

## REVIEW ARTICLE

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*Pragmatics of word order flexibility*. Edited by Doris L. Payne. [*Typological Studies in Language*, vol. 22.] Amsterdam: Benjamins, 1992. Pp. 320.

The book under review is the 22nd volume of the well-known “orange” series “*Typological Studies in Language*”. It is made very much in the traditions of this series, containing typological or typologically-oriented accounts of different languages in a functional/pragmatic perspective. All authors apparently share a belief that in order to get a comprehensive description of (a) language one needs such notions as given/new information, topicality, discourse structure, and the like.

There are two basic views of word order phenomena that probably partly correlate to types of phenomena themselves. The first approach, in its origin associated with the typological work by Greenberg (1963), deals primarily with grammatically fixed word order and assumes that languages have unmarked, basic, neutral orders. In the realm of clause structure (as opposed to, say, NP structure) it is the relative order of the verb (nucleus) and its syntactic arguments — subject and object.

The other approach, dating back to the “Prague school” (Mathesius 1939, Firbas 1964), focuses on another kind of phenomenon/language — word order driven not by syntactic statuses of subject and object but by “pragmatic” statuses like “theme — rheme” (or “topic — comment”) and “given — new”.

During the last decade, the first approach gave rise to a number of important new studies, including especially Hawkins (1983, 1990), Dryer (1988, 1992), Tomlin (1986) (though the last work is of great relevance for the second approach as well, see Kibrik 1990). The present book is a significant attempt to bring together the efforts related to the second approach.

The introduction by the editor, **Doris L. Payne** (pp. 1-13), contains a comprehensive retelling of the volume's articles, alternating with Payne's original comments. In particular, she distinguishes syntactic, cognitive, and pragmatic accounts of word order phenomena, further noting that the latter two can hardly be separated. Payne discusses the types of cognitive/pragmatic factors motivating word order variations discovered by the contributors and speculates about the limits of the quantitative methodology in word order flexibility studies. The introduction provides a good background for a reader of the collection, though some points in it become clear only after the book is already read.

The volume holds twelve papers. All of them share interest in the relative order of major clause constituents — verb, subject, and object. There are several ways of how the papers can be classified. First, it should be noted that some of them are reprints from earlier editions, and it can be said that really important papers have been chosen for republication (see below).

Second, papers differ from the viewpoint of what cognitive or pragmatic parameters are claimed to be crucially responsible for relative word placement in discourse. The options found in the volume include: (1) a family of related informational statuses like topic (dis)continuity/ (un)predictability along with their quantitative correlates, primarily referential distance; (2) another family of informational statuses like “newsworthiness” (Mithun), “expression in focus” (Hale), “non-identifiability” (Payne); (3) discourse segmentation into paragraphs/episodes; (4) a distinction between discourse roles of clauses, particularly temporally sequenced/unsequenced; (5) discourse genre — narrative/expository...

Third, languages presented in the volume, provide a fair genetic and geographic variety, including Iroquoian (Cayuga), three branches of Penutian (Coos, Klamath, Nez Perce), Uto-Aztecan ('O'odham = Papago), Algonquian (Ojibwa), Australian (Warlpiri, Ngandi), Austronesian (Chamorro, Agutaynen), Slavic (Polish). Of course, other languages are also cited, including especially English, Czech, Tzotzil and Chorti (Mayan), Spanish, Biblical Hebrew, Rumanian, and Mandarin. As one can judge from this list, the best represented area is North America.

Finally, and most importantly, the majority of the papers are written under the influence of the tradition of “topic continuity” initiated by Givón (ed.) 1983 — that is, quantitative approach looking at the distribution of grammatical patterns in discourse. (Nevertheless, some of these papers pro-

vide original and independent theoretical insights.) Only the first four articles — those by Mithun, Hale, Gernsbacher & Hargreaves, and Tomlin & Rhodes lack the apparent connection with the Givónian tradition.

In this review, I will start with three out of these four papers (in a somewhat different order than they appear in the book), then will proceed to the “Givónian” section consisting of eight papers, and finally to the article by Gernsbacher and Hargreaves that is the most peculiar in the context of the collection.

Until the late 1970’s it was generally believed that the Praguean postulate of the linear priority of given/theme to new/rheme holds true for language in general. The short article by Tomlin and Rhodes, first having appeared in 1979 and reprinted here, was one of the first to question this belief. In the paper called “Information distribution in Ojibwa” **Russell S. Tomlin and Richard Rhodes** (pp. 117-136) looked at the textual examples from an Algonquian language and discovered that the order of thematic and non-thematic in Ojibwa is exactly a mirror-image to what was supposed to be the universal order: “In Ojibwa, thematic information comes later in a sentence or clause than non-thematic information” (p. 117). (Probably a consequence of this principle is that “unmarked order for Ojibwa is VOS”, p. 118.) The analysis of Ojibwa syntax reveals the facts of “inverse” ordering of definite and indefinite NPs, left-fronting of indefinite NPs, as opposed to definite and non-referential NPs, and unconstrained cataphora. Then study of Ojibwa text shows that the more thematic a referent is, the later its name appears in a clause. Relative thematicity was understood in fact as aboutness (p. 128), and was measured on the basis of the native speakers’ estimates (what is the given text about?). The authors also provided explanations for the deviations from the major principle of constituent order.

The paper by Tomlin and Rhodes leaves an open question that remains relevant fourteen years after its original publication. Supposedly “thematic information” can be thought to be a cognitively universal notion. If so, does the fact that some languages order information in the order reverse to that of other languages imply that speakers of different languages have different cognitive strategies, even in such a basic area? A positive answer to this question would be in fact extremely Whorfian.

**Marianne Mithun** in her paper with a characteristic title “Is basic word order universal?” (pp. 15-62; it is the longest article in the volume and it opens the main body of the book) goes one step further than Tomlin and Rhodes (her

article was written in 1983 and was already published in Tomlin (ed.) 1987) — she questions the very relevance of basic word order as a universal notion.

Mithun's study is an example of a very productive cross-language small-scale study looking from a typological perspective at a very limited number of languages but presenting their in-depth analysis. The languages under investigation include Cayuga (Iroquoian, Ontario), Coos (Oregon), and Ngandi (Arnhem Land). All three languages share a number of similarities with Ojibwa, especially polysynthesis and obligatory pronominal markers of core arguments on the verb (these two parameters are very closely related cross-linguistically), and all three allow any order in transitive clauses though in real texts agent and patient NPs cooccur overtly very rarely — in 1 to 3 percent of clauses overall (rare appearance of more than one nominal argument per clause, at least in the narratives, is not limited cross-linguistically to polysynthetic languages). None of the existing tests for basic word order works in the sample languages. Indefinite and new NPs tend to appear earlier in the clause as also do new topics and contrastive information. Mithun proposes a new pragmatic hypercategory called “newsworthy” which is significant new or contrastive information, and the “most newsworthy first” principle.

Mithun discusses typological aspects of word order and suggests that it is the polysynthesis of languages in her sample that “has a significant effect on questions of ordering” (p. 52) since it is pronominal affixes “that bear the primary grammatical relations to their verbs” while separate nominal words “typically serve more as appositives to the bound pronouns than as primary arguments themselves” (p. 59). Thus the notion of rigid syntactic word order does not make sense for languages in question, and even the most recognized word order universals simply do not apply to them. One could argue that still in the pronominal argument languages there is something that is grammatically ordered — that is, pronominal morphemes inside the verb form rather than independent nominal arguments.

Mithun's hypothesis that “pragmatically based languages are typically highly polysynthetic” (p. 59) seems promising though it contradicts, say, the data of Slavic languages (discussed by Mithun herself) or Klamath (see below) that are not polysynthetic but are pragmatically based. (True, Mithun distinguishes between two types of pragmatic ordering — so to say, North American and Slavic ones, but she also views them as variants of the same pragmatic principle, see p. 43.) However, if reversed, the suggested depen-

dency (polysynthesis hence pragmatic ordering) is supported by the numerous data in this volume on Ojibwa (see above), Warlpiri and Nez Perce (see below), and languages investigated by Mithun; but it is certain that at least verb-final pronominal argument languages exist, for instance Navajo (see e.g. Jelinek 1987).

**Ken Hale** in a paper called "Basic word order in two 'free word order' languages" (pp. 63-82) continues the discussion of the viability of the concept of basic word order in pragmatically based languages initiated by Mithun. He considers evidence from two languages — Papago (Uto-Aztecan, American Southwest) and Warlpiri (Pama-Nyungan, Central Australia) — and claims that though both are pragmatically based the former still displays grammatically fixed basic order: "there is no *necessary* [here and henceforth all emphases inside quotes are original — A.K.] correlation between pragmatic ordering and the lack of basic word order" (p. 76).

Hale states as the basic discourse principle of word order in both languages that "expression in focus" (EIF; equivalent of newsworthy) precedes the predicator, and "expression out of focus" (EOF) follows the predicator. However, in Papago there are a number of phenomena best explained in terms of syntactic word order: tonal phrasing, allomorphy of determiners, and NP extraction from a clause (it should be noted that Hale is the sole representative of generative grammar among the authors of the collection, and hence adheres to the modular concept of syntax). Syntactic rules can be formulated only if one assumes that the head-final order is basic (counter to earlier treatments of Papago as a verb-initial language). The whole variety of surface orderings are "realizations of the projections into syntax of a given verb and its arguments" (p. 75).

In Warlpiri, on the other hand, no evidence is found that would require the notion of basic word order. Hale provides a hypothetical explanation for this fact, in particular suggesting that in non-configurational languages like Warlpiri "nominal arguments are realized overtly only in the case-projection", and "in this projection there is no correlation between c-command and linear ordering [...] there are no constraints on word order within the clause [...] no *particular* order is necessarily projected in syntax" (p. 79).

The rest of the volume are articles sharing the orientation toward Givón's topic continuity and text-counts approach. This paradigm was a very significant theoretical and methodological progress in early 80's but had several shortcomings (some of which have been recently recognized by Givón him-

self, see Givón (1990); this volume) that are still there in the papers of the volume under review. Most importantly, in topic continuity paradigm:

1) it is not always clear what cognitive parameters the text measurements are correlates of;

2) measurements are frequently considered to be the final result of study while in reality they are nothing but raw material for further explanatory work;

3) statuses of active/given and theme/topic are not properly distinguished, see e.g. p. 209, 243 (for their clear distinction see Tomlin and Rhodes);

4) referential distance (RD) measurement is used as a quantitative correlate of not only givenness (cross-linguistically reflected in the linguistic structure by means of referential choices — say, zero vs. pronoun vs. full NP — that indeed can be sometimes roughly predicted by RD) but also of thematicity; first, it is doubtful that one and the same measurement can model two inherently different functions; second, many of the papers in this volume indirectly demonstrate that RD is not efficient as a predictor of word order at all, and this may be an indication of the fact that linearization of NPs in a clause is cross-linguistically determined more by thematicity than by givenness;

5) form-function correlations are usually statistically studied in the direction from form to function (see e.g. Sundberg Meyer, Jacennik and Dryer) thus resulting in lesser explanatory force;

6) “subject” (as well as “object”) is implied to be an obvious notion whereas it is in fact language- and theory-specific (cf. the discussion in Quakenbush’s article).

The paper by **Doris L. Payne** “Nonidentifiable information and pragmatic order rules in ’O’odham” (pp. 137-166) has as its central point the claim that “it is clear that an order typology in terms of subject, object, and verb is not the only interesting one” (p. 139). The concept of ’O’odham word order suggested here is sharply different from that presented by Hale, see above (Papago is an older name of the same language). The crucial “pragmatic” distinction determining word order in ’O’odham is argued to be that of identifiability. “Information is *identifiable* if the speaker assumes that the hearer will be able to pick out and establish reference for it” (p. 142). On the other hand, when the speakers introduce nonidentifiable information, they “are most commonly requesting their hearers to open an *active discourse file* for it” (p. 143). Major sources of preverbal placement of information are

pragmatic markedness and nonidentifiability (much like in Ojibwa, see above, and Agutaynen, see below). Information that is identifiable (and a small fraction of nonidentifiable that is not important for the discourse) is placed in postverbal position. Text counts support these claims as strong tendencies. Payne concludes the article with an astute point that deserves a lengthy citation: “We could legitimately [...] characterize ’O’odham as a fairly rigid “Nonidentifiable-V-Identifiable” (or Indefinite-V-Definite) language. If the first linguists had been ’O’odham speakers and if they were predisposed to assume that all reasonable languages operate on the basis of the same function-structure mappings as does their native language [...] then English would be viewed as a “free” word order language” (p. 162) since English allows any order of (in)definite NPs: *A man showed up at my door this morning* vs. *Tom saw a guy lurking in the backyard*. So basic word order in a language can be formulated not necessarily in terms of syntactic statuses, but in pragmatic terms as well.

A similar idea is the starting point of the next paper by **Karen Sundberg Meyer** “Word order in Klamath” (pp. 167-192) “free word order” should not be understood as random word order; it is simply governed by pragmatic, not syntactic factors. Evidence from Klamath, a language of southern Oregon, is analyzed by means of topic continuity measurements. The statistical patterning of SV, VS, OV, and VO (locative NPs are also considered) orders confirms Givón’s generalization that “postverbal position tends to code highly continuous topics, and preverbal position discontinuous topics” (p. 167) (in Givón (ed.) 1983 this idea was claimed to be a cross-language trend). Sundberg Meyer’s discussion of what she considered clauses in her text counts is quite useful. Measurements used in the study include: referential distance, potential referential interference, persistence, switch-reference, paragraph breaks, and introduction of a new referent (the latter is invented by the author). This study is an especially clear demonstration of the fact that Givón’s quantitative topic continuity methodology is now firmly standardized and is ready to be applied to any language.

The article by **Noel Rude** “Word order and topicality in Nez Perce” (pp. 193-208) looks at one more language of the American Pacific Northwest, and also strictly follows the Givónian methodology. The conclusion is literally the same as in the previous paper: “pre-verbal positions tends to mark less continuous or less expected participants, and [...] more continuous or expected referents are encoded as nouns in the post-verbal position. The most

continuous or expected referents are marked simply by verbal agreement” (p. 193). However, this correlation between continuity is less straightforward in Nez Perce than in Klamath and is more like a statistical tendency. Rude argues that an earlier treatment of Nez Perce as a basically VSO language should be better replaced by its characterization as a free word order language, since all orders occur in texts, and order never distinguishes S from O. Text counts demonstrate a fair correlation between coding patterns (including agreement, personal pronoun, and combinations of verb with nominal S and O) and referential distance, though topic persistence measurement appears not to be illuminating.

**Barbara Jacennik and Matthew S. Dryer**’s contribution “Verb-subject order in Polish” (pp. 209-241) is of great importance because they look at one of the Slavic languages that were used as a source of earliest information about word order flexibility. The article is called to shed light on the apparent contradiction between the traditional Praguean notion of theme — rheme order in Slavic and the observation of Givón and others of a cross-language tendency to place continuous topics to the right of comments. One particular parameter of word order is considered — the relative order of verb and subject (in both intransitive and transitive clauses). The data the authors use is written historical prose. The authors consistently contrast the clauses with final subject (VS) and clauses with some other final material (VSX); they pattern totally differently. The three types of clauses — SV (frequency = 58%), VS (34%), and VSX (8%) — are examined for a number of parameters belonging to four groups. First, discourse parameters related to the subject referent, include the previous reference in the immediately preceding clause / preceding 20 clauses, referential distance, grammatical function of previous reference, subsequent reference. For example, mean referential distance for subjects with previous reference in preceding 20 clauses is around 3.0 for SV- and VSX-ordered clauses, and 6.59 for VS-ordered clauses. Basically, VS clauses tend to involve new participants in the discourse, while other orders tend to occur with given subjects.

Second, grammatical/semantic properties of subjects are considered, revealing that in VSX clauses the subject tends to be very short, human and very frequently is a proper name. Third, the analysis of non-subject constituents demonstrates that Polish is essentially a verb-medial language — that is, if in a clause there is anything except S and V, then it occurs on the other side of the verb than S. Hence, “the position of the subject may depend on the

discourse properties of that other material rather than on the discourse properties of the subject itself" (p. 222). The counts of discourse properties of postverbal nonsubject nominals (p. 226) display a significant similarity with final subjects (p. 214), thus allowing us to infer that the final position has some function in Polish (rheme?).

This position is attributed the status of presentational in the discussion of the fourth group of parameters — those related to the properties of the verb. "Presentative" verbs appear only in VS clauses that generally tend to be intransitive. VSX clauses are more frequently perfective than otherwise ordered clauses.

To recapitulate, Jacennik and Dryer have discovered that in written Polish the clause-medial position is reserved for the verb, clause-final is similar to rheme, and the clause-initial and immediately postverbal are both typical for "predictable" referents. The authors indicate that the VS clauses conform to the traditional concept of Slavic word order while VSX clauses lend limited support to the Givón's generalization. However, the evidence provided in the paper suggests that VSX is in fact a relatively rare variation of SV occurring when there is preverbal nonsubject material and S is phonologically light.

**Ann Cooreman** in her article "The pragmatics of word order variation in Chamorro narrative text" (pp. 243-263) discusses the viability of Givón's claim that VS order cross-linguistically tends to be used in case of "referentially continuous" subjects and SV marks "a disruption in referential continuity" (p. 243). In addition to the parameter of referential continuity, Cooreman brings in the notion of thematic continuity reflecting the episodic hierarchical structure of discourse. The data for the study is transcribed spoken narratives in the VSO language Chamorro (Austronesian). Statistical analysis shows that there is no correlation between referential continuity (measured on the basis of referential distance) and order overall, but when thematic continuity is maintained (that is, in cases of non-paragraph-initial positions) "SV order marks subjects which *disrupt* referential continuity, while VS order marks subjects which are more likely to *maintain* referential continuity" (p. 252). Furthermore, SV clearly favors paragraph-initial position, and VS — paragraph-medial/final position. Cooreman also indicates that "VS is used with relative greater frequency than SV to mark potentially ambiguous referents" (p. 258) but apparently VS order and frequent ambiguity both result from a third phenomenon (non-paragraph-initial position) and there is indeed no

causal relationship between them. In sum, according to Cooreman, Chamorro verb-subject order is largely determined by the organizational structure of discourse.

The article by **John Myhill** “Word order and temporal sequencing” (pp. 265-278) defends the following, essentially statistical, hypothesis: “In all languages with over 60% VS word order overall, VS word order is statistically correlated with temporally sequenced clauses, while SV word order is associated with unsequenced clauses” (p. 265). If VS clauses are rarer in a language than 60% such correlation is weak, if any. To substantiate this distinction between predominantly VS languages and non-VS languages the author refers to his earlier work employing “multivariate” analysis of word order phenomena. What Myhill terms “temporally sequenced” clause has been called “mainline”, “event-line”, “narrative” or “foregrounded” clause in other research. The interesting central claim of the article relies on a quite small sample of languages — Biblical Hebrew, two Mayan languages, Spanish, and partly also Old English and Rumanian, but even this evidence is not sufficiently convincing. For example, in Tzotzil, having 80% VS overall, VS is almost categorically correlated with sequenced clauses (92%) but is also strongly correlated with unsequenced clauses (76%), see p. 266.

Myhill argues that SV is cross-linguistically associated with unsequenced clauses (though in the languages with the basic SV order it appears in sequenced clauses as well). On the other hand, he claims that “the frequency of VS order in *unsequenced* clauses does *not* increase sharply as we look at languages with a higher overall frequency of VS order” (p. 272). From this one could draw an unexpected conclusion that in unsequenced clauses the frequency of VS/SV order is not especially dependent on the language’s most usual word order (contrary to sequenced clauses).

At the end the author provides an explanatory interpretation of his central hypothesis, which also builds a bridge to other papers in the volume: If the clause “is temporally sequenced and tells the next in a series of events, then the verb comes first. This principle of “new information first” in strongly VS languages contrasts with the principle of “old information first” which has been argued for in strongly SV languages” (p. 276).

The article of **J. Stephen Quakenbush** “Word order and discourse type: An Austronesian example” (pp. 279-304) looks at a Philippine language Agutaynen that is V-initial but shows many cases of NP preposing. Because of the well-known difficulties with the application of the grammatical rela-

tions terminology to Philippine languages, the author chose to term the NPs in question “pre-verbal NPs”. The paper contains comprehensive surveys of Agutaynen clause structure and of research on the functional sources of clause-initial NPs; four types of such sources have been proposed in the literature: topic discontinuity, episode/paragraph boundary, some kinds of information packaging (non-identifiability, pragmatic markedness, newsworthiness), and backgrounding (supportive, unsequenced status) of a clause. Quakenbush acknowledges the relevance of all these factors and argues that the Agutaynen preposed NPs can pattern differently according to discourse type. Following Longacre, he distinguishes narrative, procedural, behavioral, and expository discourse (not all of these terms are transparent). In the narratives, Agutaynen pre-verbal NPs signal the beginning of discourse, contrastive focus, and background information but are rarer than post-verbal NPs. In the expository text, pre-verbal NPs prevail, but have essentially the same functions as in narratives (plus marking new thematic paragraphs). One can infer from this that discourse type affects not word order choice per se but local conditions that determine relative frequency of different orders. The author also makes an observation that topic continuity methodology turns out to be inapplicable to expository texts: “Due to the brevity of the texts it was impossible to attain revealing figures for referential distance and persistence” (p. 292). One can only agree that “there is something to be gained from a careful investigation of varying discourse types” (p. 295) for the sake of word order studies.

The “Givónian” section, as well as the book as a whole, is concluded by a paper by **T. Givón** himself, titled “On interpreting text-distributional correlations: Some methodological issues” (pp. 305-320). This article is written as an argument against the unpublished comments by Johanna Nichols to a paper Sun and Givón (1985), but at least in part is a revision of the author’s earlier views and methods. In Sun and Givón (1985) a counter-traditional suggestion was made that in Mandarin Chinese VO word order is neutral, corresponds not only to indefinite but also definite objects, and OV order occurs with contrastive objects. In the course of defending this treatment, Givón makes a number of important theoretical, methodological and empiric points, including:

1) “Text-distribution correlations between grammar and discourse-pragmatic function [...] are much stronger — or predictable in the direction from function to structure” (p. 307); in Mandarin, the predictability of OV order

from contrast “is just about categorical” (p. 313) but not vice versa;

2) “Distributional correlations by themselves are frequently less than meaningful. Once they are obtained, the burden remains on the investigator to *explain* them” (p. 307); “Our hypotheses, what we endeavor to construct as explanations, must not be *about the text*. Rather, to be theoretically valid they must be *about the mind* that produced or perceived the text” (p. 317);

3) The speaker’s and hearer’s cognitive processes are not symmetrical: while for the former “a one-to-one association — high predictability — from function to form” is typical, the latter “who has to decode form into function can tolerate a certain level of ambiguity, resolving it by recourse to *context*” (p. 313); “somewhere about or above the level of 80% correlation, the perceiving mind begins to bet on a 100% categorical distribution and ignore the margins” (p. 317).

These points seem quite useful, and it can be noted that many of the language-specific papers in this volume would benefit greatly if they followed Givón’s postulates.

The article by **Morton Ann Gernsbacher and David Hargreaves** “The privilege of primacy: experimental data and cognitive explanations” (pp. 83-116) stands aloof from the rest of the volume because it is written not by typologically-minded linguists, either studying “exotic” languages or constantly remembering linguistic variety, but by psycholinguists for whom language means the English language and linguistics means careful fulfilment of experiments. The presence of this different perspective in the volume is a very fortunate find. Furthermore, this paper is unusual as compared to the mainstream psycholinguistic work, too. First, its style is not as technical as in most psycholinguistic articles, probably is adapted to broader linguistic audience. Second, it contains not only the description of experiments designed to support or refute a theoretical point but also original and interesting theoretical argument.

There is an empiric fact that comprehenders spend more time and more cognitive efforts processing initial words (sentences) of sentences (texts). A theory Gernsbacher and Hargreaves use to explain it is called Structure Building Framework. It says that building a mental structure begins with laying a foundation which requires significant effort. The remainders of the sentences (texts) are represented vis a vis the initial information that possesses the Advantage of First Mention (AFM). The authors experimentally dispel hypotheses of alternative possible causes of AFM besides the cognitive

process of laying a foundation — semantic agency and syntactic subjecthood.

AFM is known to compete with the Advantage of Clause Recency (ACR) — the phenomenon of greater accessibility of information of the later clause. In a series of quite refined experiments the authors discover that ACR has priority over AFM immediately at the end of comprehending a biclausal sentence, information from both is equally accessible 150 ms later, and then AFM acquires strong priority one or two seconds later since it is “a relatively long-lived characteristic of the representation of a sentence” (p. 102). Gernsbacher and Hargreaves also claim and prove that comprehenders represent each clause in a sentence in its own substructure, but at some level the representation of the whole sentence is also relevant.

In sum, the volume is a useful collection bringing together the variety of approaches toward pragmatically based word order proposed in the last fifteen years. From the technical point of view, the book is quite well made and, except two or three articles, has no or few typographic errors. However, for a typologically and theoretically oriented volume it would be desirable to have a language and subject index.

To conclude, I will present several implications of quite diverse nature that can be drawn from the collection.

First, the book is another illustration of a pitiful separation between particular linguistic traditions. (Of course, this is by no means the fault of either the editor or the contributors.) It is especially obvious in the domain of word order flexibility where an important role was played by the Slavic languages. Almost no recent literature on Slavic is mentioned in the book, including that published in English by American authors — cf. for instance a strikingly unusual and insightful monograph Yokoyama (1986) providing a consistently cognitive account of Russian word order.

Second, it appears that in contemporary linguistics the relative ordering of verb and its core argument NPs is considered the word order problem par excellence. In the whole book, despite its general title, there are very few mentions of other word order phenomena (like placement of adjectives, adverbs, particles, etc.)

Third, it seems that there is some inherent weakness in the notion of word order typology per se. It is not the only problem that the standard word order typology erroneously assumes that every language has a basic order of clause constituents, that all languages possess uniformly defined S and O, that all languages have nominal arguments, and that the occurrences of transitive

clauses typically display all three overt constituents. There is a more general problem with the very way how the notion of “word order typology” approaches the issue, using as a starting point the relative order of linguistic elements rather than functions. Not only S and O, but any other superficial entities would appear to lack the desired universal applicability. As any other typology, a typology attempting to capture the facts of word linearization must proceed not from form (words) but from function — it should be constructed as a calculus of cognitive and pragmatic factors influencing a range of related phenomena, among them word order (one attempt of such calculus was represented in Givón (ed.) 1983).

Finally, it is quite clear that at this time linguistics does not possess a theory explaining the fact that in Slavic thematic and definite NPs tend to precede the verb while in polysynthetic languages of North America the picture is quite opposite. This controversial fact presents a great challenge to the emerging cognitively oriented paradigm in contemporary linguistics.

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