich et al. 2016). But beyond case marking and agreement no comparable surveys (both in coverage and in the amount of detail) exits on other argument selectors, the state of the art still remain at best the 200 some samples in WALS characterized by their exemplar-based sampling method and consideration only of one pattern out of many (see e.g. Polinsky 2013 on the antipassive argument selector). For a large number of common argument selectors, such as the relativization site, no large-scale studies exist to the best of my knowledge. Similarly scarce are comparative accounts of other biclausal argument selectors, though as the contributions to the present volume show, they are common and might show great diversity in individual languages. These seem to be the areas where further investigations will prove to be of significance.

Appendix: Questionnaire

The purposefully short questionnaire is organized in such a way as to encourage systematic collection of information about any argument selector of a language, i.e. about any rule, construction or restriction that shows sensitivity to grammatical relations. However, as we did not want to reduce this questionnaire to a check-list of known argument selectors (e.g. case marking, agreement, or conjunction reduction) and known conditions on split alignment (e.g. aspect), so contributors should feel free to extend the list of argument types, argument selectors and conditions with any information that they find of relevance for grammatical relations in your language.

For every argument selector present in the language you describe, please provide at the minimum an explicit description of

- its morphosyntactic properties (morphological make-up, type of clause linkage, whether it is a controller or controllee, etc.), showing why the phenomenon is indeed a selector with strict constraints (cf. the discussion above)
- the list of arguments that are selected by the selector, in terms of generalized semantic roles and any lexical or referential specifications and splits that may apply
- any clause-level conditions that may cause a split in the set of selected arguments.

As we are interested in any restrictive mechanisms of a language, the list of possible selectors can be very long and often includes among others the following:

- dependent marking (flagging/case/adposition)
- head-marking (indexing/agreement/cross-referencing/bound pronouns)
- quantifier floating
- relativization site
- raising (controllee)
- possessor ascension
- conjunction reduction (controllee and controller)
- control (controllee)
• subjects of imperatives
• switch-reference marking
• other non-finite clauses (controllee and controller)
• secondary or depictive predicates
• passivization and antipassivization


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Referential scales and case alignment


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