Referential hierarchies and alignment: An overview

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To cite this version:

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A referential hierarchy is a scalar representation of types of referents or referring expressions that are ranked according to their deictic, semantic, and/or discourse-pragmatic properties.[1] The first representation of this kind was Silverstein's (1976: 113) "hierarchy of inherent lexical content",[2] which predicts tendencies of the distribution of accusative vs. ergative alignment patterns in languages with ergative traits. Silverstein's suggestion was that entities high in the hierarchy are more prototypical agents and entities low in the hierarchy are more prototypical patients. The concept of referential hierarchies soon became very popular, both as a tool for explaining morphosyntactic patterns and as an object of research itself (see Comrie 1981 and DeLancey 1981 for early examples; see Bornkessel-Schlesewsky et al. 2015 for a selection of recent studies).[3] One version of Silverstein's referential hierarchy is given in (1) (from Dixon 1979: 85).

(1)   first person pronoun > second person pronoun > third person pronoun > proper nouns > human common noun > animate common noun > inanimate common noun

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1 Other terms used in the literature include empathy hierarchy (Kuno and Kaburaki 1977), nominal hierarchy (Dixon 1979), animacy hierarchy (e. g., Comrie 1981), and indexability hierarchy (Bickel and Nichols 2007).
2 A similar hierarchy has been independently introduced by Moravcsik (1978) and was referred to as "activity scale".
3 For an extensive overview of the history of research on referential hierarchies see Filimonova (2005).

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As was already observed by Silverstein (1976: 118) and discussed in detail by DeLancey (1981), not all systems make the same distinctions, and the ranking of the different members in this hierarchy, especially in the domain of the first and second person, varies from one language to another (and even from one construction to another in a single language; see Zúñiga 2006). This is captured by simplified versions of the hierarchy like the one in (2) (adapted from DeLancey 1981: 627–628; "SAP" stands for "speech-act-participant").

(2)   SAP > 3rd person human > 3rd person > non-human animate > inanimate

As the comparison of (1) and (2) makes obvious, there is a difference as to what kind of categories a referential hierarchy may represent: the hierarchy in (2) ranks properties of *referents*, whereas the hierarchy in (1) ranks referring *expressions* – a distinction that is not always made explicit by the authors, since both domains interact closely.

Due to the interaction of different factors, some researchers have proposed to decompose the complex hierarchy into several layers or sub-hierarchies that rank features like animacy, person, definiteness/specificity, linguistic expression (noun vs. pronoun) and discourse prominence individually (Croft 1990: 112–115; Siewierska 2004: 149).[4] The advantage of such multi-layered hierarchies is that their sub-hierarchies are logically independent, and each of them may have more or less influence on shaping the grammatical system of an individual language. The postulation of sets of sub-hierarchies thus allows for variation in the sense that the ranking among individual sub-hierarchies (e. g., that of animacy and that of definiteness) is not fixed. However, the different levels are obviously closely linked. For instance, first and second person are not only inherently animate; they are also inherently definite and have highly accessible referents. Animate, especially human referents are more likely to be discourse-prominent and, hence, to be referred to by a pronoun. (Comrie [1981: 191] coined the term "topic-worthiness" to account for the frequent correlation of animacy with discourse prominence.)

Independently of how exactly referential hierarchies are labeled or represented, the idea that such a hierarchy can explain morphosyntactic patterns has been largely uncontroversial ever since it was introduced by Silverstein (1976), and has even been conceived of as representing a universally valid fact (Aissen 1999). Indeed, it seems almost impossible to account for certain morphosyntactic

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4 The multi-layered nature of the hierarchy is already inherent to Silverstein's original proposal of the hierarchy of such binary features as [± ego] or [± human]. The proposals by Croft (1990) and Siewierska (2004) allow for more than two levels for each sub-hierarchy.

phenomena without recurring to some kind of referential hierarchy. A well-known case in point is differential object marking (Bossong 1985), which super-ficially allows a "choice" in case marking. Differential object marking is usually described as a system where an untypical patient (i. e., a patient that ranks high in the referential hierarchy) receives special marking – although it can be a matter of much debate which factors, exactly, in the referential hierarchy are relevant for differential marking (cf. for instance, the ongoing discussion of the factors conditioning the usage of the preposition *a* in Spanish, Comrie 1979; Bossong 1991; von Heusinger and Kaiser 2003). Starting with Silverstein's (1976) seminal article, cases of differential agent marking – more familiar under the name of split ergative system (Dixon 1979, 1994) or differential subject marking (de Hoop and de Swart 2008) – have also been accounted for and explained by referring to a referential hierarchy. For these systems the hierarchy predicts that high-ranking agent arguments – typically pronouns denoting speech-act-parti-cipants – are unmarked, while low-ranking agent arguments – typically nouns – participate in an ergative-absolutive system, where the patient is unmarked.

A referential hierarchy may also determine the choice and/or order of person indices on the verb, a system sometimes characterized as hierarchical agreement (see, for instance, the examples in Comrie 1981: 184–187; Mallinson and Blake 1981: 58–59): affixal person-marking slots on the verb are filled according to the hierarchical rank of the indexed persons, regardless of their argument roles. Hierarchical agreement is closely related to what is sometimes referred to as obviation, prominently discussed by DeLancey (1981). Obviation consists in a special morphological marking of NPs independently of their semantic roles: NPs whose referents are relatively low in terms of animacy and/or discourse prominence – the so-called "obviative" NPs – are overtly marked, in opposition to a usually unmarked "proximate" NP, which ranks high in animacy and/or discourse prominence. Obviation usually goes together with a morphological direct-inverse opposition on the verb: direct marking indicates that the proxi-mate NP is the agent and the obviative NP the non-agent (i. e., the expected direction of action), while inverse marking on the verb indicates that the prox-imate NP is the non-agent and the obviative NP the agent (i. e., the less expected direction of action).

As Zúñiga (2006: 21) points out, different representatives of hierarchically based systems can involve different sections of the hierarchy: "[d]ifferential object marking is a grammatical reflex of the [± definite] and/or [± animate] distinctions for 3rd person objects, and split ergativity patterns where SAP pronouns align accusatively and 3rd persons show ergative alignment are a clear example of the division between SAP and 3rd persons." Accordingly, depending on the gramma-tical phenomenon under discussion, it may not always be necessary to assume a

hierarchy, but the phenomenon might also be accounted for by simply postulating binary oppositions, as originally proposed by Silverstein (1976). Therefore, it is often more appropriate to speak of reference *effects*, i. e., of the effects that semantic or discourse-related properties of the referent have on its encoding, without postulating an entire hierarchy consisting of different levels. Obviously, and in line with Silverstein's idea, binary oppositions can also be ranked, e. g., when a first person constantly receives a privileged treatment with respect to the second person, or vice versa.

The amplitude of variation in the proposals in the literature shows that as soon as one wants to get into the details of how a supposedly unique, universally valid referential hierarchy might be structured or how many dimensions such a hierarchy must include, one faces a number of challenges. A major problem is the fact that there does not seem to be independent evidence either in favor or against the existence of such a hierarchy (Gildea 2012), and that the similarity of reference effects from one language to another may be more adequately accounted for by chance and areal diffusion (Bickel et al. 2015). Thus, while referential hierarchies can be a useful descriptive tool in accounting for particular patterns in individual languages, further large-scale typological as well as neurolinguistic research is needed before any solid statement can be made with respect to the universal validity of Silverstein's claim.

Whatever the exact nature of referential hierarchies – one or many, complex or simple, cognitively "real" or not –, the fact that some linguistic systems are determined by reference effects has always posed complications for alignment typology. Ever since it was first propagated in the late 70s, alignment typology was based on the *roles* of the event participants that are represented by verbal arguments. To give a brief characterization, alignment refers to the way the basic notions S (the single argument of intransitive clauses), A (the agent-like argument of transitive clauses),[5] and P (the patient-like argument of transitive clauses) are treated alike in morphosyntax, e. g., through case marking or agreement patterns. The three roles S, A, and P can yield five logically possible groupings or alignment types: nominative-accusative alignment (S behaves or is marked the same way as A but differently from P, i. e., $S = A \neq P$), ergative-absolutive alignment ($S = P \neq A$), tripartite alignment (where all three notion behave or are marked differently, i. e., $S \neq A \neq P$), neutral alignment ($S = A = P$), and horizontal alignment ($S \neq A = P$), where A and P are treated alike and different from S (this pattern is the least common cross-linguistically). To include

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5 Some linguists use O instead of P (e. g., Dixon 1994). There is disagreement among linguists as to what these basic notions actually refer to, i. e., as to whether they are primarily semantic or primarily syntactic notions or both (see Haspelmath 2011 for an overview).

arguments of ditransitive verbs into the alignment typology as well, the system was expanded with the notions T and G (or R) initially by Dryer (1986) and further elaborated in Croft (1990: 102–111) (see also Siewierska 2003, 2004; Haspelmath 2005a, 2005b; Malchukov et al. 2010). This system of alignment, occasionally referred to as object alignment, relies on comparison of the properties of P, T, and G arguments rather than S, A, and P arguments. Again, there are five logically possible alignment types of these three arguments: neutral (P = T = G), indirective (P = T≠G), secundative (P = G≠T), horizontal (P≠T = G) and tripartite (P≠T≠G).

   While the five basic alignment types of S, A, and P, as well as the object alignment types listed above, have proven useful for descriptive purposes, not all cases of argument marking can be straightforwardly characterized in this way: the above-mentioned cases of reference effects on argument marking make it difficult to compare role-based alignment systems on an equal basis. As already Dixon (1972: 59–60) noticed, differential argument marking is unproblematic for alignment typology and can be captured by reference to both the argument roles and the referential properties of arguments it applies to (e. g., first- and second-person arguments are nominatively-accusatively aligned, whereas third-person arguments are ergatively-absolutively aligned). The characterization and analysis of such systems is straightforward and is not different in principle from well-established alignment conditions based on clausal properties such as tense, aspect, or polarity, which also frequently result in alignment splits (cf. Dixon 1994: 97–103). However, other systems in which referential factors affect argument marking, such as obviation systems with direct-inverse marking (e. g., Algonquian languages) and systems where alternative transitive constructions are chosen depending on discourse prominence (e. g., Tagalog), are much less straightforward. The struggle to integrate these systems in alignment typology has given rise to the postulation of further alignment types such as "hierarchical alignment" (Mallinson and Blake 1981: 65; Nichols 1992; Siewierska 1998), "inverse alignment" (Gildea 1994) or even more specific types, such as "Austronesian alignment" (Aldridge 2012). The problem with these terms is that their definitions do not follow the same conceptual logic of forming subsets of argument roles that underlies other alignment types (cf. Creissels 2009) and that they are not universally applicable. Most importantly, these non-canonical types contain traces of the five basic alignment types (Nichols 1992; Bickel 1995; Zúñiga 2006; Haude 2009), so that individual constructions can still be described in terms of the alignment S, A and P. On the other hand, one can object that such a representation does not capture the overall character of the systems in question, whose make-up is based on totally different underlying factors and

is allegedly different in its essence from the systems of differential subject or object marking.

The papers in this volume all deal, in one way or another, with the problems that come with the postulation of a referential hierarchy to describe grammatical systems, focusing on systems that involve the morphological (agreement, inverse, or voice) marking of the predicate. The volume emerged as a result of collaboration in the ESF-EuroBABEL project *Referential hierarchies in morphosyntax: description, typology, diachrony* (RHIM) and relied on comparative studies of these phenomena in the languages of the Americas and the Himalayas, many of which are seriously endangered.[6] Based on fieldwork and on data from annotated oral discourse corpora, the project aimed at a better understanding of such systems from a typological and diachronic perspective.

The article "Inverse and symmetrical voice: on languages with two transitive constructions" by Katharina Haude and Fernando Zúñiga discusses languages that are difficult to place in traditional alignment typology because they possess more than one basic transitive construction. These include the above-mentioned "obviation" systems with a direct-inverse opposition, on the one hand, and "symmetrical voice" systems (Foley 1998) like Tagalog, on the other. On the basis of data from three native languages of South America, the authors show that the line between the two types is not easy to draw, since features of the inverse type can coexist with those of the symmetrical-voice type within the same language.

In their paper "Referential hierarchies: A new look at some historical and typological patterns", Spike Gildea and Fernando Zúñiga provide a survey of the diachronic sources for inverse and hierarchical agreement systems. They show that these systems can have quite different historical sources: passive constructions, the reanalysis of deictic verbal morphology, the reanalysis of zero 3rd person forms, and cleft constructions. Their case studies indicate that the formal properties of hierarchy-sensitive constructions are largely predictable from their sources, and that there is no evidence for the idea that there is a cognitively underlying referential hierarchy that influences their development.

In "Decomposing hierarchical alignment: co-arguments as conditions on alignment" Alena Witzlack-Makarevich, Taras Zakharko, Lennart Bierkandt, Fernando Zúñiga, and Balthasar Bickel draw a parallel between two ways in which referential properties of arguments affect argument marking. In the well-known type of hierarchical marking – often in the form of hierarchical agreement – arguments compete for the possibility of being marked in a particular slot or by a particular marker, and the competition is resolved by a hierarchy. In the second type, which the authors refer to as "co-argument sensitivity", the marking of one argument depends on the properties (e. g., person or number) of its co-argument. The article argues that, while co-argument sensitivity cannot be analyzed in terms of hierarchical marking, as no clear hierarchy can be posited, hierarchical marking can be analyzed in terms of co-argument sensitivity and does not present a special case in the typology of alignment. The findings also cast doubt on the relevance of person hierarchies in diachrony by examining two families, Algonquian and Kiranti, whose agreement systems are often cited as being based on hierarchies. The authors find only very limited statistical evidence for agreement paradigms to have been shaped by a principled ranking of person categories.

The paper "Referential and lexical factors in alignment variation of trivalent verbs" by Eva van Lier, Alena Witzlack-Makarevich, and Joana Jansen, finally, discusses the role of referential and lexical factors in the marking of arguments of trivalent verbs, which exhibits a much larger variation than argument marking with bivalent verbs. This variation presents a challenge when attempting cross-linguistic comparison of alignment patterns of ditransitives. This paper presents a case study of trivalent verbs in Yakima Sahaptin, a language whose complex case and agreement marking system is strongly influenced by reference effects.

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