

■ BOOK REVIEWS

András Kertész and Csilla Rákosi: Data and evidence in linguistics. A plausible argumentation model. Cambridge: Cambridge University Press, 2012. pp xiii + 297.

1. Central questions and answers

“The problem of linguistic data and evidence is in the air.” The first sentence of this highly compelling book places the work in the very center of recent metatheoretical discussions in linguistics. By reference to an article by M. Penke and A. Rosenbach (2004, 480), authors Kertész and Rákosi (K&R henceforth) note that the current issue is not whether linguistics is an empirical science and thus whether empirical evidence is available at all but rather, what type of empirical evidence should be used and how.

The primary thrust of the book is not to tell linguists how they should go about their tasks; rather, it is to hold up a mirror that reflects the oft-tacit assumptions that linguistic work has been rooted in and to propose a realistic metatheory of linguistic theorizing in tight fit with actual practice.

The central questions pertain to the nature of data and evidence and their function in linguistic theorizing. Emerging from a systematic and tightly-structured argument, the answers to these questions are supplied by a novel metatheoretical framework: the plausibility model (p-model). Rather than attributing certainty, absolute consistency, context-independence, and immutability to the results of linguistic theories and the data that they are based on, this model offers a liberalized view of data and evidence by highlighting the uncertainty, possible inconsistency, context-dependence, and changeability of argumentation.

In what follows, first an overview of the structure of the book is presented (section 2). Section 3 discusses three seminal ideas of the book and their general implications, followed by a few concluding thoughts (section 4).

2. Overview

Chapters 1 and 21 – stating the main questions and summarizing the answers – book-end the central body of the text. The issues of data, evidence, and argumentation are approached by way of five sub-problems taken up in turn in the five parts of the book. Paralleling the structure of the entire volume, each part also begins with questions and ends with answers.

The five chapters (2–6) of Part I, “The state of the art” are devoted to the first sub-problem: what are the answers that have been provided to the issues of data, evidence, and argumentation in the current literature and what are the metascientific background assumptions revealed by these views (7)?¹ In surveying the literature, K&R identify two problems. First, they detect **a gap between the metatheoretical principles that researchers explicitly subscribe to and their actual analytic practice**. Most linguists would claim adherence to the standard view of the analytical philosophy of science and the standard view of linguistic data. According to the tenets of the analytic philosophy of science, the goal of the philosophy of science is the justification of theories with the discovery process irrelevant; justification is based on evidence; empirical scientific theories are deductive systems; and scientific theories have to conform strictly to the norms of rationality (11).

However, K&R find that in the overwhelming majority of cases, actual research practice is not in line with these principles (18–22). New data types and methods have entered the field, such as probabilistic approaches, computer modeling, and experiments. While generativists traditionally relied on introspective data, more recently they have also resorted to corpus data and experimental results. Confidence in the traditional data-handling methods has diminished as factors influencing the reliability of factual information – such as the use of questionnaires and interviews – have cropped up.

The second problem identified by K&R is that even though some linguists (Christian Lehmann, Martina Penke and Anette Rosenbach, Carson Schütze, Robert Borsley and others) have taken a new look at linguistic data by relativizing and weakening the requirements that data and evidence have been held to, **no comprehensive new framework has yet emerged** (40). K&R formulate seven specific questions that are left open in the literature (42).

¹ Numbers in parentheses refer to the page numbers of the reviewed book.

In sum, the emerging answer to the first sub-problem is that views and practices regarding the concepts of data, evidence, and argumentation show two gaps: one between theory and practice, and the other between the perceived need for new metatheoretical principles and the lack of a comprehensive new framework.

Growing out of the picture painted in the first part, a second sub-problem is formulated in chapters 7–11 of Part II, “The p-model:” since there is a need for a new metatheoretical model, what might such a model be like? The answer proposed is the plausibility model (160–163). The defining feature of the p-model is a prismatic and cyclic mode of argumentation aimed at the treatment of uncertain information. The process is not logical deduction and it does not amount to a calculus (57): in contrast to logic, the contents, as opposed to forms, of the premises also play a role in inferencing. Argumentation leads from plausible data to plausible results.

The tools of plausible argumentation are plausible statements and plausible inferences based on the statements. **Plausible statements** are statements associated with a plausibility value (63–79). A statement is generally neither true nor false: rather, it is more or less plausible. A statement’s plausibility is not inherent in the statement: it depends on the reliability of the sources that it derives from. The sources that can count to determine plausibility are multifarious including individual accounts, historical information, theories, and methodological principles such as simplicity. Plausibility values – plausible and implausible – range between the two limiting values of truth-with-certainty and falseness-with-certainty. A statement may also be of neutral plausibility if its source is not supportive either of the statement or its opposite.

A **plausible inference** (85–128) is an inference from a set of plausible statements that leads to a more or less plausible result on the basis of the plausibility values of the premises (99). There is a multiplicity of inferences in a single argumentation process due to two characteristics of plausible argumentation: it is cyclic (136–143) and prismatic (143–153). Cyclicity means that, in view of new data, the researcher may open a new line of inquiry and explore an alternative solution. Prismaticity means that the same set of data may be viewed differently depending on the researcher’s vantage point.

Thus, the **results** of plausible inferences are not true with certainty or with a given probability: they are context-dependent (121–127) and thus change with the context.

While cyclicity and prismaticity are distinct notions, they are also related. It would appear that a new cycle of argumentation necessarily im-

plies a new point of view – i.e. a prismatic turn in the process. However, the reverse does not necessarily hold: a new point of view does not require a new cycle. The complex relationship between the two notions is in need of further discussion.

The force of the plausibility model may be demonstrated by comparing it with two other modes of inferencing: logical deduction and probability calculation. Take the two statements A and B.

- (1) A: X
B: not- X

In terms of two-valued logic, if one of them is true, the other must necessarily be false. Probability calculation assigns a particular probability to one, from which the status of the other is predictable: if A has 80% probability, B's is necessarily downgraded to 20%. Thus, both in two-valued logic and in probability calculation, the value of one statement implies the value of the opposite statement. In contrast, plausibility values are independently defined for A and B and thus both statements may be equally plausible in the light of information stemming from different sources. From the plausibility value of one statement, one cannot determine the plausibility value of the other.

While this difference between probability and plausibility is clear, the two notions are not wholly independent. Probability can be one of the sources of plausibility but not in reverse. Probabilistic linguistics has been articulated and applied in actual descriptions; one study from the highly relevant volume of Bod et al. (2003) is discussed in the book (138–143). However, a systematic comparison of probability-based and plausibility-based argumentation remains the task of future work through an examination of instances where results are probable but not plausible and vice versa.

Part II suggests that the p-model provides appropriate concepts of data, evidence, and argumentation. Accordingly, the third sub-problem is articulated in Part III, “Data and evidence” (chapters 12–14): how exactly are the concepts of data and evidence defined by the p-model (167)? In this framework, a **datum** consists of two parts: a statement of some fact and a plausibility value assigned to it. Data are merely truth-candidates rather than being necessarily true. A datum in turn counts as **evidence** if it contributes to the comparison of the plausibility of rival hypotheses. Depending on their role in evaluating hypotheses, evidence may be weak, relative, or strong. Weak evidence is datum from which a degree of plausibility can be inferred for or against a hypothesis. Relative evidence allows

us to assign a higher plausibility value to a hypothesis than to its competitors. Strong evidence means that the datum makes a given hypothesis plausible without providing any support at all to its rivals.

The fourth sub-problem is raised in Part IV, “Application of the p-model: a case study” (chapters 15–17). The question is about the use of the p-model in the actual practice of linguistic inquiry (191). By way of an answer, K&R demonstrate how the process of linguistic theorizing can be made sense of in the light of the p-model: this is exactly the kind of argumentation that many linguists have intuitively employed (234). This answer emerges from a concrete case where the authors show the actual role that the p-model’s concepts play in solving problems. The example is Gentner & Wolff’s (1997) study of the interpretation of metaphors. In this paper, three hypotheses are tested against experimental evidence. K&R’s reconstruction of Gentner & Wolff’s process of theory-building demonstrates the crucial role that alternative points of view (prismatic thinking) and the cycling back to earlier stages take in the argumentation.

Part V, “The answers to the open questions” (chapter 18–20) addresses the fifth and final sub-problem of the book: providing an elaborate account of the nature of data, evidence, and argumentation (237). K&R resume the seven issues formulated in chapter 1 about the diversity of data and their combinability, their complexity, the role of sources in the reliability of the data, the treatment of the uncertainty and possible inconsistency of the data, and the relationship between data, evidence and theory; and they propose answers to them.

3. Three seminal ideas

At several points in the book (e.g., 55, 63), K&R refer to plausible argumentation as a cognitive tool whose applicability extends beyond linguistics to other sciences and to everyday discourse. Indeed, a basic insight that K&R offer in their book is the generality of their concepts. This will be shown below in regard to three cardinal concepts of the book.

3.1. Prismatic and cyclical argumentation

As noted above, the prismaticity of argumentation consists in the constant re-evaluation of the evidential context: like a prism, evidence may vary with the angle from which we view it and it remains fragmentary. Rather than being linear and unidirectional, argumentation is variable and context-

dependent. Argumentation is in turn cyclic when the analyst recognizes that the solution arrived is only one of several possibilities: new information opens the way to additional cycles of inferencing and in view of the new evidence, the researcher takes a new stab at the problem. Cyclicity does not mean circularity: the argument does not return to its own initial stage but “to a re-evaluated variant of it with altered information content” (160).

These two defining features of the p-model are ubiquitous. In scientific discourse, they are instrumental in meteorological forecasts, earthquake predictions, economic forecasts, and medical diagnoses and prognoses: all of these, too, are based on the constant re-evaluation of evidence. A popular book of the history of astronomy (Kolb 1996) makes this point in a particularly stunning way by adopting the title *Blind watchers of the sky*. Documented by an analysis of how astronomical understanding has evolved, the idea behind this striking title is that even though mankind has been staring at the same sky for thousands of years, what people saw was not at all the same: different astronomers saw different things and they re-evaluated their theories multiple times, with the “final truth” still eluding their grasp.

The idea is familiar from criminal investigations as well. As “who-done-it”-type crime stories illustrate, investigators start with alternative guesses associated with sets of plausibility values derived from the evidence supporting them. These values may change in the course of the investigation depending on the vantage point assumed and on the available evidence. The detectives may at some point need to turn a new page and start the process from scratch with a set of revised premises. Similarly, prismatic and cyclic argumentation is evidenced in everyday thought. When evaluating a book, or a movie, or a piece of art, or a political position, or a person, different vantage points may yield different results and additional considerations may trigger a new assessment cycle.

Much of human concern revolves around two concepts underlying prismatic and cyclic argumentation. Prismatic thinking amounts to the recognition of the **variability** of conclusions; the need for cyclic argumentation in turn underscores their fallible, temporary status and thus their **changeability**. Variation and change are difficult concepts to live with: they fly in the face of the human aspiration for answers that are uniquely certain and will remain so. While in many situations in individual and societal life, variation and change are coveted, in other contexts, it is uniqueness and immutability that are held at a premium. Alternative views and changing views are often looked at askance. Individuals, as well political parties, organizations, and theories, that entertain alternatives or change their views

are often judged negatively: they are roundly labeled opportunistic and unreliable even though what may lie behind such phenomena is a pluralistic, prismatic view of things and the healthy process of re-thinking positions. As noted by K&R, the plurality of linguistic theories “cannot be interpreted as a symptom of the immaturity of linguistics. Rather, from the p-model it follows that it is a constitutive and natural characteristic of linguistic theorizing” (255). The same holds for human thought in general. By showing that prismatic and cyclic argumentation are basic to human thought, the plausibility model lays bare the inevitability of the need for us to embrace variability and change. This recognition lowers the barrier between linguistic theorizing and theories of other sciences, as well as between scientific theorizing and everyday human thinking.

3.2. Plausibility

While language and metalanguage share many properties, it is particularly striking to notice the parallelism between K&R’s focus on the evidential status of theoretical statements and the meticulous concern that some languages pay to evidentiality in everyday discourse. In English and other European languages, the plausibility value of a statement may be indicated by modal auxiliaries such as *may* or by periphrasis, such as *I think that...* or *X writes that...* or *according to X...* Many statements, however, are not annotated for their degree of reliability and thus they sound like they are simply true. Political discourse as well as everyday conversation are full of statements that suggest certainty, whether they have to do with the causes of things (why something happened), the consequences of actions (what will happen in the future), and how things would have been in the past if they had been different (counter-factuality). Statements that lack plausibility annotation falsely cater to the human desire for truths that are rock-solid and eternally valid.

However, in many languages around the world, statements that are not annotated for their reliability are simply ungrammatical. Two collections of papers, Chafe & Nichols 1986; Aikhenvald & Dixon 2003, attest to this (cf. also Aikhenvald & Dixon forthcoming). In her introductory paper to the 2003 volume, Aikhenvald surveys the various evidentiality distinctions observed in languages. Most commonly, languages explicitly mark reported – “hearsay” – information; this is the case in Enga, a Papuan language. More fine-grained distinctions are also amply documented. The Caucasian language of Godoberi requires an indication whether the information does or does not come from an eyewitness. Tariana, a language

of Brazil, has a system that makes a four-way distinction between visual, nonvisual sensory, inferred, and reported information. The awareness that K&R's plausibility model urges of the source-dependent plausibility values of language-theoretical statements is paralleled by the awareness of the source-dependent plausibility values that "evidentiality languages" require for everyday utterances.

3.3. Conflict resolution

As noted above, the two fundamental principles of prismaticity and cyclicity of argumentation are based on two more general notions: variability and changeability. Prismaticity means there is more than one way of looking at the same problem; cyclicity means results may change with additional evidence and new vantage points.

Variation and change are troubling concepts in human life. What is behind the cognitive hardship of coming to grips with variation and change is conflict: multiple solutions are in conflict with each other and if solutions change over time, there is again a discrepancy between them. The notions of variability and change are inherently contradictory and as such they undermine our sense of security.

Conflicts of various kinds are a basic phenomenon in individual life as well as in society and politics; attempts to resolve them engage much time and human effort. Attempts to deal with conflicts of various sorts have been a prime mover of linguistic theorizing as well. Conflicts have been most explicitly addressed in Optimality Theory and analyzed in the large literature of competing motivations in grammar (cf. for example MacWhinney et al. to appear). In the shaping of language structure, competitions are palpable between the speaker's interests and those of the hearer; between phonological and morphological principles; and in how both semantic argument roles and informational-structural roles of noun phrases might be successfully accommodated in syntactic structure. In theory-construction, many issues have also created apparently contradictory approaches: adherence to different kinds of data, different interpretations of the same data, and different theoretical assumptions have all constituted seemingly impenetrable wedges between theorists (cf. Moravcsik 2010).

However, the fundamentally non-absolutistic, pluralistic approach of the p-model goes a long way toward resolving such conflicts. In his classic monograph that has served as one of the basic sources for K&R, Rescher (1976, 1) assigns a prominent role to plausible thinking in conflict resolution. He writes: "Plausibility theory seeks to provide a rational instrument

for dealing with cognitive dissonance.” As noted above, in the p-model, inconsistencies are not a fatal fault to an argument: the logical contradiction between a premise and its negation may be accommodated by assigning different plausibility values to them, or, by a paraconsistent move, relegating them to different contexts; or by simply tolerating them on a temporary basis (247–249; cf. also Kertész & Rákosi 2013).

4. Conclusions

Emerging from about two decades of work by the authors that has yielded a rich roster of publications (see the list of references in the book), this volume summarizes and crystallizes Kertész and Rákosi’s concept of linguistic metatheory. The p-model provides a realistic image of linguistic analysis and theorizing: what data are and what linguists can do with the data. Ideals such as linear and relentlessly consistent argumentation, unique solutions to problems, and a search for truth with certainty are off the agenda. Instead, argumentations are shown to be prismatic, cyclic, and tolerant of contradictions; solutions are multiple and fallible, and, rather than absolute truth, the goal is to arrive at conclusions that are maximally plausible at a certain stage of research.

While the plausibility model compromises traditional goals and tools, it also grants more freedom to the researcher. Certain truth offers security but is limiting; uncertainty is liberating since it opens up possibilities. According to the p-model, linguists are not prisoners to immutable data and strictly logical deductions: they are to some extents masters of the facts and the conclusions that can be drawn from them. The p-model’s pluralistic approach to linguistic theory also weakens the walls that often separate theorists of different persuasions and softens the conflicts among them.

Due to its rigorously-organized structure and the many examples taken from various theoretical frameworks, the text articulates the framework clearly and makes its points in a reader-friendly manner. The structure of the discussion is transparent: questions and answers define the outline of each chapter and of the book as a whole. Most chapters are short and are divided into sections; previews and summaries abound; varying fonts help to draw attention to key points. Footnotes are in the back but since the pertinent page numbers are given on the top of the footnote pages, they can be located easily. The only occasional hardship is references to numbered items that appeared many pages earlier. Repetition of these items or tagging them with short mnemonic phrases might have been

useful to jog the reader's memory and thus make it unnecessary to search for the items in the text.

Continuing the line of argument of their earlier work on the topic (e.g., Kertész 2004a;b; Rákosi 2005; Kertész & Rákosi 2009; 2013), K&R's present book is a new contribution to the cognitive science of science. It provides novel insight into the understanding of general human cognition through the analysis of how linguists view language structure. The book is accessible both to linguists and to philosophers of science.

On the final pages of the book (260–262), K&R note that the central ideas of the p-model are themselves the outcome of plausible argumentation and thus they will have to compete with their rivals in further argumentation cycles. This fact, however, does not diminish the timeliness and significance of their suggestions. A comment from language-typologists Nicholas Evans and Toshiki Osada underscores the point. Evans' and Osada's original paper concerned the issue of whether Mundari did or did not have word classes such as nouns and verbs; their conclusion – that it did – was subsequently questioned by others who interpreted some of the same data differently and drew different conclusions. At the close of their response to these alternative analyses, Evans and Osada remark (2005, 456):

“Recent years have seen considerable convergence in descriptive and analytic practices. [...] We have made less progress in standardizing the practices of argumentation, yet until we make these explicit we will be left with a situation where what counts as evidence for one linguist will be deemed irrelevant by another. [...] The very different responses of our distinguished commentators show how far we still are from having an agreed set of rules of argumentation within word class typology. [...] Because the assumptions that underlie argumentation are so numerous, and interact in so many ways, developing a set of convergent rules of argumentation is a huge task for the field.”

K&R's book is a significant step towards identifying realistic principles of argumentation that apply across linguistic theories, across different sciences, and across scientific discourse and everyday human thinking.

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Mary Dalrymple and Irina Nikolaeva: Objects and information structure.

Cambridge: Cambridge University Press, 2011. pp 247.

1. Introduction

Objects and Information Structure by Mary Dalrymple and Irina Nikolaeva (henceforth D&N) is a recent addition to the *Cambridge Studies in Linguistics* series of Cambridge University Press. It is a book-length exploration of a new kind of approach to differential object marking (henceforth DOM) and object marking patterns in general: the authors argue that the effects of **information structure** on object marking across languages are pervasive and have to be taken into account when dealing with the phenomenon of DOM, to a higher degree than is usually assumed.

While not focusing on information structure only, D&N claim that in languages that no longer show direct effects of topicality in DOM, semantic features associated with topics (definiteness, specificity and animacy, for example) play a role (p. 2). At least indirectly, then, they claim that the topicality of objects is a relevant factor in DOM cross-linguistically and diachronically. D&N's analysis is couched in an LFG framework. The relevant features of this system are introduced in roughly the first half of the book before D&N move on to analyse a wealth of cross-linguistic data to support their hypothesis.

I will provide an overview of the structure of the text before discussing a few points in more detail.

1.1. Structure and contents

In their introductory chapter, D&N introduce the basic concept of DOM with data from a range of languages. One particularly welcome aspect of their study is that they treat languages with differential **agreement** (e.g., Hungarian, varieties of Ostyak [or Khanty, Finno-Ugric] and Nenets [Samoyedic]) on a par with languages showing differential **case marking** by showing that the same kinds of restrictions hold for both types. The authors provide a good overview of accounts of DOM in different frameworks: approaches analysing the function of DOM as distinguishing arguments, helping the recoverability of referents of arguments, as well as transformational approaches.

Approaches stressing the distinguishing function of DOM argue that when a given object has properties that are more typical of subjects (e.g., definiteness or animacy), morphological marking on the objects (as opposed to zero marking) serves to disambiguate the arguments of the predicate. While this logic underlies much work on DOM, D&N argue for a different approach. They do not agree with the hypothesis that DOM highlights differences between typical and atypical objects, they rather suggest that DOM highlights “**similarities** between subjects and topical objects [...] as opposed to nontopical objects” (p. 15, their emphasis). A crucial part of this analysis is the LFG notion of grammatical function, such as SUBJ, OBJ and OBJ θ . These correspond to the subject, the primary object and the secondary object, respectively. The latter is restricted to certain semantic roles (reading θ as a variable over these). D&N aim to show that the OBJ function – which shares some properties with the SUBJ function – is what marked objects across languages are mapped onto. This accounts for the similarities in the syntactic behaviour of SUBJ and OBJ functions (as opposed to OBJ θ).

Chapters 2–4 introduce in some detail the LFG machinery that is assumed throughout the book, which is another welcome feature of this book. While, in later chapters, the formalism is only invoked to indicate the language-specific analyses of DOM, D&N provide an explicit framework that allows for a compositional semantic analysis of sentences as well as a mapping of referents to information structure (cf. in particular their discussion in section 4.3). I will come back to their discussion of the notions ‘primary’ and ‘secondary’ topic below.

In chapters 5–9 the authors discuss the relation of topicality and grammatical marking with respect to different kinds of arguments. Chapter 5 discusses the role of topicality in singling out arguments that trigger marking. Again, this marking includes markers on the object NP (e.g., Ayacucho Quechua, Japanese), as well as in verb morphology (e.g., Aleut). D&N go on to discuss the frequent mapping of topic to subjecthood across languages. Chapter 6 turns to discuss the mapping of topicality to non-subject arguments. Again, the discussion includes both case marking and agreement, and is extended not just to objects, but also obliques.

DOM comes into play in chapter 7: in the languages under discussion, such as Tundra Nenets (Samoyedic), Tigre (Semitic) and Dolakha Newar (Tibeto-Burman), D&N argue that only topical objects can trigger case marking or agreement, but other grammatical functions cannot. Other than that, they suggest, objects that do and do not trigger marking display identical syntactic behaviour. However, there are additional restrictions:

in Tundra Nenets, some indefinite determiners, like ‘some’, never trigger agreement, independently of topicality.

In chapter 8, D&N introduce a slightly different kind of DOM: languages like Northern Ostyak (Finno-Ugric), Mongolian and Hindi are argued to involve not just a difference in topicality with respect to marking but a difference in grammatical function: objects bearing the OBJ trigger differential marking while objects bearing the OBJ_θ role do not. D&N further illustrate that the two roles show differences in their syntactic behaviour.

Chapters 9–11 include discussion about ditransitives and possible mappings between objects and grammatical functions (9), as well as sketches of diachronic and typological relations between different kinds of DOM (10). Chapter 11 briefly summarises and concludes.

2. Discussion

The book is generally very clearly written and structured. Chapters 5–8, in which different kinds of phenomena are introduced, are highly systematic and serve the purpose of illustrating the parallels between case marking and agreement with respect to topicality very well. These chapters cover an impressive range of languages from different genera for which D&N generally argue convincingly that topicality is in some way involved in object marking.

To illustrate the interaction of topicality, semantic roles and grammatical functions in D&N’s terms, I will consider their analysis of Northern Ostyak (chapters 8 and 9). This language shows complex mappings between grammatical functions, information structure roles, and semantic roles. For example, it has a SUBJ role which must be topical but can appear with several semantic roles like AGENT or PATIENT/THEME (in passivised clauses). As for objects, D&N argue (following earlier work by Nikolaeva 1999a;b; 2001) that objects that trigger agreement show syntactic differences from objects that do not. First, objects that trigger agreement are freer in their syntactic position; they do not have to immediately precede the verb (p. 145). In addition, this kind of object can control coreference in certain kinds of embedded clauses, cf. (1):

- (1) a. [xul_i u:n u:l-m-al pata] xul_i / ∅_i nox an tai:l-s-e:m
 fish large be-AN-3SG because fish out not carry-PAST-OBJ.1SGSUBJ
 ‘I didn’t take out the fish because it was large.’

- b. *[xul_i u:n u:l-m-al pata] xul_i / \emptyset _i nox an ta:l-s-əm
 fish large be-AN-3SG because fish out not carry-PAST-1SGSUBJ
 ‘I didn’t take out the fish because it was large.’ (D&N: p. 147, (16), (17))

Only the object triggering agreement (cf. *ta:l-s-e:m* ‘I took out’ in (1a)) can control coreference on the embedded subject *xul* ‘fish’, the object in (1b) cannot. Objects that trigger agreement share this (and other properties) with subjects. While Nikolaeva (N) has argued in earlier work that this is due to the topicality of the object (it being topical in (1a) but not in (1b)), D&N argue (p. 148) that the grammatical function and its mapping to semantic roles provide a better explanation. D&N explain the different syntactic behaviour by arguing that objects that do trigger agreement have the OBJ function which can have different semantic roles like GOAL and THEME/PATIENT, whereas objects that do not trigger agreement have the function OBJ_{THEME/PATIENT} which is restricted to the single semantic role of THEME/PATIENT.

As D&N (p. 149) point out, then, agreement in Ostyak “can be straightforwardly characterised in terms of the grammatical function OBJ” or what they call the **primary object**. Topicality only plays a role for THEME/PATIENT objects, as other roles like GOAL or CAUSEE can control agreement independently of their topicality. Thus in (2a), *a:n* ‘cup’ can be OBJ or OBJ_θ, depending on whether it is a topic or not. In the first case, it triggers agreement, in the second it does not. In (2b), on the other hand, *a:n-na* is an oblique, and the GOAL role is realised as OBJ, obligatorily triggering agreement.

- (2) a. ma a:n Pe:tra e:lti ma-s-e:m / ma-s-əm
 I cup Peter to give-PAST-OBJ.1SGSUBJ give-PAST-1SGSUBJ
 ‘I gave a/the cup to Peter.’
 b. ma Pe:tra a:n-na ma-s-e:m / *ma-s-əm
 I Peter cup-LOC give-PAST-OBJ.1SGSUBJ give-PAST-1SGSUBJ
 ‘I gave a/the cup to Peter.’ (D&N: p. 148, (18))

Notice that the mapping between OBJ and the information structure role of topic is not fixed, as shown in (3a,b) (original glosses), answers to the question “Whom did he make cry?”, with the causees ‘me’ and ‘Peter’ obligatorily triggering agreement, even though they are in focus (given (2)).

- (3) a. ma:ne:m xo:llə-ptə-s-li / *xo:llə-ptə-s
 I.ACC cry-CAUS-PAST-OBJ.3SGSUBJ cry-CAUS-PAST-3SGSUBJ
 ‘He made me cry.’
- b. Pe:tra xo:llə-ptə-s-li / *xo:llə-ptə-s
 I.ACC cry-CAUS-PAST-OBJ.3SGSUBJ cry-CAUS-PAST-3SGSUBJ
 ‘He made Peter cry.’ (D&N: p. 149, (20))

D&N conclude that “mapping rules in Ostyak must include reference to information structure roles” (p. 149) but their examples show that this only concerns the question of which (object) function a THEME/PATIENT object is mapped onto. This role can be realised as SUBJ (when topical and passivised), OBJ (when topical) or OBJ_{THEME/PATIENT} (when nontopical).

2.1. GOALS and topicality

Northern Ostyak is one of several languages that show an interesting similarity between arguments carrying the GOAL role and those triggering DOM. D&N mention (pp. 191–192) the often cited observation that the morphology of DOM is in many languages the same as the morphology marking GOAL arguments — this is the case in Ostyak, where GOALS which are not obliques always trigger agreement. For D&N, who cite research stating that “ditransitive goals are inherently more topical than theme arguments” (p. 192), this fits well with their idea that (secondary) topicality is related to DOM: if GOALS are likely topics, then it might not be surprising that the THEME/PATIENT role (to which “the GOAL is superior [in topicality]”; p. 192) is expressed similarly when topical. I will come back to this point below.

2.2. Cross-linguistic variation

Languages can and do differ in the mappings between grammatical functions, information structure roles and semantic roles: in Tundra Nenets (Samoyedic), another Uralic language, the identical syntactic behaviour of objects triggering agreement and those that do not leads D&N to suggest that the language has only one object function, namely OBJ. Both nontopical and topical objects map onto this function, while GOALS are always expressed as obliques, independently of information structure.

Thus, D&N can represent cross-linguistic variation as differences in mapping between grammatical functions, information structure roles and

semantic roles, as well as the inventory of grammatical functions a language has. There can be certain restrictions on these mappings, such as that differential marking targets the THEME/PATIENT role but not others (other roles being consistent, as discussed above for Northern Ostyak GOALS always triggering agreement).

What kind of cross-linguistic predictions can this framework make? While the mapping rules seem to be fairly free, the inventory of grammatical roles is probably restricted, cf. the case of Tundra Nenets with only one OBJ role. D&N further assume “spreading” and “narrowing” of DOM (pp. 208ff.), suggesting that the set of noun phrases triggering marking can be expanded (spreading) or reduced (narrowing) diachronically and provide examples for these processes.

These, together with different mapping rules, allow them to suggest a typology of three types of DOM (pp. 215–216): (i) Languages in which DOM only relies on information structure (Northern Ostyak); (ii) Languages which only rely on semantic properties for DOM but not on information structure (Hebrew, arguably Spanish and Turkish); (iii) Languages in which information structure and semantic properties interact (Hindi, Tundra Nenets).

What all these languages have in common is that it is (by assumption) always the OBJ function that is morphosyntactically marked, either triggering agreement or case marking, as opposed to the OBJ_θ function.

2.3. Open questions?

Before concluding, I want to raise two more points that I think are worth mentioning. The first of these concerns the idea of secondary topicality. This is not a concept that originates in D&N’s work, N in particular has used it in earlier work to explain object marking in Northern Ostyak. Nikolaeva (2001, 26) defines a secondary topic as an element such that “the utterance is construed to be ABOUT the relationship it and the primary topic” (emphasis in original). While D&N discuss this notion in some detail (p. 54ff.), its usefulness is not quite clear to me. They state that secondary topics are “less pragmatically salient for the speaker than the primary topic.” This might well be the case, but it seems that in the description of given languages ‘secondary’ could just be treated as a label stating that a certain topic is not the first one.

Consider a difference between Northern Ostyak and Tundra Nenets. The former language has grammaticalised an obligatory connection between subject and topic (cf. p. 146). D&N argue that this implies that a

(THEME/PATIENT) object triggering agreement must be a secondary topic. It does not become clear whether treating such a topic merely as a second topic (the subject being the first one) would have any negative consequences. Given that D&N argue for subjects being most prominent on syntactic grounds anyway (p. 102), any effect on salience or prominence of a second topic could follow from its not being the subject-topic.

Other languages are freer in their assignment of the topic role to arguments: Tundra Nenets does not have a subject-topic restriction, therefore the verb can agree with a topical object without their being another topic noun phrase (p. 129). Note also that in the formal representations of i(nformation)-structure that D&N provide both topics are merely stated to have the TOPIC role (p. 89), not a primary and a secondary one. The theoretical use of the notion ‘secondary topic’ in this context thus seems doubtful.

A final issue concerns the relation of GOALS and THEMES, briefly mentioned above. D&N argue that topical THEMES behave like GOALS in some languages, even receiving the same morphological expression. D&N state (p. 221) that in their framework grammatical functions are not defined configurationally but are primitives of the system. This, I think, raises an interesting possibility for a comparison of analyses of DOM across frameworks. López (2012) argues, in a Minimalist setting, that DOM is inherently configurational. On his approach, an direct object (a THEME/PATIENT) triggering DOM moves to a position higher than the indirect object (a GOAL). López (2012) provides data including quantifier scope, binding effects and object control to argue that DOM objects are structurally higher than indirect objects and non-DOM objects. It is particularly interesting that some of the languages in question are analysed both by López and D&N, albeit not with the exact same data. A possible advantage of a configurational approach could be that the similarities between GOAL objects and THEME objects that trigger agreement would come ‘for free’, since syntactic positions might be the closest analogue to D&N’s grammatical functions in López’s framework.

3. Conclusions

To conclude, *Objects and Information Structure* is a valuable addition to the literature on differential object marking. The book is well written and very well structured, it has a clear hypothesis and provides a great amount of relevant data that (mostly) strongly support the authors’ theory. It is also obvious that D&N are extremely well informed

about DOM and the literature on it and they present data from an impressive range of languages and families: Ayacucho Quechua (Quechuan), Japanese, Kinyarwanda (Bantu), Aleut (Eskimo-Aleut), Somali (Semitic), Persian (Iranian), Tariana (Arawakan), Itelmen (Chukotko-Kamchatkan), to name just a few.

All in all, this book does a very good job in providing an analysis of certain types of DOM on a wide empirical and theoretically sound basis.

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