

REVIEWS

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Heinz J. Giegerich, *Lexical structures: Compounding and the modules of grammar* (Edinburgh Studies in Theoretical Linguistics 1). Edinburgh: Edinburgh University Press, 2015. Pp. viii + 142.

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Is compounding lexical or syntactic (or neither)? Is there a morphological module separate from a syntactic module of grammar, and if so how do the two fit together, and where is compounding dealt with in these modules? How is this related to the stratal divisions in morphology? These are the fundamental questions raised by Giegerich in this latest investigation of such problems, an investigation which leads to conclusions different from those he has earlier espoused (viii).

In this review I first summarise what Giegerich (G.) sets out in the book, and then raise some discussion points.¹

G. begins in Chapter 1 by distinguishing various patterns of modification for adjectives. In attributive usage, he distinguishes three patterns of modification: intersective attribution (such as *beautiful picture*, which denotes the intersection of the set of pictures and the set of beautiful things), intensional attribution (such as *false friend*, where the attribute augments ‘the semantics of head with the feature “not actual”’ (6)), and subsective attribution (as in *beautiful dancer*, in the sense ‘a person who dances beautifully’). Intersective and subsective modification can be either restrictive or non-restrictive, but ‘attribution occurring in the lexicon’ is invariably restrictive (9).

G. then goes on to distinguish between ascriptive and associative attribution, a distinction which is central to his discussion throughout the book. Ascriptive attributes, which provide the default reading for adjectives, ascribe a property to their heads: *beautiful picture* ascribes beauty to the picture. However, in *dental decay*, the property of dentalness is not ascribed to the decay, rather the decay is associated with teeth. Ascriptive and associative attributes may be nouns, so that *tóy factory* ‘factory that makes toys’ shows associative attribution while *toy fáctory* ‘factory that is itself a toy’ ascribes the property of being a toy to the head

[1] I should like to thank Heinz Giegerich, Ingo Plag, Liza Tarasova and Salvador Valera for comments on a first version of this review. They do not, of course, necessarily agree with my judgements.

factory (11). There are relations between these various categories. Associative attribution cannot be non-restrictive or intersective; associative adjectives cannot be used predicatively (14). This provides a test for ascriptiveness in nouns. If a noun can be used predicatively (as is *toy* in *this train is a toy*), then it is being used ascriptively, while lack of such a possibility (*this brush is a tooth* is not the same as *a tooth-brush*) indicates associative attribution. While nouns are typically associative attributes and adjectives typically ascriptive attributes, there are exceptions in both directions (17). The same form may be ascriptive in one collocation (*musical child*) but associative in another (*musical director* – at least under the normal understanding of that phrase), and predicative usage will force an ascriptive reading (*criminal lawyer* is ambiguous, but *this lawyer is criminal* is not). Thus associative versus ascriptive is not part of the semantics of the adjective – or of any word-formation process – as such (25). Figurative interpretations of adjectives which can be associative are always ascriptive (as in *his face is feline*) (26).

Associative adjectives are not gradable, and therefore not available for modification by adverbs that imply degree: *a very musical director* forces an ascriptive reading on *musical*. G. suggests that this implies that associative adjectives cannot head APs. He also points out that associative adjectives show unexplained gaps in their distribution: *vernal* can modify *equinox* but not *cleaning* or *cabbage*. He proposes (30) that this is because adjective + noun (AN) sequences involving associative adjectives are lexical: ‘associative [adjective + noun constructions] are compound nouns in the traditional terminology’ (30). He supports this by the observation that the semantics of associate adjective plus noun collocations is not predictable (as was shown by e.g. Levi 1978). However, he back-pedals slightly from this position and suggests that some associative adjectives plus noun collocations may be syntactic, but that they are ‘candidates for lexical status’ (34), which does not necessarily imply that they have such status.

Where stress is concerned, nominal associative attributes favour forestress while ascriptive ones show more variation (40). Associative adjective attributes may also take forestress (e.g. *sólar system*, *póstal order*), and such examples ‘must be lexical’ (40–41). Yet some items with associative adjectives are lexical by this test, but still allow reference by *pro-one* (e.g. *Is this the médical hospital or the déntal one?*), which is usually taken to indicate syntactic status. Thus there must be overlap between the lexicon and the syntax in some way (42).

In Chapter 3, G. tackles lexical stress in noun + noun (NN) sequences. He points out that attempts to deal with the relevant phenomena in generative approaches, and in particular in the C[ompound] S[tress] R[ule] of Liberman & Prince (1977), do not allow for all possible combinations of bracketings and do not allow any explanation (beyond an ‘exceptional’ marking) of items like *Madison Road* which behave as phrasal rather than as lexical. He notes that adjective + noun phrases may take forestress rather than the predicted endstress if the adjective is restrictive (as in *Well-prepáred students will finish the exam on time*). Non-restrictive adjectives take phrasal stress by default (51). Compounds with forestress also have a restrictive reading: the celebrated difference between

bláckbird and *black bírd* is partly a matter of restrictiveness (52). If fore-stressed adjective + noun constructions exist, so too do endstressed noun + noun constructions, and while they may be phrases, they may also be compounds (54). The stress in NN constructions is less messy than is commonly assumed: exocentrics take forestress, genuine synthetic compounds take forestress, ascriptive attributes tend to take endstress, and so on (56). Endstress also favours transparent semantics (60). The factors encouraging endstress are also characteristic of phrases (63). Scottish English shows a rather different pattern of stress from that in some other varieties. Scottish English uses more endstress than Standard Southern British English, in line with the tendency to endstress in several Lowlands placenames, such as *Dalkéith*, *Loanhéad* (65). When NNs are bracketted together with a third N, then the stress can be calculated on the basis of the way the stress falls in equivalent NNs. All patterns of forestress and endstress are found (not just the ones predicted by the CSR), and they are predictable (67–72).

In Chapter 4, G. considers the nature of lexical stratification. Following Giegerich (1999), affixes do not generally belong exclusively to one stratum or another. In this, as in many other ways, there has to be overlap between the strata. For G. the difference is that Stratum 1 is root-based, while Stratum 2 is word-based, but also that Stratum 2, but not Stratum 1, is productive. This has the effect, in English, of making much of Stratum 1 Latinate. Exocentric compounds are created in Stratum 1 (because they must be listed since their meaning is unpredictable), but unexpectedly have the phonology of Stratum 2, in line with the general pattern of compounding (95).

In the final chapter, G. attempts to synthesise all of this. He says that compounds are lexical items in the sense that they belong to word-classes, but behave syntactically in a number of ways. There is, he says, no neat dividing line between being listed and being derived by rule (113). This is fatal to classical lexicalism. G. also proposes that what he calls ‘anaphoric compounds’ and others have termed ‘deictic compounds’ such as are found in headlines differ from listed compounds in being able to take phrases in the modifier (114–118). This is a problem for generative approaches which do not account well for listedness. Compounds are not ‘subject to lexical integrity’ (120), though they are subject to constraints against zeugma, which also apply in syntax. He proposes (122) that compounds are ‘simultaneously part both of (stratum 2) of the lexicon and of the syntax’, and that ‘the two modules overlap like slates on a roof’. This overlapping of the modules ‘makes space available for probabilistic explanations’ (124).

There is a great deal of food for thought in the material G. presents. The discussion of different kinds of attribution is clearer than I have seen elsewhere, the problems of trying to distinguish syntactic NNs from lexical NNs by a number of (largely syntactic) tests is carried out in great detail and with thought to the overall pattern of interaction between lexical and syntactic factors, the problems with a modular approach to morphology and syntax are explored in detail by someone who has been an exponent of just such a modular approach, and the

differences between various compound types are presented clearly. There is no doubt that this is a major contribution to the literature on this area of grammar (and so, incidentally, a promising start for Edinburgh University Press's new series). Yet the reader (or at least, this reader) is left with a number of queries and problems, some of them minor, some rather more important. I shall try to outline some of the more important ones.

The first discussion point concerns the nature of modules. In the original modular view on which lexicalism was built, I felt I knew what a module was. Morphology was dealt with in the lexical module. The module had within it various strata, and material from an earlier stratum was inherited by later strata. The output from the lexical module was passed to the syntactic module, where it was unavailable for further internal manipulation. It was clear to everyone that there were problems with this neat exposition, and various ad hoc processes were proposed to avoid some of the problems. Nevertheless, the outline was clear. G.'s version may be a lot more realistic, but this realism comes at the expense of knowing what a module is. If you can do Stratum 1 things on Stratum 2 and vice versa, if you can do syntactic things in the lexicon and lexical things in the syntax, do we have any modules left at all? Is it the case that the arguments for overlap in modules simply negate the notion of a module? G. clearly feels that modules persist, though I must confess that I do not find the image of them overlapping 'like slates on a roof' at all helpful, since material from one slate does not permeate another slate, rather extraneous material slides off one and onto the other leaving both unaffected. I get the impression that modules that remain are areas of canonical behaviour (in the sense of Corbett, e.g. 2007): areas where certain tendencies are expected, but are subject to being overruled in ways that are essentially non-rule-governed. If this is the case, the view will, of course, be anathema to supporters of many current models of linguistic behaviour (which does not make it uninteresting). If this is intended to be the case, though, I wish G. had made overt appeal to canonical categories in the book, which might have made his point clearer and shown how his work is in step with other current work in morphology.

The second discussion point concerns exocentricity. I have argued elsewhere (Bauer 2015) that exocentricity lies not in the grammar of compounding, but in the interpretation of the compound: literal interpretation leads to endocentricity, figurative interpretation leads to exocentricity. And there can be places where one is in doubt as to whether a compound is endocentric or exocentric (as Fabb 1998 points out in relation to the item *greenhouse*). Here G. argues that '[exocentric compounds]' exocentricity is alien to the English noun phrase' (56), but if they are merely figurative interpretations of words, this is not true. A sentence like *This is the responsibility of the Crown* contains an exocentric phrase *the Crown* (although it is not usually analysed in that way). For G., though, based on the assumption of alienness, and an assumption that exocentrics show a lack of productivity (95), they belong on Stratum 1, even though they show Stratum 2 phonology. But so-called exocentric compounds show plenty of productivity. Bauer, Lieber & Plag (2013: 478) list many examples with the righthand element *head* alone

(*fuck head, gear head, java head, towel head*), many of which show all the hallmarks of being formed on the spot. So it seems to me that G. complicates the picture unnecessarily, and that exocentric compounds fit much more easily into a traditional modular pattern than is acknowledged.

The last point concerns the nature of compounds. G. argues that different types of compound show different types of behaviour. Synthetic compounds are very clearly lexical, he says for instance, a view which I find slightly odd in that these are compounds which require the fulfillment of requirements for verbal diathesis, something which is generally only found in the syntax. NN compounds with associative meanings show a range of features, spreading them across morphology and syntax, while forms like *dental hygiene* are probably compounds, though the class of associative adjective + noun items is rather more syntactic than NN constructions when viewed as a whole. So far, such a conclusion is not objectionable: not all compounds are born equal, and different scholars include or exclude different sets of items from the domain of compounding. For instance, for Adams (2001) there are no coordinative compounds. Nevertheless, I find myself worried on two fronts.

The first, which may just show my own limitations rather than indicate a criticism of G.'s presentation, and which I may come to appreciate with greater distance, is that I do not understand what it means to say that compounds are both morphological (or lexical) and syntactic. It differs from the sense in which the suffix *-ize* belongs to both Stratum 1 and Stratum 2 in Lexical Phonology: there the implication was that a given *-ize* word would show either Stratum 1 phonology or Stratum 2 phonology, here individual items or types show both lexical and syntactic features. The only difference between being both morphological and syntactic and being neither morphological nor syntactic would seem to be that the latter might imply a third module specific to compounds, while G.'s position clearly does not. It is not clear to me whether G.'s position is any different from showing features typical of morphological constructions and features typical of syntactic ones. Certainly, if G.'s position is true (or, if that is too much to ask, analytically useful), it seems to imply that we start out with an idea of what compounds are.

This leads to my second problem here. It is not clear to me that G. takes us any further in determining whether or not a given construction type is or is not a compound. Is *yes-no* in *yes-no question* a compound, for instance? Is *before-tax* in *before-tax profits* a compound? Is *director-producer* a compound? To some extent it is not fair to criticise G. for this: he tends to focus on NN and AN constructions, and to focus on the way in which they have features of morphology and features of syntax. But when it comes to something like *red squirrel*, I think it is important to know whether it is or is not a compound, because it seems to have some lexical features (lack of possible modification of *red*, for instance) and some syntactic features (*a red squirrel* or *a grey one* seems to be acceptable). Another way of looking at this might be that there is no class of compounds. There are construction types which have some lexical features and some syntactic ones,

and it does not really matter whether we call them ‘compounds’ or not, that is just an old-fashioned taxonomic label which we can now see is meaningless. The new research paradigm, arising from the work done here, would be to consider the limits of lexical features in otherwise syntactic constructions and vice versa. It would ask whether there is any ‘pure’ morphology or ‘pure’ syntax, and if so how we recognise it and where we find it. I would have some sympathy for such a conclusion, but it does not appear to be what G. says.

Yet another viewpoint can be considered here. From a Construction Grammar point of view, there is no distinction between syntax and morphology anyway, there are just constructions. If there is a construction type which is a compound (see e.g. Booij 2010), then it may have some features we traditionally think of as being lexical and others that we traditionally think of as being syntactic, but a problem arises only if we expect lexical features and syntactic features to be separate in the grammar. Because G. starts off from a modular perspective, such considerations are not raised, yet it might be that the work presented here would provide grist to the Construction Grammar mill, and be worthy of consideration from that point of view.

This book leads us into new territory both in relation to the nature of word-formation and into the nature of a modular grammar. For G., I infer, it is the latter of these points which is the more important. For this reviewer, it is the former. The book has something to say to scholars who are interested in either. I suspect, though, that the book’s major contribution will be to Canonical Morphology or Construction Morphology rather than to either of these lines of research. The implications for both these models seem strong. The result is that this book deserves a wider audience than its title might imply.

REFERENCES

- Adams, Valerie. 2001. *Complex words in English*. Harlow: Pearson.
- Bauer, Laurie. 2015. Re-evaluating exocentricity in word-formation. In Daniel Siddiqi & Heidi Harley (eds.), *Morphological metatheory*, 461–477. Amsterdam & Philadelphia, PA: John Benjamins.
- Bauer, Laurie, Rochelle Lieber & Ingo Plag. 2013. *The Oxford reference guide to English morphology*. Oxford: Oxford University Press.
- Booij, Geert E. 2010. *Construction morphology*. Oxford: Oxford University Press.
- Corbett, Greville G. 2007. Canonical typology, suppletion and possible words. *Language* 83, 8–42.
- Fabb, Nigel. 1998. Compounding. In Andrew Spencer & Arnold M. Zwicky (eds.), *The handbook of morphology*, 66–83. Oxford & Malden, MA: Blackwell.
- Giegerich, Heinz J. 1999. *Lexical strata in English*. Cambridge: Cambridge University Press.
- Levi, Judith N. 1978. *The syntax and semantics of complex nominals*. New York: Academic Press.
- Liberman, Mark & Alan Prince. 1977. On stress and linguistic rhythm. *Linguistic Inquiry* 8, 249–336.

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