REVIEWS

Dik Bakker, Martin Haspelmath, eds. *Languages across boundaries: Essays in memory of Anna Siewierska*. Berlin/Boston: De Gruyter Mouton, 2013. xix + 400 pp. ISBN 978-3-11-033103-5.

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The collection of papers in this edited volume is the result of a workshop held in 2012 in memory of Anna Siewierska, whose tragic death in 2011 was a great loss to the field of linguistic typology. Leading scholars present results from their own research, on themes that overlap extensively with those of Siewierska's own work. While the thematic orientation of the book centers around the work of an individual linguist rather than a specific topic in linguistics, the volume shows a great deal of thematic continuity as the authors interact with Siewierska's research, especially her seminal monograph on person (Siewierska 2004). Most contributions relate to this issue: the status of bound person forms (variously termed "indexes" or "agreement"), impersonal pronouns, the referential hierarchy, partial coreference, and suppletion in person forms. There are also two papers on ditransitives, building on important works by Siewierska (Siewierska 2003; Siewierska & Bakker 2007). Most chapters take a broad cross-linguistic typological orientation, while a few present in-depth studies of specific languages.

The book opens with a short preface by Bakker detailing the background behind the creation of the volume and paying tribute to Anna Siewierska's life. Bakker presents a brief overview of her research and how the chapters in the book relate to it, followed by a complete bibliography of her published works. The chapters of the book are not numbered and are arranged alphabetically by (first) author.

In the first chapter, Baerman and Corbett discuss languages in which person as a category is not clearly a part of the morphosyntactic system. In many of these languages, person marking is a by-product of gender and sometimes number marking, such as in Tucano, where first and second person forms are generally marked in the same way as third person neuters. The authors present an in-depth discussion of Archi, which at first glance appears not to utilize the feature of person at all. They conclude, however, that postulating a feature of person for Archi provides a more elegant analysis of the morphosyntactic patterns, in spite of the fact that there are no unique person forms. The key findings are that the feature of person cannot be automatically assumed to be present in any given language, and in those languages where person is not obviously part of the system, careful analysis sometimes shows that it is necessary after all.

In their substantive contribution, Bickel, Iemmolo, Zakharko and Witzlack-Makarevich plunge into the complexities of argument alignment with a quantitative study of alignment types on bound person forms (which they term "agreement"), following up on Siewierska's (2003) important work on ditransitives. The authors observe that determining alignment type on the arguments themselves is relatively straightforward since one only has to check how case or adpositional marking is aligned in regard to core argument roles. For bound person forms the issue is more complex primarily because the form is sometimes absent. For the quantitative study the authors examine a database of 260 languages, consolidating Siewierska's (2003) four criteria for determining alignment type on bound person forms into two: Trigger Potential, whether the argument triggers "agreement"; and Morphological Marking, the form and position of the morphological form. The findings indicate that Trigger Potential (related to the syntax) diverges from Morphological Marking in alignment type in 42% of the systems in the sample. This is an important finding since it shows that a large percentage of systems is not easily categorizable as either nominative/accusative or ergative/ absolutive. Further, more highly complex systems tend to show stronger discrepancies between the two criteria than do simpler systems. The authors also show that there is a strong cross-linguistic bias toward systems where S=A (accusative or neutral alignment). The implication for studies of alignment types is that characterization of a particular alignment system as accusative or ergative should include a discussion of the types of criteria employed. The authors conclude that in the common scenario of conflicting criteria, diachronic work is required to show the layers of grammaticalization that led to divergent patterns within a single system.

Comrie's enjoyable contribution discusses argument alignment in Spanish ditransitive constructions as related to the humanness of the arguments. While previous studies and Spanish reference grammars generally indicate a split alignment, where P patterns like T when it is non-human and like R when it is human, Comrie finds that this is not the case. Utilizing an unusual and highly effective methodology of coding 2,000 pages of modern Spanish-language literature for occurrence of ditransitive constructions with human T arguments, he finds that the pattern is more clearly indirective than previously thought. The R argument is always flagged with the preposition *a*, and T and P both undergoing Differential Object Marking depending on the humanness of the object. In addition, there is a secondary split-argument pattern in which human referential T is not flagged with *a*. The paper concludes with some suggestions regarding recent diachronic development of these constructions and possible social reasons for the decline in overall frequency of human T arguments in speech.

In the next chapter, Creissels analyzes impersonal pronouns in the Mande language Mandinka. Most discussions of impersonal pronouns are limited to well-known European languages; this paper seeks to broaden the scope with an examination of impersonals in a typologically and genetically distant language. An interesting feature of the impersonal usage of second person singular pronouns in Mandinka is that they can refer back to non-specific noun phrases in the preceding context. This is unlike many European languages, where impersonal pronouns can only refer back to other impersonals. Creissels proposes a probable grammaticalization pathway for the Mandinka pattern, where a vocative construction (e.g. "child, if you go somewhere...") shifted semantically to an impersonal (e.g. "if a child goes somewhere...").

Cristofaro's important chapter puts a new perspective on the often-referenced referential hierarchy (also known as the animacy hierarchy or topicality hierarchy), discussing synchronic phenomena related to the hierarchy in terms of their diachronic development. Since its inception, the referential hierarchy in its various instantiations has been proposed on synchronic grounds, such as alignment splits between accusative and ergative case marking, where accusative marking is limited to pronouns and more definite or animate nouns, and ergative marking is limited to less definite or animate nouns. This split has a cognitive explanation in that overt marking is only used for those arguments that are most difficult to identify. Cristofaro shows, however, that in several languages with an alignment split, the historical development of the split was not actually related to the above (synchronic) explanation. In Hittite, for example, the ergative marker developed from an instrumental marker. The reason why it did not apply to first and second person pronouns is simply because instrumental markers did not typically occur with these forms; that is, the development of the Hittite alignment split in ergative marking came about as a result of other grammaticalization processes and not because of the psychological reality of the referential hierarchy. Another explanation rooted in the referential hierarchy is hierarchical alignment patterns. Again, Cristofaro argues that in the development of hierarchical alignment in specific languages, the resulting constructions came about via grammaticalization pathways that were not related to the referential hierarchy. Finally, she argues against a referential-hierarchical explanation for splits in number distinctions where more highly animate/topical/referential arguments are more likely to make a distinction between singular and plural, showing convincingly how the development of these splits in several languages came about in ways not related to the referential hierarchy. This paper calls into question the validity of the referential hierarchy, showing that it is best used simply as a descriptive tool rather than an implicational hierarchy with diachronic and psychological realty. Further, the paper has broad theoretical implications, calling for a shift in typological research away from cross-linguistic comparisons of synchronic patterns and toward explanations that are rooted in the diachronic development of patterns in individual languages.

The next chapter, by Croft, is largely a response to Haspelmath's contribution three chapters later. Here I discuss Haspelmath's paper first for the sake of continuity. Haspelmath argues for syntactic status of bound person forms, what he terms "indexes", as separate from both pronouns and agreement. His definition of bound person forms includes person marking on adpositions and nouns (e.g. possession), but in the chapter he focuses on bound person forms on verbs. Categorizing all indexes as either "agreement" or "pronouns" is a result of a Eurocentric tradition, where German and other languages have cross-linguistically rare "agreement", rather than from a principled typological investigation. The author develops a typology of indexes, with a three-way distinction between "gramm-indexes", "cross-indexes", and "pro-indexes" based on the presence of a co-referring nominal in the clause. Gramm-indexes are grammatical agreement markers, where both the index and a conominal are obligatory, as in German. Cross-indexes, where a conominal is optional, are cross-linguistically by far the most common of the three types of indexes. Finally, pro-indexes are most pronoun-like, in that a conominal is impossible. Cross-indexes pose the main challenge for conceptualizing the facts in terms of the traditional categories of either agreement or fully referring argument. Haspelmath suggests that cross-indexes are neither agreement markers nor referring arguments; rather, they are "elements providing person information that are compatible with further information in the same clause provided by a conominal" (212). This view, while going against an often-held theoretical view that an argument should not be expressed twice, captures nicely the place of cross-indexes on a continuum between gramm-indexes and pro-indexes, and receives justification in the fact that distributed expression of meaning is not unusual in the world's languages. An appendix lists nine proposed universals involving argument indexes.

As noted above, Croft's paper is a response to Haspelmath's, offering a modification of Haspelmath's proposal for a typology of argument indexing. Croft argues that "all indexes refer" (97). Indexes and pronouns are both treated as independent referring expressions rather than grammatically dependent on an argument with which they agree. He contrasts syntactic agreement and semantic agreement, noting especially cases where the two are in conflict; e.g., a female doctor in a language where *doctor* is a masculine noun. He points out that constructions in some languages agree with the grammatical form, and in others with the semantics. In other constructions there is variability between syntactic and semantic agreement, as speakers construe the referent in different ways for discourse purposes. The distribution of semantic and syntactic agreement depends on the Agreement Hierarchy (Corbett 1979), where syntactic agreement is more likely with more closely syntactically bound constituents, and semantic agreement with syntactically more loosely connected elements. Croft argues that antecedentless pronouns pose a major problem for the grammatical-dependency analysis and provide a nice argument for the independent-reference analysis since they show that pronouns can refer to referents that have no antecedent in previous discourse. Croft argues that some of Haspelmath's proposed universals of bound person forms (222) are not universals, but rather strong cross-linguistic tendencies.

Gast and van der Auwera develop a typology of human impersonal pronouns, which they define as pronouns that fill a verb's argument slot without establishing a link to a discourse referent. Common sources for human impersonal pronouns include words meaning 'man' or 'people', 3rd person plural pronouns, and 2nd person singular pronouns. The bulk of the paper uses the logical framework of connectivity maps to develop a semantic typology of various types of human impersonal pronouns. The semantic typology is unusual in that it is a circle rather than a linear continuum, since the two end nodes are semantically related to each other. The data used is all from well-studied European languages (Germanic, Slavic, and Romance), so examining a wider range of languages would give greater validity to the typological conclusions drawn in the chapter. However, the authors' proposal for computational implementation of the model has potential to increase our understanding of human impersonals through corpus studies.

Hampe and Lehmann present a typological study of partial coreference between subject and object arguments in the clause, using descriptive data from a convenience sample of languages, as well as quantitative corpus data in English and German. Based on these two types of data they make several observations. (1) Singular subjects acting on plural objects (e.g. "I embarrass us both") are more common than the reverse situation (e.g. "We embarrass me"). (2) First-person partial coreference is more common than second-person partial coreference. (3) Partial coreference with the subject is more common for arguments lower on the hierarchy of syntactic functions (e.g. adjunct) than for arguments higher on that hierarchy (e.g. direct object). (4) Partial coreference is also more common for less grammaticalized object forms (e.g. independent pronouns vs. affixes). The authors mention possible motivations for these tendencies and note that grammars generally do not develop specific structures to deal with partial coreference; that is, partial coreference is usually constructed in a somewhat *ad hoc* fashion from related grammatical structure.

Kibrik, in a discussion of the Russian referential system, proposes a diachronic scenario involving both internal and external factors that may have led to the development of the current system. The Russian referential system is typologically unusual in that person inflection on the verb typically does not occur without a free referential form. This arrangement, termed "syntactic agreement" following Siewierska (2004), is rare because an argument of the verb is referenced twice and, from a functional perspective, the use of two separate obligatory referential devices is not economical. Syntactic agreement is common among the languages of

Western Europe, but very rare elsewhere. The Russian system, however, is not quite identical to the Germanic system in that the free referential form is not always obligatory. Previous quantitative studies have found that verbal inflection alone, with no free form, accounts for about 1/4 to 1/3 of subjects in corpus text, and that these instances can be explained in terms of reference in discourse. Kibrik proposes that the development of the system, originally verbal inflection only, came about through a combination of factors involving grammaticalization and contact with German. Restructuring of past tense morphology created space for more free forms to be used in the past tense. Later, intensive contact with German in the northwest helped expand the usage of free forms into other tenses. The change has not been complete, however: Bound referential forms are still obligatory, and the free forms have not taken over entirely.

Malchukov shows the cross-linguistic alignment preferences of basic and derived ditransitve constructions. This paper is part of an extensive recent literature on ditransitive constructions (e.g. Malchukov, Haspelmath and Comrie, eds. (2010)), including work by Siewierska (Siewierska 2003; Siewierska & Bakker 2007). This paper discusses the difference in alignment preference between basic and derived ditransitives, where basic ditransitives are verbs that take two object-like arguments, and derived ditransitives are causatives and applicatives. Alignment is usually indirective (the ditransitive T patterns like the monotransitive P), secundative (the ditransitive R patterns like the monotransitive P), or neutral ("double object construction"). A cross-linguistic comparison of alignment preferences of the two construction types shows two generalizations: "matching", where basic and derived ditransitives tend to follow the same alignment pattern, and "bias", where derived ditransitives show a stronger tendency toward neutral alignment. Malchukov argues that this bias is due to the greater formal complexity and lower syntactic integration of derived ditransitives. This paper helps integrate the literature on ditransitives into our understanding of other areas of morphology and syntax, and also helps ground the typological distribution of patterns in functional explanations.

Mithun shows convincing evidence that in some languages bound person forms are best analyzed as the core arguments of the clause, while free pronouns serve a variety of pragmatic functions. She presents data from Mohawk as one instantiation of this type, showing two lines of reasoning to support the argument. First, Mohawk bound forms show many more distinctions in person, number, gender and case than do the free forms: There are 24 bound forms, but only 7 free forms. Second, usage of free pronouns is shown to be motivated in discourse, while bound forms are obligatory. The pitch traces throughout the chapter show how the prosodic contours of the various constructions with free pronouns differ from unmarked prosodic contours and from each other. Therefore, an argument for the Mohawk free forms as the core arguments of the clause would first require an explanation of why the bound "agreement" markers make more distinctions than the free "core arguments", and second why the bound forms are obligatory while the free forms occur only in certain well-defined pragmatic contexts, with marked prosody. Mithun shows that both these facts are explained nicely if the bound forms are seen as the core arguments. She then gives a brief sketch of the diachronic development of the current system. At a previous stage in the language, free pronominal forms regularly occurred in an immediately pre-verbal position in unmarked contexts. The free forms eroded phonologically over time, fusing to the verb as bound pronominal forms. In marked contexts, such as focus, cleft constructions, contrast and topicalization, the free forms were not immediately pre-verbal and did not attach to the verb.

In the next chapter, Nichols discusses the historical development of case-suppletive pronouns in languages of Eurasia, with a particularly detailed analysis of case suppletion in the Uralic languages. The first section presents a list of diachronic pathways along which suppletive pronoun paradigms develop. There is also a typology of person as either lexical ("mostly instantiated in independent root words"), or inflectional ("mostly realized in inflectional morphology"). The list of diachronic pathways and the typology of person are grouped under the same main heading, but the relationship between them is not very clear; reorganization and expansion of this section would make it more useful. Through a look at the pronoun paradigms in the modern Uralic languages, Nichols suggests a diachronic pathway to their development from Proto-Uralic. Initially, person was a purely inflectional category. It then became a lexical category as personal pronoun paradigms took shape. Suppletion developed as non-pronominal forms were recruited as nominatives. Finally, routinization led to the suppletive paradigms being solidified. New forms were also sometimes recruited as oblique forms, usually from prepositions. In general, Nichols finds that pronominal paradigms are relatively stable across time.

Bakker and Siewierska's major contribution in the final chapter of the book, completed just before her death, is informative from both a theoretical and a methodological standpoint. They present a quantitative cross-linguistic study of suppletion in person forms and the potential functional roles of both iconicity and frequency in the distribution of suppletion. Suppletion between singular and plural independent pronouns has been noted to be cross-linguistically more common for first person than second, and for second person than third. The authors show that this is indeed the case in a large sample of languages, and suggest two implicational hierarchies to predict the presence of suppletion $(1^{st} > 2^{nd} > 3^{rd} \text{ and } s_G > PL)$. However, the data bears out this implicational hierarchy only weakly, and the authors posit this as a general cross-linguistic tendency rather than an implicational universal. Iconicity and frequency are both potential functional motivations for this distribution of suppletion: iconicity because of the greater semantic opacity of the first and second person non-singulars as opposed to the third person, and frequency because first person (singular) pronouns generally have greater textual frequency than second or third person pronouns. Through a detailed study of suppletion in their cross-linguistic database, comparing suppletion in terms of number (SG vs. PL) as opposed to case (NOM / ABS vs. ACC / ERG), the authors conclude that iconicity is indeed a motivating factor, albeit a weak one, behind the greater rate of suppletion in first person pronouns as opposed to second and third person pronouns. Frequency is taken to be an even weaker motivating factor, but sometimes motivating changes in the opposite direction. When taken together, iconicity and frequency are likely to be two important factors that combine in the complex historical development of suppletion in person forms.

The volume as a whole, while centered around a linguist rather than a specific theme, is thematically quite cohesive. Collectively the papers represent a continuation of Siewierska's work, primarily on person as well as on ditransitives. The work of leading scholars is represented here, making the book an important contribution furthering scholarly understanding of linguistic typology. The chapters by Cristofaro on the referential hierarchy, by Haspelmath and by Croft on bound person forms, by Bickel et al on criteria employed in determining argument alignment, and by Bakker and Siewierska on functional motivations stand out in particular as important in current theorizing. The organization of the volume would be more intuitive if the chapters were arranged thematically rather than by author's name. An introductory chapter could give an overview of the chapters and their arrangement, making the book more accessible. Apart from these rather minor issues, the volume is an excellent contribution to the field and is essential reading for linguists specializing in the issues discussed.

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