MORPHOLOGIZATION FROM SYNTAX

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1. Introduction

It is clear that the set of changes effected by speakers in their languages include those
that are often labelled "grammaticalization", "grammaticization", or even
"grammatization". This notion is variously defined, [1] but especially in recent years,
almost always in such a way as to refer to something that, first of all, morphemes do,
as opposed to (referring to) what is done by speakers, and that, second, echoes the
characterization of Kurylowicz 1965: "an increase of the range of a morpheme
advancing from a lexical to a grammatical or from a less grammatical to a more
grammatical status". Indeed, several other chapters in this volume — Bybee, Fortson,
Harrison, Heine, Hock, Mithun, Rankin, and Traugott, to be exact — are concerned, to
one degree or another, with grammaticalization.

As Heine's chapter points out, the notion of "grammaticalization" has been
extended by many practitioners to cover other sorts of change than strictly the
movement of an item along a scale ("cline") of increasing grammatical status (from
content word > grammatical word > clitic > inflectional affix, cf. Hopper & Traugott
1993:7), and thus Kurylowicz's definition isprobably too narrow. McMahon (1994:
160), for instance, notes that grammaticalization encompasses essentially all types of
language change, since "grammaticalization is not only a syntactic change, but a

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[1]See Janda Forthcoming/1999 for a survey of more than 20 definitions of this term which documents
tellingly the general absence from these definitions of references to what speakers do.

global change affecting also the morphology, phonology and semantics".[2]   Still,
Kuryłowicz's definition is generally accepted as a basic characterization of
grammaticalization, and it is so endorsed by Heine (this volume).

   In the present chapter, by contrast, a rather different angle on the emergence of
grammatical elements and related phenomena is taken. In particular, the focus here is
on what can be called "morphologization", in a particular sense — a set of
developments by which some element or elements in a language that are not a matter
of morphology at one stage come to reside in a morphological component — or at
least to become morphological in type[3] — at a later stage.[4]   For example, within
Romance linguistics[5] it is generally agreed that the French adverb-forming suffix -
ment, as in *clairement* 'clearly' (cf. *clair* 'clear/MASC.SG') is a reflex of the ablative

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[2]It is worth asking whether grammaticalization "affects" the phonology etc., or whether changes in

those components simply constitute or even bring on what is labeled as "grammaticalization"; see

Joseph 1999/2001 for some discussion.

[3]This implies, of course, that there is a separate — or at least recognizable — morphological rule

type, distinct from phonological and syntactic rules. Anderson 1992 argues for this very point, based

on the fact, for instance, that morphological formations are subject to different kinds of constraints

from syntactic ones.

[4]Compare the definition given in Hopper & Traugott (1993: 135): "Morphologization involves the

creation of a bound morpheme ... out of an independent word by way of cliticization". Important

earlier works on morphologization from syntax include Givón 1971 (the source of the oft-cited and

highly relevant slogan "today's morphology is yesterday's syntax" (p. 413)), Anderson 1980, and

Andersen 1987.

[5]See, for instance, Lausberg 1962 for a survey of the Romance evidence, discussed more fully in

Karlsson 1981; Hoenigswald (1966:44) mentions these developments, as do Hopper & Traugott

(1993:130-1).

case of the Latin feminine noun *ment-* 'mind' (nominative singular *mens*) as used in adjective + noun phrasal combinations serving as adverbials, e.g. *clar mente* 'with a clear mind' (where *clar* is an ablative singular feminine form agreeing with the noun it is modifying); a reanalysis and/or shift in phrasal status to word-level status seems to have occurred, resulting in monolectal forms in French such as *clairement*.[6] Thus what was once in Latin a matter of syntax, i.e. a combination of free words forming a noun phrase that was case-marked so as to function adverbially, became in French a matter of morphology, i.e. the output or result of word-formation processes that yield a derived word. But this case is also a stock example of grammaticalization (see Hopper & Traugott 1993:130-1), so some differentiation between grammaticalization and morphologization is needed in order to show their distinctness (as in Gaeta 1998, for instance).

Thus, the goal of this chapter is to discuss various aspects of morphologization, especially in comparison with the by-now more familiar notion of grammaticalization, and to present an extended case study examining one example in some detail. The case in point is the change in Medieval and Modern Greek by which earlier speakers' use of a periphrastic (i.e. multi-word and thus syntactic) future-marking formation, consisting of the verb *thél* and a complement verb, yielded to later speakers' use of a monolectal future in the modern language — one with an apparently prefixal marker [ɑa-] attached to an inflected verb form. Meillet 1912 wrote about this case as a paradigm example of grammaticalization, and it has been discussed elsewhere in the

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[6]Spanish offers an interesting twist on the development of adverbial *mente* in Romance; see section 4 below.

grammaticalization literature, as well (e.g. Hopper & Traugott 1993:24; McMahon 1994:167).[7]

2. Scope and Motivation for Two Types of Morphologization

There are two directions for morphologization: either something that is syntactic at one stage can turn into morphology (the major focus of this chapter), or something that is a matter of phonology at one stage can become morphological (as discussed in Janda's chapter in this volume).   These directions could be characterized as morphologization from above and morphologization from below, respectively, reflecting the customary view of the components of grammar as hierarchically arranged from the level of sound "up to" the level of sentence structure, though nothing crucial hinges on this characterization.

Elsewhere, in Joseph & Janda 1988, these two types of morphologization have been referred to as *desyntacticizing* and *dephonologizing*, respectively. Although they can be given these different labels, they are actually quite similar, having the same outcome, i.e. morphology, and the same motivation.

In particular, both reflect a preference on the part of speakers for what Joseph & Janda refer to as 'localized' solutions to the problem of how to account for a given phenomenon in language, e.g. marking for some category or a particular combination of elements. 'Localized' solutions range over small sets of data rather than being widely applicable, and are general only in a very local sense, covering perhaps just a few forms. Reduplication in Sanskrit provides examples of such local generalizations, since the patterns of reduplication found for instance in the perfect tense formations, including (where V = a vowel that usually copies the root vocalism) V-, VV-, CV-, and occasionally even CVV-, as well as the highly specific   *n-*, tend to cluster around

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[7]It has been discussed in the "anti-grammaticalization" literature, as well — for instance by Joseph 1999/2001 (the basis for the present discussion).

particular root-types, e.g. V- with roots that begin with *v-*, *n-* with certain vowel-initial roots, CV- with alteration of the root-initial consonant with a handful of roots, CV- as the default case, and so on. Significantly, also, local generalizations tend to result from, and show fragmentation of, once quite general phenomena — perfect tense reduplication in Proto-Indo-European, for instance, was almost exclusively[8] CV- — and thus they suggest that speakers focus on the analysis of just a restricted set of data at a time, and thus come up with quite particularized analyses.[9] That is to say, speakers view language through a relatively small "window" at any given time, and thus the size of their focal area is relatively small.[10] This access to only limited data at a given time translates into solutions that are cast in terms of highly particular properties of stems, affixes, and the like, and which are usually best accommodated in the morphology, since phonological solutions are usually to be interpreted quite generally, referring as they do to properties of sound only; thus local generalizations,

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[8]This is assuming of course that the Proto-Indo-European perfect had reduplication — there is at least one widely attested perfect without reduplication, *woyd- 'know' (Greek *oîda*, Sanskrit *veda*, etc.). Roots with initial sT- (T- = a stop) probably reduplicated the whole cluster, to judge from the evidence of Gothic and Old Latin, so also possibly with roots with initial laryngeal consonants followed by a stop. It is not clear what PIE did regarding the vowel of the CV- reduplicand, but most likely it was a prespecified *e.

[9]Other facts from language change show the same tendency toward locality; for instance, it is quite common for an analogical change to affect only members of a paradigm but not extend to derivationally related forms.   The change in early Greek *hen* 'one/NOM.SG.NTR' / *hem-os* 'one/GEN.SG.NTR' to *hen*/*hen-os*, for example, did not affect the derived feminine form *hm-ía*.

[10]Thus we explicitly claim that language users are not "ideal speaker-listeners", the usual characterization adopted in generative grammar, nor are they "perfect speaker-listeners", the characterization argued for by Lightner (1975: 634-5); see Joseph 1992 for some discussion.

being defined often in terms of idiosyncrasies and sometimes extending only over a few forms, are usually morphological in nature, as well as quite concrete, in that they are based on surface representations and categories that are overtly marked rather than on abstract properties of phonological form.

In that way, Joseph & Janda claimed, speakers opt for morphological accounts over phonological or syntactic ones whenever the analysis of a given phenomenon offers any ambiguity as to the extent of its generality. It was further argued there that grammars should therefore be viewed as being "morphocentric", or more accurately, "morpholexicocentric" (see below), with a greater role for the morphological component, in order to explain this preference speakers give to morphological accounts.

It must be realized that the lexicon is taken here to be connected closely with the morphological component, and thus is part of what is to be considered "the morphology" of a language. The lexicon, after all, is where (at least root) morphemes are found and where (at least) idiosyncratic information about morphemes resides.[11] Thus references to "morphological" phenomena here include "morpholexical" information as well. Morphology, after all, is concerned with form and the relation of form to meaning in most traditional views,[12] so any aspect of language that is

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[11]I say "at least root morphemes" here, since some views of morphology, e.g. the "a-morphous morphology" of Anderson 1992 or any "process morphology" model, treat all non-root morphemes, e.g. affixes, vowel gradation, reduplication, etc., as being (part of the) morphological operations by which grammatical categories are realized with respect to roots. Similarly, I say "at least idiosyncratic information" since many views of the lexicon now embed non-general but well-definable generalizations in the lexicon via lexical rules and/or various lexical redundancy rules.

[12]The standard definition of a morpheme as the smallest meaning-bearing unit of form shows this nexus of form and meaning even though it is not clear that it is a suitable definition; problems are

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concerned with form, as the lexicon must necessarily be, is fair game for being subsumed under — or at least tightly allied with — morphology. Moreover, in many frameworks, even elements with internal syntax are listed in the lexicon, e.g. adjective-noun combinations with specialized meanings such as *Cold War*,[13] a move that is in keeping with the expanded view of the role of morphology and the morpological/morpholexical component in language implicit in the notion of "morphocentricity".[14]

The scope of morphology can thus be quite large, and consequently there is a wide range of phenomena that can be said to show morphologization, i.e. movement into the morphology, assuming of course that one can devise a heuristic for determining when the boundaries have been crossed (see below, section 4).

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posed by "empty" elements of form like *-al* in *syntactic-al*, by purely classificatory elements of form such as stem vowels in French verbal conjugation (*fin-i-r* 'to finish' versus *recev-oi-r* 'receive'), by nonphonetically determined buffer consonants such as *-n* in the English indefinite article *a/an*, etc.

[13]Note that *Cold* in this combination does not behave like a regular adjective in that it cannot be inflected; the comparative *colder war* does not have the specialized meaning that the positive degree has (and might be used instead in a more literal sense, as in *The battle in Murmansk in January represented a colder war than the battle of Jakarta*. If one wanted a comparative form of *Cold War*, a periphrasis would be needed, as in *The early 20th century witnessed more of a Cold War between superpowers than the latter part*.

[14]Klausenburger 1976 draws attention to developments in which a morphologically-baed generalization becomes (more) lexicalized, but he calls them "demorphologization"; in the view developed here, such a development would be a subtype of morphologization, i.e. greater (morpho)lexicalization, not movement out of the morphology entirely.

3. Morphologization and Grammaticalization Distinguished

As noted in section 1, there is some overlap between the notion of morphologization as developed here (drawing on Joseph & Janda 1988) and that of grammaticalization, discussed in this volume and elsewhere. Yet, there are significant differences of approach, method, and substance between the two that provide a rationale for taking a morphologization viewpoint on various changes and not simply treating them as instances of grammaticalization.[15]

For one thing, there are phenomena in language which are (already) clearly grammatical in their function but which nonetheless undergo changes in the direction of greater involvement in the morphological component. For instance, the changes to be discussed concerning the Greek future started with a grammatical usage of the verb *thél* , which meant 'want' as an ordinary lexical verb, in a periphrasis indicating futurity; as becomes clear below, these changes were such that the realization of the marking for futurity passed from being a matter of syntax (i.e. word-combination) to being a matter of morphology (i.e., word-formation).

Thus, there is clearly morphologization in this example by the definition given above, but is there grammaticalization? There might be, but only if grammaticalization is taken to involve movement along a "cline" by which expression via morphology, e.g. with an affix, is "more grammatical" than expression via syntax (cf. Kurylowicz's definition, given above). However, such a cline iscompletely stipulative, for there are free words that have grammatical functions, such as English *of* or French *de*, various complementizers such as English *that* and *whether* or French *à*, pronouns,

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[15]An additional issue beyond what is described here is the recent criticism that grammaticalization is an epiphenomenon, something that describes a result of other changes and not an independent mechanism of change in itself. See Campbell 1999/2001, Janda Forthcoming/2001, Joseph 1999/2001, Newmeyer 1998, Newmeyer 1999, and Norde 1999/2001 for some discussion.

etc., as well as affixes that have no grammatical function at all, such as the empty *-al*
that (descriptively speaking) can be added for some English speakers to *syntactic* to
form *syntactical* (note that both are adjectives and that they are synonymous) or the
equally empty *-y* that (again from a descriptive standpoint) some English speakers add
to *competence* to give *competency*, and so on. Thus there is no necessary correlation
between an item's place on the cline and its degree of grammatical involvement.
Grammaticalization theorists recognize this issue to some extent; C. Lehmann (1985:
306) for instance gives six criteria — attrition, condensation, paradigmaticisation,
coalescence, obligatorification, and fixation[16] — and claims that an item lines up at
equivalent points with regard to each one as it "grammaticalizes". However, each of
these properties is in principle independent of the others, so that demanding a
grouping of all of them involves a stipulation that one needs to have all six, and in
equal measures, to have movement along the grammaticalization cline.

Similarly, as noted in section 2, there are two directions of development that can
lead to morphologization, and desyntacticizing morphologization can readily be linked
to dephonologizing morphologization via their common outcome (morphology) and
common motivation (localized generalization by speakers). When viewed from within
a grammaticalization framework, however, it is not at all obvious why
morphological/morpholexical determination for a given phenomenon, as opposed to
determination via regular and general phonological conditions, should be considered to

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[16]McMahon (1994: 167) gives useful brief definitions for these terms: *attrition* is 'the gradual loss
of semantic and phonological substance'; *condensation* is 'the shrinking of scope, or syntagmatic
weight'; *paradigmaticisation* is 'the integration of syntactic forms into morphological expressions';
coalescence is 'a gain in bondedness ... syntactic elements may become morphological';
obligatorification is 'the loss of paradigmatic variability'; and *fixation* is 'a loss of syntagmatic
variability'.

be more grammatical and thus should have anything to do with or anything in common with, for instance, the movement from syntactically determined to morphologically/morpholexically determined. For example, marking noun plurals via an affix that happens to have a regular, exceptionless, phonological effect on a root, such that it would be accounted for by a purely phonological rule, does not seem *a priori* to be less grammatical in any meaningful sense than marking plural via an affix that alters the vocalism of a root in ways that vary from one lexical item or lexical class to another and thus requires a morpholexically particularistic account;[17] nonetheless, grammaticalization "theory" wants to link such a change in the nature of the concomitant phonological effects with the change from phrasal to affixal expression of adverbials or futures or the like as being the same type of change.[18] Such a linkage is straightforward when viewed from the perspective of morphologization, since in both cases there is greater involvement of the morphology, but not necessarily so at all from a grammaticalization perspective.

Moreover, as noted above, grammaticalization proponents recently have been claiming an ever broader domain of applicability for this notion, whereas such is not the case with morphologization. Yet, there are changes in language and grammar that

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[17]This situation is exactly what happened with umlaut in German; see Janda 1998 and Janda (this volume) for discussion and references.

[18]Hopper & Traugott (1993: 145-149) discuss the phonological aspects of their "morphologization" (see footnote 4 above), and talk about "fusion" of elements as a common concomitant; yet, they must admit that "many of the phonological changes that accompany morphologization are not peculiar to this process but are simply part of the same processes of assimilation, attrition, and other kinds of reduction that are found more generally in non-prominent syllables and across junctures" (p. 147). Thus it is not clear why they should contribute to a special place on the grammaticalization cline.

do not involve any of the typical characteristics of grammaticalization. Regular sound change, for instance, under the Neogrammarian view (see Hale, this volume), is purely phonetically conditioned and almost by definition has no grammatical involvement at all. Also, a change such as the polarization in word order by which speakers of English have come to differentiate the perfect *I have written the letter* from the resultative *I have the letter written*, moving away from earlier English variability in ordering for both types,[19] seems not to involve any cluster of the characteristics said to be typical of grammaticalization.[20] Admittedly, these changes do not involve morphologization either, but the concept of morphologization makes no claims about such changes, whereas grammaticaliztion, in some instantiations at least, does.

Similarly, there are changes in the direction of greater morpholexical involvement that do not involve grammar, and thus can be accommodated within the concept of morphologization but not grammaticalization. Relevant here are the sorts of reductions seen for instance in German *heute* 'today' from a presumed instrumental phrase *hiu tagu** in Old High German or *heuer* 'this year' from the OHG instrumental phrase *hiu jaru*. It is not clear that anything relevant to grammaticalization has taken place, for this combination of sounds is as grammatical (or not, as the case may be) before the phrase was reduced as it is afterwards. Yet, as

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[19]I thank Hans Henrich Hock for bringing this example to my attention. It can be noted of course that with suitably "heavy" noun phrase objects, the word order for both constructions can be the same, e.g. *I have written all the letters I was asked to write*; there are prosodic differences in the two constructions that differentiate them even with heavy objects but the word order in the usual case is distinct as well.

[20]There is only C. Lehmann's characteristic of "fixation" that would be applicable here, but as noted above, a clustering of six characteristics to an equivalent extent is needed in grammaticalization, according to Lehmann.

Hopper & Traugott (1993:23) note regarding *heute*, "there surely is a difference in Modern German between *heute* and *an diesem Tage* 'on this day' that needs to be characterized in some way"; grammaticalization really does not provide a way, yet morphologization is exactly what is involved here.

In fact, the only way that *hiu tagu > heute* might be said to be relevant to grammaticalization is under the interpretation Hopper 1994 takes concerning what he calls "phonogenesis", defined by him as "the process whereby new syntagmatic phonological segments are created out of old morphemes" (p. 31). He explicitly refers to phonogenesis as "an advanced stage of *grammaticalization*" (*idem*), noting that there is generally "phonological reduction that accompanies grammaticalization" (*idem*, and see the reference above in section 3 to Lehmann's "attrition" and "coalescence"). While there is no denying that such developments occur — and indeed, Hopper presents a large number of well-known and not-so-well-known cases, mostly from English, by way of illustrating the phenomenon, e.g. the *-nd* of *friend* and *fiend* reflecting an old present particpial ending now lacking in any obvious meaning — the terminology and definition seem particularly inappropriate and the linkage with grammaticalization is at best fortuitous.

For one thing, there is nothing grammatical about such material; if anything, what *-nd-* has undergone might be termed "degrammaticalization", at least by the usual definitions of grammaticalization, for there is a movement out of being, in some sense, a grammatical formative. Admittedly, this criticism may involve taking the terminology of grammaticalization too much at face value, but given generally accepted formulations of grammaticalization, an extension of the notion is needed if "phonogenesis" is to be subsumed under the same rubric as the development of the French adverbial marker *-ment*. Furthermore, calling the accretion of material onto a word "phonogenesis" implies that the material added, the element that was once a

morpheme in Hopper's formulation,[21] had no phonic value when it was a morpheme. However, whether *-nd-* was a recognizable participial suffix or a meaningless string at the end of *friend* and *fiend*, it still contained a sequence of sounds; the morphemic or non-morphemic status of that sequence does not affect the extent to which this element adds "phonological bulk" (in Hopper's words, p. 29) to a stem it attaches to. Thus there may be "phono-accretion", but the sounds were already there and thus had already undergone "genesis" at the time they constituted a morpheme; the real difference lies in the morphological status of the sequences in question, i.e. phrasal vs. word status, or compound/polymorphemic word vs. monomorphemic word status.

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[21]It is important to point out that under strict form-based, yet classical, definitions of "morpheme", involving looking for recurring partial elements in related words, it would be possible to parse *friend* and *fiend* so as to identify *-nd* as a morpheme. Admittedly, such a parsing is not necessarily feasible in all the examples that Hopper presents (the *-n* of *forlorn* is probably not recoverable as a parsable element, for instance), but it is in more than he might be willing to admit. Perhaps what Hopper really means is that the function of the sequence of sounds has changed significantly — *-nd* no longer marks a present participle, the *-i-* of *handiwork* is a formal element only gluing together two morphemes instead of the nominal prefix it once was (cf. Old English *hand-ge-weorc*) — but that view leads to a very different picture of what is going on from that painted by Hopper. He does say (p. 31) that "since there is no categorial point at which a morpheme ceases to be a morpheme and becomes a set of functionally empty phonological segments, there is ultimately no clear dividing line between the phonological and morpholexical levels of language", a position which seems to define morphemes only in terms of a linking of form and meaning, despite the existence in languages of morphemic elements with no clear meaning (such as *-al* in *syntactical*, as described above). I readily admit that it is often difficult to decide whether two elements are to be connected as a morpheme (as with *-nd*, just discussed), but to go from that uncertainty to a position that there is no categorial difference seems to be an extreme leap.

Such a difference can be readily characterized in terms of morphologization, but not grammaticalization, and moreover, focusing on morphological status allows such cases to be linked rather directly with the emergence of the French adverbial suffix and similar examples in ways that grammaticalization theory can only do by stipulation and extension of the basic notion.[22]

Finally, there are methodological differences between the ways in which morphologization has been studied and the ways in which grammaticalization has been studied. In particular, grammaticalization has now been built into an elaborate theoretical framework, so-called "grammaticalization theory", with a cognitive basis and a stake in the putative principle of unidirectionality, by which, it is claimed, changes are always in the direction of greater grammatical status and not, for instance, in the direction of affix to clitic or free word, i.e. in the opposite direction on the cline of grammaticalization.   The existence of such "counter-grammaticalizations", described in the literature for several years and recently discussed and summed up, with extensive literature, in Janda Forthcoming/1999, are particularly troublesome for grammaticalization proponents,[23] but pose no threat for the concept of morphologization, as discussed below in section 6.

Also, grammaticalization studies tend to ignore the somewhat more formal question of where in the grammar a particular phenomenon is to be located, as if it is always self-evident what the answer to this question is. Some studies do provide a basis for making a decision, e.g. Hopper & Traugott (1993: 4-6) regarding the

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[22]See below, footnote 40, for some further criticisms of "phonogenesis".

[23]Yet, their reaction has generally been dismissive, as they have treated the counterexamples as if they do not exist or are somehow inconsequential or beside the point. See C. Lehmann (1982/1995: 16-19) and Heine (this volume) for such a viewpoint, and Hopper & Traugott (1993: 126-128) for relevant discussion.

distinction between clitics vs. affixes etc., but many do not nor do all that recognize criteria apply them in all cases.

Thus grammaticalization and morphologization indeed offer distinct perspectives on, and represent distinct ways of viewing, changes that involve grammatical machinery and morphological/morpholexical material.[24]

4. How to tell

As suggested earlier, talking about morphologization implies that there is a way to tell whether some phenomenon is "in the morphology" or, as is relevant for desyntacticization, "in the syntax" instead. The most useful heuristics are those enumerated in Zwicky & Pullum 1983 and Zwicky 1985.

They distinguish among affix, clitic, and word as types of morphological elements, drawing important distinctions between affix and non-affix and between word and non-word. "Clitics", then, are elements that are neither canonical affixes nor canonical words.[25] They further identify a number of traits that are characteristic of affixes and characteristic of words. For the most part, affixes, as morphological elements, show various types of idiosynrasy — they are selective as to what they attach to, they can provoke irregular effects on the stems they occur with, their ordering is generally fixed, they tend to be prosodically dependent, they are not subject

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[24]It is only fair to point out that some discussions of grammaticalization do recognize the notion of morphologization, though none seem to be as explicit about it as I try to be here. For example. Hopper & Traugott (1993: 130ff) talk about morphologization but focus just on "'compacting' — the fusing of erstwhile independent elements with each other, most especially the development of clitics into inflections", which is recognized here as only part of what morphologization entails.

[25]In later work, e.g. Zwicky 1994, clitics are argued not to be a distinct type in their own right, but rather to subsume anomalous affixes ("phrasal affixes") and anomalous words ("bound words").

to syntactic rules (e.g. deletions) unless the whole word they are part of is affected,[26] and the like — while words, as syntactic elements, show a greater degree of generality, being unselective in their combinatory possibilities, allowing reordering in response to stylistic factors, having prosodic independence, showing a one-to-one mapping with semantic rules that give syntactic units semantic compositionality, etc.

There are other criteria that can be helpful. For example, in the case of the Oscan locative, agreement seems to solve the issue of what sort of analysis is warranted. Oscan innovated a locative by the agglutination of a postposition *en* onto a noun, e.g. *húrtín* 'in the garden' (Buck 1928:114), yet what shows that this is indeed a morphological marker of a case, as opposed to a combination of free words in a noun phrase that undergo some phonological adjustment, is the fact that the *-ín* ending occurs on adjectives in agreement with a locative noun marked in the same way. Thus, this new locative participates in adjective agreement just like other cases, a feature which shows that the appearance of the *-ín* is not from a synchronic merging of a free word onto a stem; if it were a syntactically generated postpositional word, one would not expect it to occur both on the adjective and on the noun, unless, due to the principle of compositionality, there were a corresponding semantic contribution from both occurrences.

Still unresolved, admittedly, is the issue of whether compounds are syntax or morphology. The case of Romance adverbial *mente*, once again, is instructive. Unlike French, where *-ment* seems to be an affix (note that it is bound and provokes an

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[26]This criterion is essentially the principle of lexical integrity (see Bresnan & Mchombo 1995 for some discussion).

idiosyncratic selection of the adjective stem it is added to[27]), Spanish adverbial *mente*,

in certain registers at least, can apply distributively over both adjectives in a conjoined

phrase (apparently contrary to the Lexical Integrity principle — see footnote 26), e.g.

rapida y claramente 'rapidly and clearly' (not: '*rapid and clearly') and *-mente*

adverbs can have two accents (thus *rápidaménte*).   Moreover, *mente* survives in

Spanish as a free noun meaning 'mind', though it is not at all clear that there is a

synchronic connection between *mente* 'mind' and the adverbial formative. These facts

suggest an analysis whereby *-mente* adverbs in modern Spanish are compounds,

perhaps containing *-mente* as a bound root. If that is the case, then the developments

with *-mente* in Spanish would not represent a case of morphologization, unless

compounds are taken to be a matter of morphology (word-formation) rather than of

syntax.[28]

Still, even though there are unclear cases, the lack of clarity comes from unresolved

issues in grammatical analysis and linguistic theory, not from anything inherent in the

notion of morphologization itself; once those issues are settled, then their application

to the determination of where in the grammar a particular phenomenon is to be located

is straightforward.

5. An Extended Case Study — the Medieval and Modern Greek Future

As noted in section 1, the Greek future offers an appropriate case study, inasmuch as

the future marker *θa* of Modern Greek is analyzable as a prefix, i.e. an element of

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[27]In particular it usually selects the feminine stem, e.g. *douce-ment* (vs. masculine *doux*), a remnant

of course of the fact that Latin *mente* was a feminine noun, but synchronically for French just an

idiosyncrasy of the adverb formation operation.

[28]The literature is divided on where to locate compounds in the grammar; see Fabb 1998 for some

discussion, with references.

morphology, yet its ultimate source in earlier stages of Greek was a periphrastic —

multi-word, thus (presumably) syntactic in nature — expression consisting of the verb

thél [29] (meaning 'want' as a lexical main verb) plus a complement verb.[30]

Some examples of the future in Modern Greek include:

(1)   a. θa   γráfo   b. θa   su   γráfo

         FUT write/1SG   FUT you/GEN write/1SG

         'I'll be writing'   'I'll be writing to you'

       c. δen   θa   γráfo   d. δen   θa   su   γráfo

         NEG FUT write/1SG   NEG FUT you/GEN write/1SG

         'I won't be writing'   'I won't be writing to you'

This future marker in the modern language is best analyzed as a true prefix, based on

the criteria for classification in Zwicky & Pullum 1983 and Zwicky 1985.   In

particular, it is a bound element, unable to stand alone and generally unaccented. More

specifically, *θa* is affixal since it shows two properties more usual of affixes than of

clitics or free words: a fixed position — **gráfo qa*, **qa ¶en su gráfo* and other

permutations of the elements in (1) are all ungrammatical — and selectivity, since it

attaches only to verbs. Furthermore, like affixes, but not (generally speaking) clitics,

θa shows some idiosyncratic behavior. For instance, it triggers for some speakers

idiosyncratic voicing on third person weak pronouns that follow it, so that these forms,

which otherwise occur with initial [t-], can be pronounced with [d-] after *θa*, e.g. [θa

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[29]I give pre-Modern forms in transliteration, rather than attempting to approximate the presumed

pronunciation in a transcription; Modern forms are cited in an approximately phonemic transcription

except where otherwise noted.

[30]This section draws heavily on Joseph 1999/2001 and especially Pappas & Joseh 2002, where these

developmnets are discussed in considerably greater detaul; see also Joseph 1978/1990 and 1983 for

discussion of the history of the Modern Greek future.

do γráfo] 'I'll be writing it' (Householder, Kazazis, & Koutsoudas, 1964). In addition, *θa* shows some special combinations with a few verbs, contracting for instance with forms of the verb 'be', e.g. / θa + íse / 'you will be' —> [θáse], even though the contraction of *a + i* is not a general phonological process in Greek — the **-***a* of the adverb *kalá* 'well' combines with *íse* to give [kalájse] not *[kaláse] 'are you well?', for instance. Finally, *θa* shows idiosyncratic semantics in the expression *tí θa pí?* 'What does it mean?' (literally: "What will it-say?"). All of these characteristics taken together indicate that for Standard Modern Greek at least, the future marker is an affix.

However, as noted above, the future marker was not always an affix; the ultimate source of *θa* is the verb of volition *thél* 'want', which occurred in Classical and early Post-Classical Greek as a main (lexical) verb with a complement infinitive, as in (2):

(2) thél   gráphein

       want/1SG write/INF

       'I want to write'

In later post-Classical Greek, the infinitive gave way to a finite clausal replacement introduced by the subordinator *hína* 'that', as in (3), a process that began in the Hellenistic period and spread over several centuries on a construction-by-construction basis (see Joseph 1978/1990, 1983 for details and bibliography):

(3)   thél   hina gráph

          want/1SG that write/1SG

          'I want to write' (literally: "I-want that I-write").

The more immediate source for the future prefix *θa* is a "redeployment" of the infinitive with *thél*, coupled with a semantic shift from the volitional lexical main verb to a more auxiliary-like and grammatical future meaning, as in (4):

(4)   thél   gráphein

          1SG   write/INF

'I will write'.

As an independent verb at this stage *thél* still means 'want', a meaning and use that continues into present-day Greek (though not with an infinitival complement).

At this point, to follow essentially the account of Psicharis 1884 and the chronology for the emergence of various future formations seen in Bănescu 1915 (see also Joseph 1978/1990, 1983), a chain of developments began which ultimately led to the form θa. These developments included regular sound change, reanalysis, and analogical generalization of sandhi variants, among others. The first step was the loss of word-final *-n* in the infinitive by regular sound change,[31] which resulted in future formations as in (5):

(5)   thél gráphei   /   thélei gráphei

        1SG   INF   3SG   INF

        'I will write'   '(s)he will write'

in which the infinitival complement came to be homophonous with the third person singular indicative form in that both ended in *-ei* (thus, *gráphei* was both 'to write' and '(s)he writes'). At that point, the future formation in the third person seems to have been reanalyzed as a combination of two forms each marked as third-person (see Anttila 1972/1989), with the reanalysis being evident when the new pattern with multiple inflected forms was extended into other persons in the paradigm, as in (6):

(6)   thél   gráph

        1SG   write/1SG

        'I will write'

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[31]There are some modern dialects, e.g. Cypriot Greek, that retain final *-n*, as well as some forms in the standard language, e.g. the genitive plural in *-on*, that similarly show *-n#*. It is likely that there have been several waves of the loss of final *-n*, with interim periods in which *-n#* was restored from the learnèd language and/or analogically reintroduced (e.g. if the loss began as a sandhi phenomenon).

This pattern must have co-existed with the infinitival formation of (4), as both types are to be found in one and the same text in Medieval Greek.[32] Since the replacement of the infinitive by finite complementation, seen in (2) and (3), was an on-going process through much of Post-Classical Greek even into the Medieval period (see Joseph 1978/1990 1983), it would have affected the renewed use of the infinitive in the future type of (4). This gave rise to an innovative type that was identical to (6) in meaning and similar to it in form except that it had the subordinator *hína* (glossed here, probably inadequately, as 'that'), and was identical in form to (3) but with a future meaning instead:

(7)   thél   hina gráph

         1SG   that write/1SG

         'I will write'

From the future types of (6) and (7), by a change presumably motivated by the elimination of redundant person marking, a type developed with an invariant third person singular form *θéli*, which as an independent verb still means '(s)he wants', with no subordinator (from (6) or with the subordinator *na*, from *hina* of (7) by regular sound changes:[33]

(8) a. ǧéli   gráfo

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[32]Indeed, the range of variability in the expression of the future tense in Medieval Greek texts is striking (and there are other formations that do not involve a form of *thél* that are not mentioned here). The various types described here cooccur in texts, though there is a clear chronology to the emergence of the different forms, as outlined by B nescu 1915.

[33]Actually, *hina* in (7) is a bit anachronistic, since by the time it was introduced into the future tense formation, it was probably already [na], and [na] developed from earlier *hina* by regular sound changes; the representation of the Greek here is given in more of an approximation of the pronunciation since in this form the future is now approaching Modern Greek.

3SG   write/1SG

'I will write'

  b. qéli   na   gráfo

3SG   that write/1SG

'I will write'

The next step was that, from (8), a reduction of *θéli* occurred giving *θé*. This reduction

may have been a fast speech phenomenon, since it also affected at least some forms of

the independent verb 'wants' (in present-day Greek, for instance, the second person

singular of (nonfuture) *θélis* 'you want' is commonly reduced to *θés* and reductions

with other persons and numbers may be possible as well), but it gained currency most

generally only with the future marker.   Some modern dialects (e.g. Cretan, cf.

Pangalos 1955:322-324) have *θéla γráfo* for the future 'I will write', suggesting that

the reduction may in the case of (9b) have been via a stage with *θel'na* (elision of

unstressed *-i*, and reduction of or assimilation in the resulting *-ln-* cluster).   By

whatever route, however, the result was the future patterns in (9):

(9)   a. θé   γráfo

    FUT   write/1SG

    'I will write'

  b. θé   na   γráfo

    FUT

    'I will write'

At some point, moreover,*θe* became deaccented, though the chronology of that

development is not clear.

Further developments from the formation in (9b) led to the widespread modern

form *θa*, usually given as end point of the "grammaticalization" with the Modern

Greek future. In particular, *θé na γráfo* of (9b) underwent an irregular vowel

assimilation, giving *θá na γráfo*. Here it is relevant that some modern dialects have

θála γráfo (compare the *θéla γráfo* cited above). To get from *θa na γráfo* to *θa γráfo*,
it is safest to assume that a variant of *θa na* before a vowel-initial verb, such as
aγorázo 'I buy', had the form *θa n*, and that this pre-vocalic sandhi alterant was
generalized to pre-consonantal position, giving *θá n γráfo*; in this way, no irregular
phonological developments need to be assumed, since contraction of *-a a-* to *-a-* is
regular in Greek. By a similar path, this variant *θá n* could have yielded *θa* in all
contexts — the loss of *-n-* in *θa n γráfo* would be regular, and the resulting pre-
consonantal *θa* could then have spread to pre-vocalic contexts, giving forms such as
θa aγorázo 'I will buy' alongside *θa γráfo*

It is therefore possible to motivate all of the stages by which *thél gráphein* could
have yielded, through the crucial intermediary stage of *thél (hi)na gráph*, the
Modern Greek future *θa γráfo*. Moreover, with the possible exception of the *thélei
(hi)na gráph* stage, all of the necessary stages are directly attested or safely
inferrable. Significantly, all of these steps involve, for the most part, perfectly ordinary
and well-understood processes in language change: sound change, reduction of
redundancy, and (analogical) generalization of one variant at the expense of another.

From the foregoing, it is clear that from the point at which the invariant third
person singular form *thélei* ([θéli]) was fixed in the future construction, there was a
significant change in the construction. At that point, *thélei* was certainly more
grammatical in nature and less lexical, despite the identity in form between it and the
third person singular of the main verb of volition 'want'; in particular, it was fixed
positionally, could not support clitics,[34] and could not be inverted, even though in
previous stages, there were fewer such limitations on the form of *thél* in the future. It

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[34]Clitic pronouns at this stage were positioned between *thélei* and the main verb, e.g. *thélei to
gráph* 'I will write it', and never occurred as a proclitic to *thélei* (**to thélei gráph). See Joseph,
1978/1990, p. 143-145, for examples and discussion.

is not clear when this more restricted *thélei* or its successors developed into a prefix, but clearly *thélei* was a step in this direction.

In terms of morphologization, therefore, at some point between the *qéli na gráfo* stage and the *qa gráfo* stage, the expression of the future changed from being a matter of syntax to being a matter of morphology, with a prefix marking futurity. Deciding exactly when that line was crossed would depend on a detailed consideration of all relevant properties of each stage, but most likely it came at a point when the initial part of the future marker (*q...*) was not longer synchronically relatable to the main verb *qél-* that remained in the language. The Zwicky/Pullum criteria allow for a clear determination for the modern language, as demonstrated at the beginning of this section, but the full range of evidence needed for a determination at earlier stages may not be available. Still, from the perspective of morphologization, these developments are readily characterizable.

Within the framework of grammaticalization, however, the view is somewhat different. On the one hand, the development of prefixal *θa* from *thél hina* looks like a straightforward case of grammaticalization, with an affix developing out of a once-free form by an eminently traceable progression, and so it is no accident that Meillet drew attention to this in his important early article on grammaticalization. On the other hand, though, it is clear that the combination of *thél* and a complement verb had a grammatical value marking future quite early on, at a time when the periphrastic nature of the formation and the link between *thél* in the future and *thél* as a lexical, main verb would have been obvious. In this view, bearing in mind that the changes from *thél (hi)na* to *θa* all involve just ordinary instances of phonetic change and analogy that resulted in increased separation of main-verb *thél* from what ultimately became *θa*, the latter changes that result in *θa* being a prefix are really incidental to the grammaticalization, rather than forming a crucial part of it that demonstrates that it occurred.

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Yet, it is well-known that speakers can lose sight of obvious connections among elements so that the increased separation of free form and bound form here does not require the positing of a special mechanism such as grammaticalization. For example, the first part of English *withstand* has become separated off from the preposition *with*, for the original meaning of *with* as 'against' is preserved in the compound (literally "stand against"), but is not evident in the free form, as discussed by Kim 1995. Other similar cases involving a separation of forms that were once clearly related include the creation of an innovative gerund *hafing to*, replacing *having to*, based on *hafta* (i.e. *have to*), despite a seemingly clear connection with the verb *have* (Joseph 1992), and *let's* (discussed both by Joseph 1992 and by Hopper & Traugott 1993:10-13), which has moved away from its once-syntactic *let + us* source toward morpholexicalization as a marker of hortativity. Moreover, in a case especially germane to the matter at hand with *thélei* and *θa*, Pappas 1999 has discussed the increased separation of *thél* in futures from its corresponding past tense *vthel* in its use to form counterfactuals in Middle Greek.

Therefore, it would appear that one need not invoke "grammaticalization" as the force behind the ultimate formation of a grammatical morpheme for future in Greek. Well-understood processes of change other than "grammaticalization" suffice to give the observed end-result.[35] At any rate, however, despite ambiguities as to which stage, if any, is most pertinent to a claim of grammaticalization with the Greek future — the initial innovation by which *thél* 'want' came to be used to mark future or the Modern Greek stage by which future is marked with a prefix — and despite questions about the status of grammaticalization in general and whether or not it has any relevance at

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[35]This aspect of the development of *θa* led Joseph 1999/2001 to argue that grammaticalization is best understood as an epiphenomenon, rather than a process or mechanism of change in itself (see footnote 15).

all in this case, one cannot overlook the clear indication that morphologization has occurred, in that a once-syntactic expression has come to be analyzable as a morphological expression.

6. Unidirectionality and Morphologization

As noted in section 3, the claim of unidirectional movement along the cline of grammaticalization is an important one within grammaticalization "theory", and there is much riding on this claim for the theory. In the approach advocated here, on the other hand, in which the status of an element or phenomenon in its own synchronic grammatical system is at issue, no such claim is made. The reverse of morphologization, referred to in Joseph & Janda 1988 as "demorphologization",[36] taking in both movement from morphology into phonology ("(re)phonologization"[37]) and from morphology into syntax ("(re)syntacticization"), is acknowledged as a possible development, even if such developments are recognized not to be the norm. In fact, the general procedure used in deciding if

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[36]I must note here that both Hopper & Traugott (1993: 164) and Hopper (1994: 32) cite Joseph & Janda 1988 (the authors of course are grateful for the reference) regarding "demorphologization" (a concept discussed there) but attribute a different concept of demorphologization from that intended; they mention the paper in regard to the notion of a morpheme that has "lost its morphological value" (p. 164) on the way to becoming empty phonological segments ("phonogenesis", on which see above). However, what was meant by Joseph & Janda's use of the term is movement of some element out of morphology into a syntactic treatment or possibly a phonological one, the latter not necessarily with any loss of function.

[37]The term "phonologization" has been used for other phenomena as well elsewhere, e.g. within Prague School and Structuralist phonology for the the situation in which a phonetic difference becomes distinctive (i.e. becomes a phonological distinction).

morphologization has occurred, i.e. the examination of a language in its own (synchronic) terms to see whether a given element or phenomenon is a matter of morphology or of syntax, would dictate that under the right conditions an element that was a bound morpheme at one stage of a language could come to be analyzable as a free word at a later stage.

As discussed earlier, there are in fact several such cases reported in the literature that seem quite compelling.[38] Nevis 1986, for instance, has demonstrated that in most dialects of Saame (formerly known as Lappish) an inherited sequence of affixes *-pta-k-ek/n marking abessive has become a clitic word (*taga*, with variant *haga*), and more specifically a stressless postposition, while in the Enontekiö dialect, it has progressed further to become a nonclitic independent word, an adverb, *taga*. A critical piece of the argumentation that *taga*/*haga* is now a free word is the absence of any phonological interaction (e.g. vowel harmony, or the like) between *taga*/*haga* and the word it combines with; in the absence of such evidence, the default analysis would treat *taga*/*haga* as an independent word, not as part of the word it co-occurs with. The particular circumstances by which this element thus came to be analyzable as a word, after being an affix in an earlier stage, are not necessarily ones that would occur frequently, but in a morphologization approach to accounting for *taga*/*haga*, one has to take what the language gives, so to speak, in establishing the parameters for an analysis, and an element's earlier status is irrelevant to its synchronic status at some later stage.

An approach to describing and explaining phenomena such as the developments with adverbial *mente* in Romance that is not a straightjacket and does not have to

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[38]See Janda Forthcoming/2001 for relevant bibliography, where a large number of cases (some 70 or so!) are referred to, belying any claim that counterexamples to unidirectionality in grammaticalization are rare and thus not of concern to grammaticalization theory (so Heine (this volume)).

ignore or dismiss viable counterexamples, but rather identifies the (possibly extraordinary) sets of conditions that must be met for such counter-tendencies to emerge and for counterexamples to arise, is in many ways a more realistic framework. Such is the case, it is argued here, with a focus on morphologiztion, for it can be recognized to be a more realistic approach to understanding changes in morphology and syntax than grammaticalization.

7. More on the Scope of Morphologization

The preceding discussion makes it clear that syntax can develop into morphology. It is reasonable to ask whether "higher" levels can be involved in the devolution into morphology. The answer appears to be yes, in that elements or constructions with a chiefly pragmatically determined value can, under the appropriate conditions, contribute to a morphological account at a later stage. What is not clear is whether there is an intermediate stage in which a purely syntactic analysis is called for; it may well turn out, though, that such a question is irrelevant.[39]

A case in point appears to be that described by Auger 1994, concerning the change from subject pronouns to subject-agreement markers in Canadian French through the medium of developments with topic-marking fronted (dislocated) subject pronouns. She argues that the pragmatic effect of dislocation has been lost, so that *Moi, je dors* does not have the topic reading of 'As for me, I am sleeping' but rather only the unmarked reading of 'I am sleeping'. This bleaching of the marked pragmatic

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[39]Pintzuk (this volume) refers to a type of syntactic variation governed by "prosodic constraints and information structure [that] frequently involves a simple alternation in constituent order", characteristics which would seem to apply to the topical dislocation in French discussed here. Although Pintzuk goes on to say that "this type of variation is diachronically stable", the Canadian French developments suggest otherwise.

function has created a situation in which *je* can be analyzed as a subject affix, since its contribution to the semantic interpretation of the sentence has been usurped by the fronted once-topical pronoun. Indeed, it shows evidence of idiosyncratic behavior, e.g. in irregular combinations with certain verbs, that is characteristic of affixes. Whether the shift in pragmatic function came first or the idiosyncrasies did is unclear, and the chronology would matter for the determination of whether there was a stage with the fronted pronoun, e.g. *moi*, and the subject pronoun, e.g. *je*, but no evidence of affixhood for the latter, i.e. a stage at which the positioning of the subject pronoun was still a matter of syntax. If so, then the morphologization evident with subject markers in Canadian French would be just another case of desyntacticization, but if not, and if the idiosyncrasies either preceded or were simultaneous with the bleaching of topicality, then the involvement of pragmatic shifts in morphologization becomes more direct. As always in discussions of where in the grammar a particular phenomenon is to be located, what is most crucial is what the evidence is at the particular synchronic stage under investigation, in this case, contemporary Canadian French. In a sense, then, the question of whether there was a stage where the construction was purely syntactic is not wholly irrelevant, for the current evidence makes it clear that the morphologization occurred, in Auger's analysis, and for present purposes, that determination alone may be sufficient.

8. Morphologization/Grammaticalization and Reconstruction: A Caution

One benefit that has been claimed for recognizing grammaticalization is that it can give some guidance in matters of reconstruction (so Rankin (this volume), and Harris & Campbell 1995:361ff.). Indeed, if certain types of developments were truly unidirectional, then one could safely infer, given putatively cognate forms in different languages, where one form is a word and the other is an affix, that the language with the affixal form shows an innovation.

If, however, in keeping with the realism that a focus on morphologization requires, unidirectionality is recognized not as a viable absolute of the movement into morphology but rather at best a directional tendency, then some caution is in order in the applying the findings from investigations into morphologization and grammaticalization to specific problems in reconstruction. Given the hypothetical word-affix cognate situation described above, one could still reconstruct a free word, but there would be greater uncertainty to the reconstruction than if unidirectionality could be relied on absolutely. Indeed, Anderson (1980: 68), in his study of the development of morphology out of syntax, expresses a similar need for caution: "if we have not found that today's morphology can be taken reliably to be yesterday's syntax, we have at least seen that there are some clear circumstances in which today's syntax can be expected to become tomorrow's morphology". But even such expectations need not be realized.

Still caution is needed, and, to be sure, it is always in order in reconstruction, even in instances that seem to present a quite clear set of facts at first. For example, it is well-known that weak forms of pronouns can develop as unaccented variants of strong pronouns, as indicated by the relationship between English *him* and the unstressed form *'im* (phonetically [§m]) and what is known about the history of these forms. Thus, when one observes a similar alternation in the plural, between *them* and *'em* (phonetically [§m]), it is tempting to reconstruct the history of *'em* such that it is derived as a reduction of *them*. Such is not the case, however, for *'em* represents the continuation of the Old English accusative pronoun, but *them* is a borrowing from Scandinavian, replacing the native English pronominal form. The borrowing has created a synchronic situation that looks like the result of grammaticalization, yet the history is quite different. On the other hand, the borrowing can be said to have caused a morphologization in that synchronically, the relationship between *them* and *'em* would be reflected in an enriched lexical entry for *them* listing *'em* as the unstressed

variant, inasmuch as there is no regular phonological process in contemporary English that would map between these variant forms; the *them*/*'em* alternation is unique to this lexical item. Still, however this relationship is encoded in a synchronic grammar, it should be clear that attempting to do reconstruction by "undoing" an apparent morphologization (or grammaticalization, as the case may be) is fraught with potential pitfalls.[40]

9. Conclusion

In discussing morphologization here, I have been critical of many of the assumptions inherent in the study of grammaticalization, in an attempt to distinguish between these two somewhat related concepts. As a final phase of that attempt, I note that the main focus of one interested in morphologization is the perspective of the grammarian, working with the assumption that language does have structure and that this structure

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[40]Hopper (1994: 31) articulates the view that "all phonemes were once morphemes" (so also Hopper & Traugott 1993:128-9, "there is no evidence that grammatical items ... can be innovated without a prior lexical history"), a position which clearly has implications for reconstruction. It is worth noting therefore that this extreme view is most assuredly wrong: Hopper overlooks the fact that there can be phonologically excrescent elements that take on grammatical value, as with the *-(s)t* in nonstandard dialectal English adverbs such as *acrosst*, *oncet*, and *twicet*, as well as standard *against*, *amidst*, etc. (see Hock 1976:216 on the source of this *-t*; I am indebted to Rich Janda for this example), as well as analogical creations that have no real prior existence as lexical items yet can have grammatical value (as Joseph 1999/2001 argues regarding the weak third person nominative pronouns in Modern Greek and in Hittite). To their credit, Hopper & Traugott (1993: 127-128) recognize that "such counterexamples should caution us against making uncritical inferences about directions of grammaticalization where historical data is not available".

must be reflected in our analyses and accounts, and focusing on the place of a given phenomenon in that structural edifice, the grammar of the language. On the other hand, those interested in grammaticalization generally take the view that language has what may be called "emergent grammar" (see Hopper 1987) in that synchronic structure is a goal that is never reached. This assessment would mean not only that it may not be possible to resolve differences between grammaticalization and morphologization, in that they reflect the results of applying different criteria to a given set of facts about change in a language, but also that recognizing morphologization and all that the notion entails is essential for any structurally oriented historical linguist.