REVIEWS/COMPTES RENDUS

The aim of Bauer's book is to introduce 'students ... in the early stages' to linguistic morphology. His presentation is divided into three main parts: Fundamentals, Elaboration, and Issues, consisting of twelve chapters, as well as a conclusion. References and further readings are provided at the end of each chapter. Bauer's theoretical statements and various definitions are formulated on the basis of well-chosen data from a variety of Indo-European and other languages (Semitic, Turkish, Dravidian, Finnish, Hungarian, Chinese, Japanese, African, Amerindian and Polynesian).

Part One (pp.1-42) provides an introduction to the fundamental notions involved in the study of morphology (basic units, distinction between inflection and derivation, affixation, reduplication, ablaut and umlaut, the formation of new lexemes by compounding and their classification, and suppletion). Morphemes are defined as 'abstract units of grammatical and semantic analysis' (p.17) and represent thus a correlation between form and meaning at a level lower than the word. Like lexemes and phonemes, they are realized by something else, i.e., by (allo)morphs. To use a well-known example, /t/, /d/ and /ɪd/ are phonetically conditioned allomorphs of the morpheme (past tense) in English (p.247). Many European and American scholars do not use morpheme in this abstract sense and make provision for a third level of analysis by using one of the available semantic terms (sememe, grammeme, semantico-syntactic property, (bundle of) semantic features, etc.). In this vein it would be said that /t/, /d/ and /ɪd/ are phonetically conditioned allomorphs of the morpheme (ed) which expresses the grammatical meaning of past tense. The tri-stratal approach has obvious advantages over the two-stratal one when dealing with crucial issues of suppletion (= polymorphy) and grammatical polysemy (the latter concept does not figure in Bauer's book). One would thus expect greater elaboration on the central issues of morpho-semantics than the one provided on pp. 13-17.

The discussion of practical matters of affixation is generally
satisfactory though in several instances it is possible to come
up with more convincing examples or to bring in new pieces of
counter-evidence. Suffice it to mention only two cases. In
3.1.3, the German prefix ge- and the suffix -t acting together
'seem to realize a single morpheme' (i.e., they together express
the grammatical meaning of the past participle) and are
considered a circumfix. However, one would prefer to see an
identical phonological element being used as both prefix and
suffix to call it a circumfix. This is the case of Berber (Tašelhit),
where the circumfix {t-t}, made up of identical elements, marks
the feminine gender (e.g., amdakul 'friend', t-amdakul-t
'(female) friend'; only the prefix is used in the plural:
imdukal 'friends', t-imdukal '(female) friends)'. As for
interfixes - the German type Tag-es-licht 'day light', Tag-e-
reise 'day's journey' in 3.1.5 - Bauer suggests that they do not
represent synchronically the morphemes {plural} and {possessive}
and that they should be considered semantically empty. Yet,
there is some evidence of minimal pairs such as the following
that this is not necessarily the case: Gött-es-dienst 'church
service' vs. Gött-er-dienst 'idolatry'; Volk-s-kunde 'folklore'
vs. Völk-er-kunde 'ethnography'; Land-es-kunde 'areal studies'
vs. Land-er-kunde 'regional geography (of different countries)'.
These pairs would seem to indicate that speakers of German are
still capable of identifying the suffixes of the determinant in
the compound with the case endings of the genitive singular vs.
genitive plural: -(e)s vs. -er. Of course, counter-evidence is
also available: Bischof-s-koferenz 'bishops' conference', Kind-
er-morder 'murderer of a child'.

Part Two (pp.43-105) elaborates in some detail on several
important aspects of the study of morphology: definition of word
(using phonological, morphological and syntactic criteria),
productivity (viewed as gradient and synchronic), distinction between
inflection and derivation (with a useful list of diagnostic
criteria) and interfaces of morphology with phonology and syntax
(with short sections on clitics and compounds). Among the
possible criteria for distinguishing between inflection and
derivation Bauer mentions the following: lexical meaning, change
of category, regularity of grammatical meaning associated with
inflectional affixes, productivity of inflection vs. semi-
productivity of derivation, the proximity of derivational affixes
to the root, the fact that derivatives can be replaced by
monomorphemic forms, a closed set of affixes used in inflection,
and the relevance of inflectional morphology to syntax.

However, none of these is found to be without exceptions upon closer examination of cross-linguistic evidence and Bauer presents two possible answers to this problem: to discard this distinction or to view it in less discrete categorical terms. The second solution is that provided by language typologists (and adopted by natural morphologists) with the notion of prototype defined as that which approximates the most typical member of a class across languages. Individual languages can be expected to diverge more or less from this prototype (e.g., in Latin the process of pluralizing diminutives matches the prototypical sequence ROOT + DERIVATIONAL SUFFIX + INFLECTIONAL SUFFIX, cf. fratel-l-ī 'the little brothers', whereas in German it sometimes does not, cf. Kind-er-chen 'babies'). In this approach, all the differences between inflection and derivation are only of a prototypical, not categorical, nature (cf. most recently Dressler 1989). Finally, in the section dealing with clitics (pp.99-100) it would be profitable to distinguish clitics from affixes notationally (Bauer uses a dot for both; it is now customary to separate the clitics from their hosts by the equals sign =).

Part Three (pp.107-213) provides an introduction to some of the major issues in contemporary morphology in several frameworks: Lexicalist morphology, Word-and-Paradigm morphology, morphological typology and universals, and Natural morphology.

According to Lexicalists, at least derivational morphology (and possibly also inflectional morphology) must be dealt with in the lexicon. In the context of nominalizations (Lees 1960, Chomsky 1970) lexical entries should take a 'neutral' shape, i.e., neither completely specified as a verb nor as a corresponding nominalization. Bauer (p.128) observes that most work in Lexicalist morphology appears to have by-passed the suggestion for a neutral lexical entry while handling derived nominals in the lexicon. (It is not clear why this is not dealt with in a separate word-formation component of the grammar). It should be noted that a 'neutral' lexical entry has a respectable history of many centuries in Semitic lexicology. Dictionaries of Semitic languages are organized by roots - which are often neither nominal nor verbal - with the derivational paradigms attached. For instance, if the Arabic root B R D is vocalized (by 'transfixation') as barad we obtain a verb 'he was/became cold', if vocalized as burūd we obtain a noun 'coldness, frigidity'; if accompanied by the reduplication of the middle consonant the causative verb barrad 'X made Y cold/cool' and the noun barrād 'refrigerator' result. Halle (1973) and Jackendoff (1975) suggest that even inflectional paradigms are entered by lexical insertion rules into deep structures and 'the rules of concord must have the function of filtering out all but the correct

forms, rather than that of inserting inflectional affixes'
(Jackendoff 1975:665). Bauer (p.131) considers Jackendoff's
proposal 'computationally inefficient' (for both a 'psychologically
real' model for a native speaker and for an instrumentalist
model). This proposal enshrines de facto the grammar into
lexicon - a highly impractical proposal for morphologically rich
languages (such as fusional I-E or agglutinative Ural-Altaic
languages, not to mention for polysynthetic languages where
Lexicalists have to store whole sentences in the lexicon in order
to account for 'sentence-words'). Bauer (p.132) concludes that
the Lexicalist model needs to be modified to deal appropriately
with productive morphology, and that further clarification is
required with respect to the role of the permanent lexicon
(p.143).

Word-and-Paradigm morphology is used most successfully in the
context of fusional languages for reasons summarized by Bauer on
p.161 (most importantly, these are the languages which possess
cumulative realisations of meaning and, vice versa, their single
'morphemes' may be realized by a number of formatives). It should
be noted that even for agglutinative and polysynthetic languages
- such as Turkish, Yoruba and many Amerindian languages - in which
there is a far-reaching one-to-one correspondence between morph and
morpheme (i.e., between morpheme and sememe in tri-stratal
approaches) this is an extremely useful theoretical framework. The
amount of polymorphy (i.e., several formatives for the same
morpheme) will, of course, be less conspicuous here. To use a
famous example, in Turkish in the present tense the suffix -iz
expresses both semantico-syntactic properties of the 1st person and
plural (but only plural in the system of possessive suffixes); on
the other hand, the same fusion of semantico-syntactic properties
of the 1st person and plural in the past tense is expressed by the
suffix -k:

sev-er-im	'I love'	sev-er-iz	'we love'
gel-di-m	'I went'	gel-di-k	'we went'
ev-im	'my house'	ev-im-iz	'our house'

In Chapter 11, Morphological Universals and Typology, Bauer
introduces crucial notions such as implicational universals,
absolute universals and universal tendencies; the three-way division
of languages into isolating, agglutinative and fusional (going back
to the work of the Schlegels), and the fourth category
polysynthetic. According to Bauer, this typology does not correlate
with anything else in the morphology at all (some slight correlation
with syntax, however, is observable: isolating languages use word
order to distinguish subjects from objects; the languages with the

freest word order tend to be of the fusional type; agglutinative languages tend to be SOV). Nevertheless, these typological categories may be fruitfully correlated with three models of grammar: IA (Item and Arrangement), IP (Item and Process) and WP (Word and Paradigm), (cf. Hockett 1954). The first model is adequate for isolating languages; some aspects of agglutinative and fusional languages can be more easily dealt with in terms of an IP model; and lastly many aspects of fusional languages require the power of a WP model.

The section dealing with universals of word order is based on Bybee (1985), where tendencies are distinguished from absolute universals. Both are formulated from the point of view of the root: 'X is marked closer to the root than Y'. This state of affairs is governed by principles of relevance (i.e., the degree to which the morphological category affects the lexical content of the base) and lexical generality (the more lexically general a category is, the more likely it is to be shown by inflectional morphology). The amount of counter-evidence to these tendencies remains to be studied both intrasystemically and cross-linguistically. For instance, the prediction that imperative markers come closer to the root than person/number markers may be both confirmed and falsified by Sanskrit (<u>bharatha</u> 'you (Pl) carry' vs. <u>bharata</u> 'carry'! but <u>bharati</u> 's/he carries' vs. <u>bharatu</u> 'may s/he carry'). The introflectional languages which use simultaneously both strategies of affixation are naturally not covered by these generalizations (e.g., in Arabic <u>ya-ktub-u</u> 'he writes', person is marked by the prefix and mood by the suffix and both categories are thus equidistant from the root).

In its concern with the range of possible variation within morphology, Natural morphology provides a counterbalance to Lexicalist morphology and Word-and-Paradigm morphology which both concentrate on the way in which individual languages work. Naturalness has been defined as the converse of markedness (cf. Zwicky 1978) and an appeal is often made to evidence <u>external</u> to the language system (cf. Mayerthaler 1980:29; 1981:4-5; Wurzel 1980:104; 1984:165). Thus it is claimed that a particular morphological phenomenon is natural if it is widespread in the languages of the world; if it is relatively resistant to language change; if it arises relatively frequently through language change (particularly through analogy); if it is acquired early in L_1 acquisition; if it is left relatively unaffected by language disorders; if it is maintained in pidginization and introduced early in the process of creolization; etc. Naturalness is also determined by general semiotic - ultimately cognitive (?)-

principles, especially by the principle of constructional iconicity (= diagrammaticity).

In their attitude towards universals, there is a fundamental difference between Lexicalist morphology, on the one hand, and Natural morphology, on the other. Whereas in the former theory universals tend to be formulated in absolute terms, in the latter theory they are formulated in relative terms. For instance, Aronoff (1976:21) states the Word-Based Hypothesis in absolute terms as follows: 'All regular word-formation processes are word-based. A new word is formed by applying a regular rule to a single already existing word'.

As for natural morphology, Dressler goes only as far as to say that word-based morphology is preferred and, indeed, there is plentiful evidence that not all morphological processes are word-based. For instance, root-based derivatives formed by ablaut are found in English (strike ~ stroke), German (werfen ~ Wurf) and Arabic (kitāb 'book' ~ katāb 'he wrote'). In Germanic languages this process is not productive, while in Arabic it is highly productive. On the other hand, in Arabic word-based processes (especially compounding) are much less common than in Germanic languages (compound lexemes such as qatjarah 'laryngotomy' < qat?u l-hanjarah are limited to scientific terms). As for the root-base derivatives of Arabic, natural morphology maintains that so-called transfixation is a highly unnatural process in the world's languages (indeed, it is virtually restricted to the Afro-Asiatic phylum) because it involves both discontinuous affixes and discontinuous bases. But even here transfixation is not completely generalized and a large number of affixes is available. For instance, in Classical Arabic the root K T B yields the passive derivative by transfixation kutiba 'it was written' (= a root-based derivative) or by prefixation of ?in to the active form ?inkataba 'it was written' (= a word-based derivative from kataba 'he wrote'). Similarly, in Berber (Tašelhit) the word adrar 'mountain' may be pluralized by transfixation idurar or by suffixation idrarn. It may be said that Arabic transfixation (used for pluralization) is 'doubly' unnatural but it should be added that from the point of view of another system, namely that of possessive suffixes, the result is a constructionally iconic system (typologically similar to that of agglutinative Turkish). This will become even more obvious when contrasted with the system of Biblical Hebrew which combines transfixation and suffixation to express plurality. We may examine a limited set of data with possessive suffixes 'my' and 'our' attached to 'king' in these three languages: Turkish kıral-lar 'kings' (suffixation), Arabic muluk 'kings', Sg malik

(transfixation), Hebrew <u>məlā̄x-ī̄m</u> 'kings', Sg <u>melex</u> (transfixation plus suffixation):

	Turkish	Arabic	Hebrew
'my king'	kıral-ım	malik-ī̄	malk-ī̄
'our king'	kıral-ımız	maliku-nā̄	malk-ē̄nū̄
'my kings'	kırallar-ım	mulū̄k-ī̄	məlā̄x-aj
'our kings'	kırallar-ımız	muluku-na	məlā̄x-ejnū̄

In Hebrew the suffix <u>-aj</u> indicates a singular possessor of a plural possessed, while <u>-ī̄</u> indicates a singular possessor of a singular possessed; <u>-aj</u> - the marker of a singular possessor - co-signs paradoxically the plural possessed. The same is true of <u>-ejnū̄</u> which indicates a plural possessor of a plural possessed (vs. <u>-ē̄nū̄</u> marking a plural possessor of a singular possessed). Obviously, we may imagine a more 'natural' system operating only with two possessive suffixes to distinguish the singular from the plural possessor without co-distinguishing the number of the possessed. This is achieved in both Turkish and Arabic by keeping the number of the possessed separate by suffixation or transfixation.

The book contains three appendices (pp.215-57): Feedback Exercise for Chapter 2, Study Questions, and a very useful Appendix with definitions of technical terms used in the text. These sections especially make the book valuable to both teachers and students of morphology.

Some typographical errors were spotted in Part Two:

p.50	read <u>occi:dit</u> 'killed'	for Latin <u>occidit</u> (3 times)
p.51	<u>zpívám</u> 'I sing' <u>zpívávám</u> 'I am accustomed to sing'	for Czech <u>zvípám</u> <u>zvípáyám</u>
p.96	<u>vina: i:rsjaja:</u> 'without jealousy'	for Sanskrit <u>vi:na i:rsjaja</u>
p.96, 97	<u>uva:tʃa</u> 'said'	<u>u:vatʃa</u>

To conclude, this is a welcome contribution to a small body
of basic texts in the area of morphology. In conjunction with these
other texts, it may be profitably used as an initiation to a rapidly
expanding area of investigation by serious students of general
linguistics.

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Vit Bubenik
Memorial University of Newfoundland