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SHORTER NOTICES

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Wayne A. Davis, *Implicature: intention, convention, and principle in the failure of Gricean theory* (Cambridge Studies in Philosophy). Cambridge: Cambridge University Press, 1998. Pp. viii + 206.

Reviewed by KEN TURNER, University of Brighton

This book is about the semantics-pragmatics interface. More specifically, it contrasts one family of theories of that interface, which Davis subsumes under the generic label 'Gricean theory', with another theory of his own developed on rather different assumptions. The general perspective on and tone of this contrast is given in the book's subtitle and it resonates throughout the brief 'Introduction' (1–3) as well as much of the rest of the book. Davis doesn't mince his words: Grice's '*theory* of implicature … is a near-complete failure' (1); 'Gricean explanations of conversational implicatures are completely unsuccessful' (2); 'Gricean theory has been barren' (3); 'the theory has little success anywhere because it is fundamentally defective' (3); '[t]he illusion of understanding provided by the Gricean theory has only served to stifle inquiry' (3). And so on. It is not all negative campaigning, however. He raises expectations about the positive case when he concludes the introduction with the following sentence: 'I raise many fascinating questions about implicature, requiring systematic historical and sociolinguistic research for their solution, which did not and could not arise when the Gricean theory held sway' (3).

First, some background. It is relatively clear that the ideas explored in the 1967 William James Lectures, now collected, with additional papers and a Retrospective Epilogue, in Grice (1989), are tentative and preliminary. Grice himself acknowledges as much at numerous points in his discussion(s). Specifically, we observe that these ideas are tentative and preliminary in that they (i) relate to only one discourse type, that of 'a maximally effective exchange of information' and therefore 'the scheme needs to be generalized' (Grice 1989: 28); that consequently they (ii) must eventually accommodate other principles than a cooperative principle (cf. Grice 1989: 369); that they (iii) must eventually make reference to 'all sorts of other maxims (aesthetic, social, or moral in character)' (Grice 1989: 28); that they (iv) need to tighten up the taxonomy of contextual inferences, and, in particular, since 'it is all too easy to treat a generalized conversational implicature as if it were a conventional implicature' (Grice 1989: 37), then 'the nature of conventional implicature needs to be examined before any free use of it, for explanatory purposes, can be indulged in' (Grice 1989: 46); that they (v) must clarify why '[s]enses are not to be multiplied beyond necessity' (Grice 1989: 47); and finally, for present purposes at least, that they (vi) need to address and justify the assumption that 'it is more generally feasible to strengthen one's meaning by achieving a superimposed implicature than to make a relaxed use of an expression' (Grice 1989: 48). (Grice notes on this last point that he doesn't know how this assumption could be justified.) The tentative and preliminary nature of these ideas has already been conceded by, for example, Richmond Thomason (1973: 4), who remarks that 'Grice's patterns of explanation have much more in common with the best and most rigorous literary criticism than with mathematical logic' and by Laurence Horn (1988: 130), who more recently remarks that 'Grice's original framework is clearly at best incomplete and at worst inadequate beyond repair to the task of predicting sets of nonlogical inferences which are actually drawn from a given utterance in a given context'.

Now, back to the book under review. Davis' strategy to increase transparency involves defining 'Gricean theory' in terms of four reconstructed assumptions. These are, first, the Theoretical Assumption, which posits that implicatures are defined in terms of the conversational principles and maxims; second, the Generative Assumption, which posits that implicatures exist because of the conversational principles; third, Grice's Razor, which assumes that it is more economical to postulate implicatures than to increase the number of senses; and finally, the

Calculability Assumption, which holds that conversational implicatures should always be capable of being worked out on the basis of the usual principles and maxims.

Davis' discussion of the first two assumptions does not always introduce transparency and in the interests of the third maxim of Manner, I shall not comment further on it here. The third assumption is more interesting. Its full statement, in Davis' reconstruction, is as follows: '[o]ther things equal, it is preferable to postulate conversational implicatures rather than senses, conventional implicatures, or semantic presuppositions because conversational implicatures can be derived from independently motivated psychosocial principles' (19). There are two observations about this assumption that can be lodged. The first is that the assumption is unwarranted in the absence of an adequate and robust taxonomy of implicatures. After all, why should we give up the perspicuity and security afforded by senses and their disambiguated logical forms for the rather mushy and uncertain territory of conventional and conversational implicatures? This observation was already made by Walker (1975) but it seems to have gone unheeded. The second is that the notion of 'sense' needs much greater descriptive and theoretical scrutiny. Again, with observance to the third maxim of Manner, we observe that for Grice, senses seem to be integral objects that implicatures become attached to. Subsequent research has postulated senses as objects characterised with various degrees of underspecification that implicatures, or indeed other contextual inferences, augment and help to constitute. Such work can be found in, for example, Atlas (1989), Carston (1988) and, more formally, van Deemter & Peters (1996). This assumption of indeterminate senses complemented with contextual information is on the ascendant. Also explored, although less comprehensively, is the assumption of senses as objects characterised with various degrees of OVERspecification that implicatures, or indeed other contextual inferences, erode and help to reconstruct. Such work can be found in, for example, Cohen (1971, 1977, 1986). If one reads carefully between the lines, Davis might be seen as approaching (some of) these issues but he doesn't really get close enough for one to assess with confidence what importance he attaches to them.

But it is with respect to the Calculability Assumption that clear differences emerge between the two kinds of theory. For Grice, calculability is crucial: '[t]he presence of a conversational implicature must be capable of being worked out; for even if it can in fact be intuitively grasped, unless the intuition is replaceable by an argument, the implicature (if present at all) will not count as a conversational implicature' (Grice 1989: 31). For Davis, on the other hand, calculability has no descriptive or theoretical importance: '[t]here are many ways hearers can figure out what speakers implicated. The idea that reliance on the Gricean Working-out Schema is the only way we could figure out what speakers implicate is a fundamental mistake' (130). Instead, and this seems to be the major thesis that Davis seeks to establish and defend, 'Grice appears to have misidentified the nature of the dependence of sentence implicature on sentence meaning. Implicatures are connected to meanings by convention, not by psychosocial principles' (156). Davis is careful to limit this thesis to generalised conversational implicatures, what he calls 'sentence implicatures', and does not extend it to particularised conversational implicatures, what he calls 'speaker implicatures'. The latter have been the subject of previous reports (Davis 1992a, b). His thesis relates only to generalised conversational implicatures and his position is that they result not through calculation, but through convention.

Davis' account of 'convention-based implicature' moves as follows: (1) sentences of the form 'Some S are P' conversationally implicate sentences of the form 'Not all S are P'; (2) they do this because there is a 'conversational implicature convention' which, given 'Some S are P', licences the implicature 'Not all S are P'; (3) such implicature conventions are (a) socially useful, in that they contribute to communication; (b) self-perpetuating, in that 'past conformity breeds future conformity' (145) and (c) arbitrary, in an obvious sense. Essentially, steps (1)–(3) are all there is to the argument and Davis merely changes (1), and the content of the scare quotes in (2), to accommodate other familar kinds of generalized conversational implicature – tautologies, disjunctions, conjunctions and the modals most specifically. He concludes: 'To comprehend sentence implicature, we have to study and carefully describe the actual linguistic conventions of language communities. Rather than trying to deduce arbitrary practices from some general psychosocial principles, we must look at the social functions that particular conventions serve. And we should look to historical linguistics for their origins' (190).

There are a number of questions that need answers before one can commit oneself to the reorientation of the semantics-pragmatics interface that Davis recommends. These questions have to do with the multiplication of conventions, perhaps beyond necessity, the nature of social usefulness, at present a very blunt instrument, and the precise mechanics of self-perpetuation.

These are all very large and indeed, as Davis remarked on page 3, 'fascinating' questions but they do not receive anything like an adequate treatment in the present book. But this book seems to be the preface to a larger project. Davis mentions at several points that he has another book in the works, entitled *Meaning, expression, and thought*, in which these matters are considered at greater length so perhaps a final verdict on his work ought to await the completion of this story.

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Susan Hunston & Gill Francis, *Pattern Grammar: a corpus-driven approach to the lexical grammar of English* (Studies in Corpus Linguistics **4**). Amsterdam: John Benjamins, 2000. Pp. xii + 289.

Reviewed by JOYBRATO MUKHERJEE, University of Bonn

As the title implies, this book does not provide a comprehensive and exhaustive grammar of the English language, but it functions as a kind of topic-opener putting into perspective the huge impact corpus linguistics has on the description of English grammar. Two central keynotes of a corpus-driven approach to grammar which have already been sketched out by Sinclair (1991) are drawn on and developed further by Hunston & Francis: (1) the computer-based quantitative analysis of large corpora (in this study, The Bank of English comprising 329 million words in June 1999) shows that Sinclair's IDIOM PRINCIPLE, i.e. language use by means of semi-preconstructed phrases comprising significantly frequent co-occurences of words, is all-pervading; (2) since these (semi-)fixed phrases represent single choices in the encoding process, corpus-based evidence clearly blurs the traditionally established borderline between lexis and

grammar, resulting in the general assumption that language is to a very great extent produced in and around PATTERNS as lexico-grammatical units of meaning.

After setting the work on patterns in context (chapter 1), chapters 2 and 3 outline what a pattern is and which main problems occur in pattern identification. Chapters 4 and 5 explore the at times fuzzy nature of pattern-meaning association. The last chapters deal with the concept of pattern in a wider setting by relating pattern to linguistic structure (chapter 6), suggesting new word classes and reconsiderations of existing word classes (chapter 7), discussing patterns in text as a continuous chain of what Brazil (1995) calls PROSPECTIONS (chapter 8) and, finally, summing up the evidence in order to draw conclusions as to the application of a pattern grammar to the teaching of English as a foreign language (chapter 9).

In a similar, though much more elaborated, way to the *Collins COBUILD English dictionary* patterns are transparently represented by means of a rather small inventory of iconic symbols only: 'N *as to* wh', for example, represents a pattern in which e.g. the noun *decision* frequently occurs, as in '*It is no longer a decision as to whether or not to…*' (47). As the authors state, their analysis 'focuses on the formal components of a pattern rather than on a structural interpretation of those components' (151). The pattern 'V n n', for example, describes a sequence of a specific verb under discussion (therefore capitalized) and two nouns or noun groups. A structural analysis in terms of clause elements (e.g. object or complement) which are fulfilled by these formal components is neglected. Although the authors state that structural analyses add nothing substantial to their pattern description (152), there remains, temporarily though, an awkward feeling about subsuming sentences with clearly different clause patterns (e.g. 'verb plus object and complement' and 'verb plus two objects') into one verb pattern 'V n n'.

However, to distinguish such formally similar patterns, so-called MEANING GROUPS within the range of words selected by a pattern are established. This is a very useful notion (and a helpful tool for language learners): its application reveals that patterns in general are strongly linked to meaning and that, more specifically, patterns do in fact select a more or less wide range of words which can be sorted into semantic categories. In the pattern 'V n n', for example (its two main structural guises having been hinted at before), the di-transitive verb belongs to one of five meaning groups (e.g. giving someone something, doing something for someone), whereas the complex-transitive verb used in the same pattern is characterized as roughly 'putting something into a category' (89). The authors admit that in many cases a clear one-to-one or one-to-few relationship between pattern and meaning has not (yet?) been detected, but the general observation is that a specific pattern selects a restricted lexis and that patterns can thus be said to have meanings themselves. This allows for a better understanding of particular phenomena, such as irony, being based on a collocation 'which is at odds with the usual semantic set' (105) of a pattern (similar to the notion of SEMANTIC PROSODY coined by Sinclair).

From the point of view of the unbiased linguist, the last chapters turn out to be the most fruitful and at times thought-provoking. It is remarkable and desirable that Hunston & Francis (as well as many other corpus linguists) try to partly take into account some generativists' objections to corpus linguistic theory and methods. *Pattern grammar* is by definition a classic example of an OBSERVATION-BASED GRAMMAR as opposed to INTUITION-BASED GRAMMARS (Aarts 1991), and it is the corpus-driven approach itself which allows for most of the insights into language patterns presented in this study. But notwithstanding the empirical methodology, it is important that corpus linguists are aware of the fact that even a corpus of the size of The Bank of English covers neither all the patterns selected by words nor all the words selected by a specific pattern which would be possible according to intuition.

Throughout the book, one strength of this approach lies in the explicit presentation of problematical aspects of the adopted methods and established categories. For example, the disadvantages of neglecting functional analyses in pattern identification (discussed previously) are not lost sight of (177). The basic problem of word class categorization is discussed too (197). Furthermore, the outlook on possible practical applications of a pattern grammar to foreign language teaching is both convincing and promising (chapter 9).

On the whole, *Pattern grammar* is a very well-written and highly consistent book illustrating each aspect with a myriad of examples and potential patterns. There are very few typographical errors and slips, e.g. 'an' for 'as' (7). The relevant corpus linguistic literature is considered, and particularly in chapters 8 and 9 there is some interesting cross-talk with Brazil's (1995) *A grammar of speech* and with important pedagogic literature. The easily accessible style facilitates a comprehensive reading of the book and a firm understanding of the concepts. The book is,

thus, suitable for researchers from all linguistic fields and students (even without corpus linguistic experience) alike. The study reveals that corpus linguistics is no longer in its infancy and is able to contribute to different and innovative perspectives on grammar. Nevertheless the authors admit that there are still strong (though unjustified) reservations about an entirely corpus-based description of English grammar: 'How the world of grammar will respond to the corpus revolution remains to be seen' (261).

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Betty Louise (Bettelou) Johanna Los, *Infinitival complementation in Old and Middle English*. The Hague: Holland Institute of Generative Linguistics (Theseus), 1999. Pp. 382.

Reviewed by D. GARY MILLER, University of Florida

This philologically exemplary book is a major contribution to our understanding of infinitives in older English. A few of the important claims are highlighted here.

The *to*-infinitive as argument in (1b) originated as a purposive adjunct in (1a), reanalyzed because of the surface ambiguity of (1) (72 f.).

(1) Herodes secð þæt cild tō forspillenne. (W. Sax. Gosp.I, Mt. 2.13)
Herod seeks that child.ACC to destroy.INF.DAT
(a) Herodes secð[$_{NP}$ þæt cild] [$_{CP}$ OP$_i$ [$_{IP}$ PRO t$_i$ tō forspillenne]]].
'Herod seeks the child in order to destroy [it].'
(b) Herodes secð [$_{CP}$ PRO [$_{NP}$ þæt cild] tō forspillenne].
'Herod seeks to destroy the child.'

Since the OE *to*-infinitive could have a subject or object gap, there is nothing in (1) to force interpretation (1a) over (1b). The reanalysis was early because of the many *to*-complements of intention-verbs in OE (79ff.).

The spread of the *to*-infinitive as verbal complement is richly documented. It replaced subjunctive complements to intention-verbs (conatives, desideratives, and their negative counterparts). In Gregory's *Dialogues*, the later manuscript replaces *that*-clauses with *to*-infinitives (53 f., 85–90, 356 f.). OE was developing infinitives in control, subjunctives in non-control contexts (351).

Verbs of commanding and permitting allowed the *to*- and *to*-less infinitive (TLI), but they were not equivalent. Los (in chapter 6) shows that three-place object-control verbs have an animate RECIPIENT in the dative, and the *to*-infinitive expresses the THEME of the ditransitive construction. The TLI occurs with monotransitive predicates, and an overt inanimate D/NP is in the accusative.

It is generally maintained that in OE the infinitive was nominal and *to* was of the category P. Los (in chapter. 11) disagrees. The *to*-infinitive was not nominal because it assigned accusative (never genitive) case to its complements (250). The change from N-head to V-head predated OE records, and involved a change from derivational to inflectional morphology, which could not alter category (241).

Infinitival *to* was not prepositional in OE because strict adjacency, not required with Ps, was

obligatory (251ff.). Note the contrast between the earlier (2a) and later (2b) manuscript-versions of Gregory's *Dialogues* (250 f.).

(2) (a) tō þæs līchaman gereordunge (GD 13.129.5[C])
to the.GEN body.GEN nourishment'
'for the body's nourishment'
(b) þone līchaman mid tō gereordianne (ibid. [H])
the.ACC body.ACC with to nourish.INF.DAT
'to nourish the body with'

The complement DP intervenes between *to* and a nominal in (2a); in (2b) the complement DP and *mid* are both to the left of the *to*-complex, as in Dutch (251ff.). Los' argument (253ff.) against an infinitive with V-head embedded in a DP-shell under P misses the point of how/where genitive is assigned/checked, and that the same position is not one for checking structural accusative case. If there is no DP, of course, there is no position for intervening material. The complement-position in (2b) can also be explained by *to*-cliticization (281ff., 341 f.), indicated by reduced spellings of infinitival *to* as *te*, e.g. *tó te forlætanne* (CP 50.391.29[H] – incorrectly cited (341) as line 27) 'to leave to'.

Another problem is that genuine Ps can be gapped in a second conjunct, but conjoined *to*-infinitives repeated *to* in OE (253 f.). Moreover, *to* would be the only preposition that can accompany the OE declined infinitive (254).

Finally, OE *to*-infinitives are invariably clause final, hardly a trait of PPs (255–259). This is true but misses the point that it can be explained by movement of an object to a structural case-checking position. Object-final orders occur in finite clauses by verb-raising. If infinitives did not raise overtly, but objects in subordinate clauses did, the order is explained.

Los is probably right that infinitival *to* was not a P in OE, but her 'clitic' does not explain its grammatical function. The only certainty is that it was VP-generated. A conclusion that *to* was checked in T by covert (LF) movement, like the subjunctive (281 ff.), is unwarranted. Infinitival *-e/anne*, like its undeclined counterpart *-an*, likely bore the T-feature.

In early ME *to* was no longer obligatorily adjacent to the infinitive. The implication should be that *to* is now in T. For Los (331 ff., 352), when the order is T–V–O, nothing inhibits an analysis in which *to* moves overtly to T. But moves from where? If it is reanalyzed as a T-head, there is no reason for movement because *to* is no longer VP-generated. Most likely, the order T–V–O, combined with moribund infinitival *-enne*, forced a reanalysis of *to* as a member of the category T.

Los (in chapter 12) accounts for the rise of E[xceptional] C[ase] M[arking] by means of the ambiguity of the surface sentence (3) and the fact that *order/permit*-verbs can be three-place ((3a)) or two-place ((3b)) (289).

(3) I allowed Bob to leave.
(a) I allowed Bob [PRO to leave].
'I gave Bob permission to leave.'
(b) I allowed [Bob to leave].
'I gave permission for Bob to leave; I allowed that Bob leave.'

Los' claim is that ECM was prompted by reanalysis of (3a) as (3b): 'it is the dualistic nature of this class that prompted a reanalysis of object controlled [_ NP + *to* VP] as *to*-infinitival ECM' (229; cf. 287, 303). But these structures remain distinct. There was no such reanalysis.

Moreover, Los gives another, different account (inadvertently, it would seem). She insists (296 ff., 304) that 'old' verbs were not affected. The innovation occurred with verbs unattested in OE or not found with infinitival complements. Lexical survivors from OE kept the contrast of causative two-place verbs with TLI vs. three-place object-control *to*-infinitive. To paraphrase, some new control verbs changed semantically to causatives, but kept their old NP-*to*-INF construction, thereby introducing ECM with the *to*-infinitive.

ECM was available for the new causatives 'when it started to emerge' for reflective verbs at the end of the fourteenth century (327). What started to emerge was not ECM with reflective verbs, which was marginally acceptable with the TLI of BE and (rarely) HAVE since late OE (Miller 2001: chapter 7), but rather ECM with the *to*-infinitive, on the model of the new causatives, passive infinitives and other complement structures with tense contrasts. Moreover, the *to*-infinitive was the rule as complement to passive predicates since OE.

Some passages are difficult to find in standard editions because of Los' reliance on corpora. One of those is (4), cited (338) as *Cursor Mundi* 80.

(4) forto tha pou[er] men to fede (CM 19068 Physicians-Edinburgh MS)
forto the poor men to feed
'to feed the poor'

Incidentally, such examples (Miller 2001: section 8.29) are important because they show that separation of *for* and *to* is not unique to southern-dialect texts that retained OV longer (pace Los 337, 339).

Errors are rare. At *Cursor Mundi* 8318, Los (334) repeats past scholars' error of *makie* for *make*.

Despite some problems, this exemplary work is must-reading for any scholar of the history of English syntax.

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Ingo Plag, *Morphological productivity: structural constraints in English derivation* (Topics in English Linguistics **28**). Berlin & New York: Mouton de Gruyter, 1999. Pp. x + 290.

Reviewed by Bożena Cetnarowska, University of Silesia

On the basis of investigating 20th century derived English verbs, attested either in the Oxford English Dictionary (henceforth OED) or in the Cobuild corpus, Plag aims to show that – in spite of the rich literature existing on the subject – there are still crucial regularities to be discovered in English verb-deriving morphology.

The book under review consists of 9 chapters, chapter 1 being an introduction and chapter 9 a conclusion. Chapters 2–3 survey definitions of productivity and methods of measuring productivity of morphological processes. Chapter 4 discusses combinatorial possibilities of English affixes, with a view to invalidating the affix-driven selectional restrictions proposed in Fabb (1988). Chapters 5–7 offer an in-depth analysis of properties of English verb-forming processes, focusing on *-ize* derivation. Chapter 8 is devoted to the discussion of rivalry between the processes in question and criticism of the Separation Hypothesis. These chapters are complemented by a list of references, two appendices (the first of which lists 20th century neologisms from the OED, the second includes hapax legomena from the Cobuild), and three indexes (author index, subject index and affix index).

As stated by the author himself, the book attempts to bridge a 'gap between important theoretical insights and broad empirical coverage' (2). Plag certainly manages to achieve his goal. He tackles a wide range of topics crucial to morphological theory, including the distinction between possible and actual words, the difference between rules and analogies, the concept of blocking, and the methods of processing and storage of morphologically complex words. He highlights practical problems of text-corpus-based statistical models of productivity, such as deciding on the sufficient size of the corpus, the sampling of multiply affixed or phonologically opaque complex words, and the disadvantages of pre-processing data-bases. In chapter 5 he assesses productivity of verb-deriving morphological processes in English, employing both a dictionary-based account and a text-corpus-based account, and discusses slight discrepancies between the results achieved.

Plag then proceeds to examine structural properties of English derived verbs. Particularly impressive is the care with which he carries out semantic analysis of *-ize* derivatives in chapter 6. He postulates for them a single semantic formula (140), repeated here as the LCS (Lexical Conceptual Structure) in (1). The underlined part of the LCS is optional.

(1) *LCS of* -ize *verbs* (generalized)
$[[\ \ ]_{\mathrm{BASE}}\text{-}ize]_{\mathrm{V}}$
$\{\mathrm{NP}_{i}\text{–}\mathrm{NP}_{\mathrm{Theme}},\ \mathrm{NP}_{\mathrm{Theme}}\text{–},\ \mathrm{NP}_{i}\text{–}\}$
$\underline{\mathrm{CAUSE}([\ \ ]_{i},\ [\mathrm{GO}\ ([_{\mathrm{Property,Thing}}]_{\mathrm{Theme/Base}},\ [\mathrm{TO}\ [_{\mathrm{Property,Thing}}]_{\mathrm{Base/Theme}}])])}$

He proposes that the semantic interpretation of individual *-ize* verbs can be 'construed by mapping the different participants and the base onto the semantic representation as expressed in the LCS' (143).

Although Plag is largely successful in defending his hypothesis of semantic coherence of *-ize* verbs and predicting polysemy of numerous *-ize* derivatives, some reservations need to be stated here. The number of *-ize* verbs which are irregular semantically is negligible in his corpus, since he considers fairly recent formations. While the formula in (1) predicts that the causative element is optional in the semantic interpretation of derived verbs, many of the 20th century formations terminating in *-ize* and *-ify* lack the intransitive usage. Moreover, Plag makes a controversial assumption that performative verbs (*anthropologize*) and similative verbs (*powellize*) are intransitive variants of ornative verbs (paraphrased as 'to provide somebody with X'), in which the Theme is underspecified.

In chapter 7, adopting the framework of Optimality Theory (OT) and employing a restricted set of constraints (such as *CLASH-HEAD, R-Align-Head or *SCHWA-V), Plag accounts for the apparent irregularity of truncation in V-final bases for *-ize* and *-ify* derivatives (cf. *summarize* from *summary* and *heroize* from *hero*) and for the non-uniformity of haplology effects (cf. *strychninize* from *strychnine* vs. *feminize* from *feminine*). Plag postulates prosodic limitations on *-ize* and *-ify* affixes. The affix *-ify* requires the immediately preceding syllable to bear the main stress (*jazzify*, *opacify*) whereas *-ize* attaches to disyllabic bases ending in a light penult (*randomize*). In comparison, Gussmann (1987) identifies two disjoint sets of bases for *-ify* affixation (namely bases ending in a high vowel and Latinate bases with a stem-final sonorant) and postulates that *-ize* attaches to Latinate adjectives ending in a vowel followed by one or more sonorants. Let us note, however, that the analyses offered by Plag and Gussmann differ both in their theoretical premises and in the choice of the corpora. While Gussmann considers all deadjectival *-ify* and *-ize* verbs attested in the OED, Plag restricts his attention to 20th century denominal and deadjectival derivatives.

Plag claims (197) that *-ize* and *-ify* are phonologically (prosodically) conditioned allomorphs. His hypothesis is contradicted by the relevant etymological evidence: the suffix *-ize* originates from the Old Greek suffix *-izō* while *-ify* comes from the Latin ending *-ificare* (Marchand 1969). Therefore, it is essential to support this claim with compelling evidence. Although Plag postulates the same LCS for *-ify* and for *-ize* (which is to be expected if they are allomorphs), he admits that the range of meanings attested with *-ify* verbs is more restricted. There are no similative or ornative verbs among intransitive *-ify* derivatives. To provide another argument for collapsing *-ify* and *-ize* into one affix, Plag demonstrates (199) that phonological constraints should evaluate jointly the forms in which *-ify* and *-ize* are attached to the same base, e.g. *randomize* vs. *randomify*. This is regarded as a case of allomorph selection. However, if OT constraints were allowed to compare the phonological well-formedness of forms with rival (but independent) suffixes, the argument for the allomorphy of *-ify* and *-ize* would be considerably weakened.

Another point where I would take issue with Plag is in his criticism of the Separation Hypothesis (SH), adopted in Gussmann 1987, Szymanek 1988 and Beard 1995. SH states that formal and semantic aspects of morphological processes should be dealt with by separate sets of rules. Plag claims (227) that instances of rival affixes – which constitute part of the justification for SH – are very rare. It is important to note, however, that Plag uses the term 'rival affixes' in a very restricted sense. He does not regard co-functional affixes as rival if they show complementary distribution due to distinct phonological limitations on their bases. Moreover, the rejection of SH poses the question of how to deal with cases of form/meaning asymmetry (for which Beard 1995 could offer a satisfactory treatment), such as the occurrence of noncatenative morphological processes (e.g. conversion). It is to be regretted that Plag does

not devote much space to the analysis of converted (zero-derived) verbs. Although they constitute a sizeable section of the neologisms in the OED corpus, their discussion takes 6 pages (compared to 75 pages on structural properties of *-ize* derivatives).

The critical objections raised above do not diminish the value of the book under review. Plag's monograph is an important contribution to the debate concerning the nature of constraints on morphological processes. It should be recommended reading for anyone interested in morphological theory and morphological practice.

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Ivan A. Sag & Thomas Wasow, *Syntactic theory: a formal introduction*. Stanford, CA: CSLI Publications, 1999. Pp. xiii + 481.

Reviewed by GERT WEBELHUTH, University of North Carolina at Chapel Hill

This textbook by Ivan Sag & Tom Wasow is the first introduction to syntactic theory based on constraint-based lexicalism, the family of unification-based theories of grammar whose popularity has systematically grown over the last 20 years and which by now can be considered an 'alternative mainstream' in syntax next to Chomsky's Minimalist Program. The field of linguistics badly needed such an introductory textbook to supplement the advanced research literature, the annual international conferences, the summer school courses, and the grammar development software packages that have helped to create the vibrant new research community working within that paradigm.

I have used this book both in introductory undergraduate and graduate syntax courses and in both environments it has proved to be a reliable teaching tool. Having used every major introductory syntax book in the last 15 years, I had become frustrated by the fact that teaching introductory syntax was becoming more difficult with each new generation of books that have tried to faithfully represent the ever more abstract transformational theories of the 1980s and 1990s. My students found it hard to memorize the exact names and the order of abstract categories (as well as the reasoning of why one would postulate AGR phrases in English infinitives or in languages lacking observable agreement in the first place), as well as the complex transformational derivations that became necessary for even the simplest sentences. And then, of course, there always was the dreaded question 'How would you draw a tree for this sentence?', followed by an example of idioms, tag questions, or any other of the multitude of everyday expressions of English for which the theory didn't provide a representation because some small irregularity in the expression does not allow its properties to be viewed as a function of a language-wide parameter.

The textbook by Sag & Wasow brings great relief to the frustrated learner of syntax as well as the frustrated teacher. It introduces Head-driven Phrase Structure Grammar (HPSG) in the

recent version of this theory that also implements Paul Kay's and Charles Fillmore's Construction Grammar. The authors have designed a book that in many ways reflects the strengths of the theory that it describes: the text is systematic, concrete, precise, and strongly data-oriented in the sense that no piece of linguistic data is considered trivial or unworthy of treatment. The close connection between data and theory allows the theory to be strongly motivated in that each constraint or principle can be directly tied to a concrete grammatical phenomenon that would fail to be analyzed successfully without the constraint. This includes even theoretically uninteresting 'bookkeeping' features like FORM which are seen by the student to be necessary for a descriptively adequate theory of the selection of prepositional phrases.

Another crucial strength of *Syntactic theory* is that it simultaneously provides an introduction to general syntactic theory and an application of this theory to a fragment of English that includes the morphological, lexical and semantic principles necessary for a fully-fledged grammatical analysis of the core syntactic structures of the language. No other textbook on the market gives the student as realistic a picture of the strong interdependencies among the components of a generative grammar as the book under discussion. With the systematic documentation by Construction grammarians and others that the semantics of an expression is often more than the somehow universally combined meanings of its parts and that there is much more to say about the structure of words than that their 'morphological' features are either weak or strong, this is an important contribution to a realistic training of the next generation of students of linguistics.

The book contains 16 chapters, 2 appendixes, a glossary, subject and name indexes, and literature references. The first chapter introduces the field of syntax, discusses such issues as prescriptivism and the history of the study of grammar, and then proceeds to explain that language allows us to study some aspects of the human mind. Chapter 2 introduces traditional phrase structure grammars and shows that their atomic categories make it difficult to capture subcategorization and agreement dependencies efficiently. This sets the stage for the introduction of complex grammatical categories and feature structures in the next chapter, which naturally leads to the formulation of the HEAD FEATURE PRINCIPLE to capture the identity in head features between phrases and their head daughters. Chapter 4 reanalyzes the valence properties of words and phrases in terms of the list-valued features COMPS (complements) and SPR (specifier) and formulates the syntactic combination principles that allow heads and phrases to combine with dependents that saturate their valence requirements. With these lexical relationships in place, the student is shown how to capture agreement relationships between heads and specifiers as well as case marking dependencies between heads and their dependents. In this connection the authors make the student think about the syntactic differences between mass and count nouns in English, and give the student some insight into the cross-linguistic differences in the syntactic role of case through problem sets dealing with English, Icelandic and Wambaya.

Chapter 5 adds semantic information to both lexical and phrasal signs of the grammar and demonstrates how the semantic information in lexical items is combined by the syntactic schemas to form the meanings of phrases, including coordinate phrases. After illustrating the interaction of the syntactic and semantic mechanisms attached to words and phrases in detail, the authors build on these semantic insights by laying out the consequences of the binding theory for semantic interpretation. A chapter on idioms and expletives teaches the students to provide sentences containing these elements with correct syntactic and semantic representations. Successive chapters deal with infinitival complements and auxiliary verbs, introducing the concepts of raising and control, including a beautiful chapter on dialectal and sociolectal variation in the English auxiliary system. A chapter on long distance dependencies rounds out the picture.

I have a few suggestions for the next edition of this textbook. While it contains good exercises that lead the student to extend the theory beyond what is given in the text, the book also needs some exercises that allow the student to practice the purely mechanical parts of HPSG. For the average student in the humanities this theory is technically quite challenging and I found that my students need more help with this aspect than the book provides. In this regard it might also help if the book contained more frequent summaries of all the constraints, perhaps after about every other chapter. Currently, there is such a summary in chapter 9 and a second one at the end of the book after chapter 16. But if one wants to have an overview of what has been accomplished after chapter 5 or chapter 13, then one doesn't have all and only the information one needs in one place where the student could study it. Finally, while I understand the complexities involved in dealing with quantification, I wish the authors had included some, even

if simplified, semantic treatment of determiners in the book. From chapter 5 on, each piece of syntactic structure is accompanied by a semantics, except that the students never find out how to complete the semantic representation of NPs.

An on-line instructor's manual authored by Emily Bender, Ivan A. Sag & Tom Wasow is accessible through the website of CSLI Publications at http://cslipublications.stanford.edu/site/1575861607.html. It contains chapter-by-chapter lecture notes, downloadable transparencies, as well as sample solutions to all the problems in the text.

In sum, this is a textbook that makes it truly fun to teach introductory syntax. It is thoroughly data-driven and teaches the student to pay attention to empirical details and to find linguistic patterns and explanations for them. Based on my own teaching experience with the book, I have found that the book 'works' in the sense that by the end of the semester the student has been empowered to extend the book's analyses through precise grammars of their own that can capture syntactic, morphological and semantic patterns and correlations. I know of no other book on the market today that achieves this. In my view, Sag & Wasow's *Syntactic theory* sets a new standard for introductory syntax volumes that all future books should be measured against.

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Petra M. Vogel & Bernard Comrie (eds.), *Approaches to the typology of word classes* (Empirical Approaches to Language Typology **23**). Berlin & New York: Mouton de Gruyter, 2000. Pp. xiv + 514.

Reviewed by Edward J. Vajda, Western Washington University

The 14 articles in this volume explore language universals from a typological perspective which represents a middle ground between the two methodological extremes that in one way or another have dominated most other recent linguistic studies of word classes (formal part-of-speech categories). Rather than forcing the data to conform to the structural prerequisites suggested by a single language (such as Greek, Latin or English – the de facto perennial favorites as universal models), the authors examine word classes across a range of languages deliberately chosen for their typological, genetic and areal diversity. At the same time, the volume specifically addresses the issue of universal typological restrictions on how morphosyntactic and semantic categories can be conceptualized in language in general. The result is a wide-ranging yet highly directed theoretical contribution to a core area of typological linguistic research.

The book is subdivided into two parts: 'General studies' and 'Language-specific studies'. Part One contains eight articles addressing general, cross-linguistic aspects of word-class typology. Jan Anward's 'A dynamic model of part-of-speech differentiation' investigates general linguistic features which model language organization, such as the intersection between minimization of effort and maximalization of meaning. The data contributing to this study come from Swedish as well as nine other languages chosen for their typological and geographic diversity. 'Word classes and sentential functions' by D. N. S. Bhat views formal part-of-speech categories as deriving from the lexicalization of particular sentential functions. In 'Parts of speech as language universals and as language-particular categories', William Croft claims that the major parts of speech (verb, noun, adjective) are themselves language universals, whereas lexical classes are language-specific. 'Kinship verbs' by Nicholas Evans discusses a number of Native North American and Australian languages which formally convey kinship terms through verbs rather than nouns. His analysis provides explanations for which terms show a greater tendency to be expressed as nouns and which as verbs in head-marking languages where such a dichotomy is possible. In 'Syntactic categories, cross-linguistic variation and universal grammar' David Gil focuses interest on universal constraints affecting the possible inventory of

syntactic categories across languages. Jan Rijkhoff's 'When can a language have adjectives? An implicational universal' links the occurrence of adjectives to semantic properties present in the given language's nouns. An examination of the Southeast Asian language Hmong Njua and several unrelated languages reveals that adjectives are present as a distinct formal class only if its nouns are lexically specified for the feature [+shape]. 'Grammaticalisation and part-of-speech systems' by Petra M. Vogel compares Tongan, German and English to examine the degree of grammaticalization relevant for the formal explication of word classes in these languages. Finally, in 'Lexical prototypes as a universal basis for cross-linguistic identification of "parts of speech"', Anna Wierzbicka attempts to derive syntactic word classes from semantic primitives. In her conception, universal lexico-semantic prototypes such as 'things' or 'people' underlie the notion of 'noun' cross-linguistically. This approach seems overly simplistic, however, and relegating morphosyntax to the background in this question does not really help to solve the problem of word classes.

Part Two contains six articles, each of which focuses on a specific problem in a particular language or language family. In 'Modal particles in German: word classification and legacy beyond grammaticalisation', Werner Abraham discusses a group of words found in the continental West Germanic languages that have hitherto been difficult to categorize. This article investigates the illocutionary force of these particles and explains their sentence-level distribution. Jürgen Broschart explores another idiosyncratic class of words in 'The Tongan category of preverbials', evoking diachronic as well as synchronic evidence to elucidate their modern adverbial function. 'Identifying substantival and adjectival pronouns: a case study on German' by Monika Budde presents a general model based on Integrational Linguistics in an attempt to answer the question of which entities in a given language qualify as words. The model is applied to German possessives and other pronouns. In 'Noun and verb in Iroquoian languages: multicategorisation from multiple criteria', Marianne Mithun argues convincingly against the notion that Iroquoian languages lack a true, formal distinction between noun and verb. Mithun demonstrates that a straightforward classification of Iroquoian part-of-speech categories emerges only when one properly appraises the question how to separate the various morphological, syntactic, and semantic criteria for word-class determination. Robin Sackmann's 'Numeratives in Mandarin Chinese' investigates classifiers and measure words, a group of elements traditionally considered to comprise a distinct word class. This article contains useful information of general relevance for the analysis of any classifier system. Finally, in 'Polynesian multifunctionality and the ambitions of linguistic description', Arnfinn Muruvik Vonen revisits the question of whether the categories 'noun' and 'verb' in Polynesian languages do indeed exist as formally separate word classes. His discussion evokes other languages families for which this question has been raised and points out that much of the debate stems not from real-world differences in the data itself but from varying degrees of 'descriptive ambition' on the part of the linguists conducting the investigations.

The book ends with comprehensive indexes of authors (489–494), languages (495–498) and subjects (499–514). In addition, the editors' preface (vii–xiii) supplies concise but informative descriptions of each of the contributing articles.

The articles in this volume are most notable for their consideration of data from a broad range of languages and in light of the innovative solutions they apply to the individual problems examined. In this way they complement earlier surveys involving specific data from diverse languages and extend the exploration of how form and meaning interface in the construction of word classes (cf. Bybee 1985). However, none of the disparate approaches to word class typology included here can really be said to constitute a definitive breakthrough in our understanding of part-of-speech universals.

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