Handbook of Grammatical Relations Questionnaire

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1 Motivations and goals

The term grammatical relations is used to denote the relations between a clause or a predicate and its arguments, such as subject, direct object, and indirect object. These categories are among the most basic concepts of many models of grammar and are often regarded, either explicitly or implicitly, as universal. Moreover, they belong to the fundamental concepts in descriptions of most languages.

Traditionally, surface morphological criteria, such as case marking, agreement, and constituent order played the key role in identifying individual grammatical relations (e.g. the argument in the nominative case was identified as the subject, whereas the argument in the accusative case as the direct object). However, since it became clear (in the 1970s) that in many languages, morphological criteria do not identify grammatical relations in the same way as what is known from European languages, the inventory of grammatical relation tests was extended beyond morphological marking and constituent order. The inventory started to include a variety of syntactic criteria based on phenomena like Equi-NP deletion, raising, conjunction reduction, passivization, the behavior of the reflexives, etc. (cf. the contributions in Li 1976 and Plank 1979).

However, in many cases such syntactic criteria provide conflicting evidence. A popular response to such conflicts was to pick out one or a small set of particular construction(s) from a range of phenomena. This construction, or this selection of constructions, was then treated as providing the only diagnostic for "real" or "deep" grammatical relations (e.g. Anderson 1976). Typically, the resulting grammatical relations were then equated with subjects and objects familiar from European languages. As a result, 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', where researchers pick "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 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 (e.g. one subject and one object or one ergative and one absolutive) in a language. 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, 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 widely accepted in current typology and recent grammatical descriptions tend to provide indepth accounts of the morphosyntactic constructions defining grammatical relation (e.g. Genetti 2007; Haspelmath 1993; Nikolaeva & Tolskaya 2001; van de Velde 2008). There also have been a number of surveys of the way grammatical relations are established or structured by case marking and agreement (e.g. Comrie 2005; Haspelmath 2005; Siewierska 2004, 2005) and, recently, a handbook has been published targeting the morphosyntax of ditransitive objects (Malchukov et al. 2010). What is sorely lacking, however, is a large-scale typological survey of grammatical relations with regard to the whole range of morphosyntactic phenomena relevant for them, specifically including syntactic phenomena (i.e. beyond case and agreement morphosyntax). Our goal is to fill this gap by compiling over 30 detailed accounts of grammatical relations in geographically, genealogically, and typologically diverse languages of the world, prepared by experts working on individual languages.

2 Theoretical framework

To insure comparability of individual accounts in the volume, we suggest to use as a guideline the approach to grammatical relations outlined in Bickel (2011) and further developed in Witzlack-Makarevich (2011). In what follows, we provide a brief overview of this approach. Please, study this section carefully before answering the questions of the questionnaire.

The view of grammatical relations adopted here is characterized by a radical shift of attention from such generalized notions as subject or pivot to single characteristics or properties of the relevant phenomena. In this way, grammatical relations are reconceptualized as equivalence sets of *arguments* that are treated the same way (i.e. "aligned") by an *argument selector* (any morphosyntactic construction or pattern) under certain *conditions*. We briefly discuss these three aspects in turn.

2.1 Arguments

Arguments are complex categories defined by a *generalized semantic role* that may or may not be subject to *lexical and referential specifications* (Section 2.1.2). Before discussing various argument types, it is necessary to be able to distinguish arguments from non-arguments, we will dwell on this issue in Section 2.1.1.

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2.1.1 Arguments vs. adjuncts

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. Seen this way, the argument/adjunct distinction is exclusively semantic and independent of the way a dependent is expressed. Also, the argument vs. adjunct distinction is orthogonal to the question of whether a clausal dependent is syntactically obligatory or omissible. Arguments are frequently omitted in most languages.

Though the basic intuition behind the argument/adjunct distinction is relatively clear, difficulties can 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). One common test is constructions with pro-verbs, such as *do so*, *do it* or *do the same thing* in English (cf. Helbig & Schenkel 1991:37 on German). 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. \rightarrow at home is an adjunct
 - b. **He aimed and did so at Lucky Luke.* \rightarrow *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 & 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 languages, some other tests are more language specific. For instance, in English 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.

Ultimately, the distinction between arguments and adjuncts requires a thorough lexicalsemantic analysis of individual verbs, a task that is orthogonal to and independent from the present project. Obviously, it might be impossible to carry out such an analysis for every verb within the framework of the project. In this case we recommend that you limit your attention to the verbs you are certain about and explicitly state for which verb groups you are unable to distinguish arguments from adjuncts with reasonable certainty.

2.1.2 Generalized semantic roles

Once arguments have been distinguished from adjunct, one needs to further distinguish between individual arguments. Generalized semantic argument roles are identified first by numerical valence: the sole argument of one-argument predicates, the two arguments of twoargument 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

In case of two- and three-argument predicates, arguments are distinguished on the basis of cross-linguistically viable semantic entailment properties (cf. Bickel & Nichols 2009, Bickel 2011, Witzlack-Makarevich 2011, based on and inspired by Dowty 1991 and Primus 1999, 2006):

- (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* T with G, A *cuts* T with G)
- 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 & Nichols 2009, Bickel 2011), 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 was 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 for A_{ditr} ; or ergatives may be compulsory on A_{ditr} but not on A).

¹ The abbreviation S, A, P, T, and G used in this questionnaire have been common in typology since the 1970s. However, as has been recently shown by Haspelmath (2011), 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 (1989).

2.1.3 Lexical specifications of arguments

Our proposal identifies generalized semantic roles like 'S', 'A', 'P', 'A_{ditr}', 'T' and 'G' for most lexical 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. In return, it becomes necessary to state any lexical specification of the generalized roles. Chechen for example, distinguishes between several lexical types of S, A and P. These have different effects on case marking, e.g. some one-argument verbs assign the absolutive to the S argument, others assign datives to the S; some predicates assign ergatives and nominatives to A and P respectively, others datives and nominatives etc. The relevant classes of verbs are therefore close to the traditional concept of 'valency classes', but it is important to emphasize that classifications are defined by each argument selector separately, and that there is no *a priori* expectation that for example the classes relevant for case frames are identical to lexical distinctions relevant for agreement. A well-known 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).

Lexical specifications of S are typically discussed under the rubric of *split-intransitive* systems and *fluid-intransitive* systems, and various subtypes have been labelled 'unergative' and 'unaccusative' verbs, 'active alignment' or 'stative-active', 'agentive' or 'agent-patient', 'semantic alignment', and 'split S' (cf. Merlan 1985, Dixon 1994, Levin & Rappaport Hovav 1995, Van Valin & LaPolla 1997, Croft 1998, Donohue & Wichmann 2008).

2.1.4 Referential specifications of arguments

Apart from the generalized semantic role properties and lexical specifications of the predicate, argument marking or behavior often depends on referential properties in the broad sense and including such categories as 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 'case asymmetry' (Iggesen 2005, 2008).

Among specific manifestations of splits, the best studied patterns are splits in the marking of the P argument commonly referred to as 'differential object marking' (Bossong 1982, 1985, 1998) and of the A argument called 'split ergativity' (Comrie 1978, Dixon 1979) or 'differential subject marking' (de Hoop & de Swart 2008). The effects of referential properties on argument marking are often summarized in terms of referential hierarchies of various shapes, also known as 'agency', 'animacy', 'empathy', 'indexability', 'ontological salience', 'person' and 'prominence' hierarchy (cf. Silverstein 1976, Comrie 1979, 1989, Bossong 1985, Croft 1990, Lazard 1998, Aissen 2003).

2.2 Argument selectors

For the purposes of this questionnaire, argument selectors refer to any morphosyntactic structure, process, rule, constraint or construction that selects a subset of arguments (and possibly 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 might look like an argument selector but does not qualify as one, consider the following examples (based on Comrie 1988 and LaPolla 1993; also cf. Bickel 2011):

- (4) a. Bob_i stumbled and \mathcal{O}_i fell.
 - b. Bob_i stumbled and \emptyset_i dropped the watermelon.
 - c. Bob_i dropped the watermelon on the ground and \mathcal{Q}_i got flustered.
 - d. Bob_i dropped the watermelon_i on the ground and $\mathcal{Q}_{i,*i}$ burst.

In all examples in (4), the second coordinate clause lacks an overt argument. In all cases, the silent argument is either the S argument, as in (4a), or the A argument, as in (4b–d). These silent controllees 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 (4d), 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 like these 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. The deleted argument in (5a) is interpreted as referring to the watermelon, as this is the most plausible scenario based on our world knowledge. The same is true for (5b), 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 & Yādava 2000 for examples from other languages):

- (5) 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.'

Crucially, the Chinese constructions illustrated by these data are not argument selectors.

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2.3 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 2011). What is less well-known is scenario conditions, and we will illustrate this briefly here. In some traditions, scenario conditions are treated under the rubric of 'hierarchical alignment' (cf. Mallinson & Blake 1981, Nichols 1992, Siewierska 1998). The basic phenomenon is that argument selectors include information about more than one participant. This can bring with it a notion of an ontological hierarchy of participants that compete for a specific selector (e.g. whichever participants is higher on the animacy hierarchy triggers agreement), but the phenomenon of scenario conditions is more general and refers to any kind of condition that makes reference to the whole constellation of arguments ('who is acting on whom'), not only those which can be stated in terms of competition along a hierarchy. 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 *yawaã* '1pNOM' in (6b):

- (6) Aguaruna (Jivaroan, Overall 2007:336, 443f.)
 - a. yawaã ii-nau maa-tʃa-ma-ka-umi?
 dog.NOM 1p-POSS kill.HIAF-NEG-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 (Jivaroan, 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.'
 - c. *au a-ina-u mi-na wai-tu-ka-aha-m*ł̃. DST be-PL:IPFV-REL 1s-ACC see-1sO-INTS-PL-RECPST:3:DECL 'They saw me.'

d. *ima biika-na-kI 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. Thus, 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 hierarchy like 1 sg > 2 sg > 1 pl/2 pl > 3, as Overall (2009:168f.) 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 thus is not captured by the hierarchy.

3 Questionnaire

The questionnaire is organized in such a way as to encourage systematical 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, we do not want to reduce this questionnaire to a check-list of known argument selectors (e.g. case, 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 their language.

Please try to provide an example of each argument selector and each condition discussed. Also include examples of three-argument predicates if the language has any.

When giving examples, please use the Leipzig glossing rules for glossing conventions (http://www.eva.mpg.de/lingua/resources/glossing-rules.php).

3.1 Argument selectors

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

For discussion and examples of these and other argument selectors please consult Dixon (1994), Bickel (2011), Witzlack-Makarevich (2011), Van Valin (2005).

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