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Defining "Word" in Modern Greek: A Response to Philippaki-Warburton & Spyropoulos 1999*

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1. Introduction

The construct *word* plays a key role in linguistic theorizing. For instance, there are theories of syntax that are entirely word-based, such as "Word Grammar" (Hudson 1984), as well as theories in which the distinction between a word and a non-word has consequences for other aspects of the grammar. Relevant to this latter point, for instance, is Government-Binding theory, where the operation of the rule of Verb Raising moves elements to attach to affixes but not to attach to words, as in the analysis of Rivero 1990 on the structure underlying the generation of Albanian and Greek nonactive voice forms. Moreover, there are principles, such as Lexical Integrity (cf. Bresnan & Mchombo 1995, Harris 2000, Kanerva 1987, among others, for discussion pro and con), which rules out the possibility of a syntactic rule operating into or disrupting a properly constituted word, that are defined in terms of *word*.

All such theorizing presupposes that one can determine what a word actually is, so that the constructs that depend on this notion can operate as needed.

It turns out, though, that the task of defining what a word is in any language is a challenge. It seems clear that words have something to do with syntax, in that they are typically independent elements that are manipulated by rules of syntax and can be combined to form syntactic phrases and clauses. Indeed, the Hellenistic grammarians defined word as "the minimal part of a syntactic construction".[1] But while it may therefore seem quite straightforward and easy to identify what a word is at first glance on the basis of what the syntax requires — and indeed for many languages it seems that naïve speakers have an intuitive sense in this regard[2] — at the same time, it must be

recognized that words have internal structure and constituent parts, and thus have something to do with morphology, at least in the traditional sense of word-formation. Drawing the line between these two domains and thus pinning down the notion of word with some exactitude, therefore, upon closer examination, turns out to be an exercise that is fraught with potential for numerous false steps and misanalyses. At the very least, the recognition that it might be necessary to define 'word' with respect to different levels or components of grammar, e.g. phonological word, syntactic word, etc., shows that identifying what a word is represents a very complex task.

These difficulties are especially in evidence for Greek, where there is a rather large set of what can be called (for want of a better term) "little elements" that have at least a limited degree of independence — and thus seem in some ways to be word-like — but at the same time serve crucial grammatical functions and show some signs of being dependent, i.e. non-word-like, elements. For example, these forms cannot stand alone and generally do not pass typical tests for being classified as words, such as those regarding conjoinability or freedom in combinatorial possibilities, among others.[3] These items thus constitute a crux for the identification of 'word' for Modern Greek, and so have formed the basis for most of the discussion to date on the topic, including the present paper. A reasonably full listing of these elements (using a roughly phonemic transcription) is given in (1), covering forms that either serve grammatical functions themselves or else are associated with particular grammatical categories; thus discourse markers such as *áraje* 'I wonder', and exclamations such as *po po po* 'oh my!' are not considered here:[4]

(1) Range of "little elements" in Greek

a. elements modifying the verb, clustering obligatorily before it (when they occur), marking:

subjunctive mood:	na (general irrealis)
	as (hortative)
future (and some modality):	θa
negation:	ð e(n) (indicative)
	mi(n) (subjunctive)[5]

b. elements (generally) correlating with argument structure of verb ("object pronouns"), occurring as the closest element to verb (i.e., "inside of" modal etc. modifiers above), positioned before finite verbs and after nonfinite verbs (imperatives and participles); "ACC" (from "accusative") stands for direct object markers, "GEN" (from "genitive"[6]) for indirect object markers:

PERS	SG.ACC	SG.GEN	PL.ACC	PL.GEN
1	me	mu	mas	mas
2	se	su	sas	sas
3M	ton	tu	tus	tus
3F	tin	tis	tis	tus
3N	to	tu	ta	tus

c. weak 3rd person nominative (subject) markers (with two — and only two — predicates: *ná* '(t)here is/are!' and *pún* 'where is/are?', always postpositioned and inseparable from the predicate):[7]

PERS	SG	PL
3M	tos	ti
3F	ti	tes
3N	to	ta

d. "weakened" (different from weak forms, cf. note 34) nominatives (subject pronouns):

PERS	SG	PL
1	γo	mis
2	si	sis

e. attitudinal marker (of impatience) *dé*, especially common with imperatives, and always phrase-final (with the possible exception of one fixed expression, *dé ke kalá* 'with obstinate insistence' (see note 31))

f. pronominal marking of possession within a noun phrase (so-called "genitive" pronouns, typically occurring at the end of a noun phrase after the noun; identical in form with weak indirect object markers but not in all characteristics (see below, section 3.2.4)):

PERS	SG	PL
1	mu	mas
2	su	sas
3M	tu	tus
3F	tis	tus
3N	tu	tus

g. definiteness within the noun phrase (the so-called "(definite) article"):

CASE	M.SG	F.SG	NTR.SG	M.PL	F.PL	N.PL
NOM	o	i	to	i	i	ta
ACC	ton	tin	to	tus	tis	ta
GEN	tu	tis	tu	ton	ton	ton

h. dative/locative/allative preposition *s(e)* 'to; in; on; at', always phrase-initial, attaching to whatever occurs to its right in the noun phrase

i. marker of comparative degree (and with definite article, superlative degree) in adjectives and adverbs *pjo*

j. imperatival *ja*, adding more immediacy or emphasis to imperatives (as in *ja kíta* 'Hey look!').

Many of these elements have been called "clitics" in recent accounts of Greek (e.g. Joseph & Philippaki-Warburton 1987: 211-216) but that very term itself is rejected here for several reasons. First, even though elements labeled "clitics" tend to be short, prosodically deficient elements with some grammatical function, in practice that label is so vague and overused as to be essentially meaningless as a classificatory designation. One need only survey the incredibly varied ways in which different linguists have used this term — as a glimpse at the 1500+ entries in Nevis et al. 1994 reveals — to see that to a certain extent, almost *any* relatively short, quasi-grammatical, and/or accentually unusual entity seems to be fair game for this label. More tellingly perhaps,

almost no analysts ever justify using the term for a particular element in a language they are looking at, as if it were always self-evident that a given element is a "clitic". Thus, it seems that the most realistic position to take is that offered by Zwicky (1994: xiii), who considers the term "clitic" to be most uninformative, and argues that "clitic ... is an umbrella term, not a genuine category in grammatical theory".

Zwicky goes on to articulate a framework, adopted here, in which "clitic", precisely because it is not a "genuine category", is dispensed with (and see also Everett 1996 for a similar view). Noting (p. xv) that " a variety of phenomena [that] have appeared under the clitic umbrella ... merely have marked properties in one or more components of grammar", Zwicky suggests that on theoretical grounds, "clitic" can be rejected as unnecessary. In particular, instead of recognizing "clitic" as a basic element in a three-way division of morphological/syntactic primitives, as in (2):

(2) AFFIX — CLITIC — WORD

one can simply recognize only *affixes*, on the one hand, and *words*, on the other. In addition, one needs to further recognize *typical* (i.e. "core") and *atypical* (i.e. "marginal" or "marked") members of each category, but that division, Zwicky points out, is needed independently of the decision regarding clitics; that is, even if one were to start with a basic three-way affix/clitic/word distinction, there would still be degrees of typicality within each category. Given then that differences in typicality must be recognized in any case, it seems preferable, if at all possible, to maintain the more restrictive and economical inventory of elements, i.e. the one with just a binary affix/word distinction instead of the tripartite division.

There are some further concomitants of a decision to have only affixes and words in the inventory of morphological/syntactic primitives.

First, within the grammar, an affix is "handled" (i.e., accounted for or distributed) by the morphology, that is, by the morphological component, while a word, being the minimal syntactic unit (as noted above), is "handled" by the syntax, that is, by the syntactic component. Second, elements *must* be designated by the grammar as an affix or a word; that is, they must be assigned to the morphology or to the syntax. It is one of the functions of the grammar to reflect this status; a

putative "cline" between these two polar oppositions[8] is merely the linguist's reflection of the fact that there are typical and atypical members of each type. Third, as suggested already (see, e.g., notes 3 and 4), among the ways of determining where an element falls are various "tests", various mostly language-specific "behaviors" (though some cross-linguistic universals or tendencies emerge), that are typical of one or the other type; for the most part, affixes show a greater degree of idiosyncrasy along various parameters (e.g., following Zwicky & Pullum 1983, Zwicky 1985, rigidity in ordering, selectivity in coocurrence, etc.), whereas words show less idiosyncrasy, inasmuch as they are syntactic entities manipulated by rules of syntactic distribution. These syntactic rules, in the general framework adopted here, are maximally general, referring to categories only, not to individual lexical items. Moreover, they feed directly into semantic interpretation, so that there is compositionality — i.e., a one-to-one mapping — between syntactic rules that build structure and rules of semantic interpretation.

Returning to the Greek facts, all too often it has turned out that linguists have simply made an assumption about the status of the elements listed in (1) and have assigned them to word-level status without argumentation.[9] However, a recent laudable attempt to apply some criteria in a principled way to arrive at a proper classification has been made by Philippaki-Warburton & Spyropoulos 1999 (hereafter, PW&S). PW&S offer a thorough and rigorous consideration of how one might identify the construct *word* for Greek and thus what the category status of various of these little elements should be, taking an integrated approach in which their syntactic, morphological, and phonological behavior is specifically addressed. PW&S concentrate just on the verb-modifying elements in (1) that make up the Modern Greek verbal complex, namely those in (1a), which they refer to as "particles", and those in (1b), which they refer to as "object clitic pronouns". They argue that both groups of elements have what they refer to (p. 56) as "an intermediate status" — intermediate between full words and affixes — and thus are counter-evidence to Zwicky's claim, alluded to above, that there are only words and affixes as morphosyntactic/morpholexical "atoms".

Their conception of this intermediate status can be seen clearly in the following characterization they give for the "object clitic pronouns" (p. 54):

> [they] are not affixes on the verb but constitute separate syntactic units (syntactic atoms) … [with] the syntactic and morphological properties of grammatical words stored in the lexicon or derived in the morphological component before they enter the syntax. However, they are phonologically reduced and this creates the need for them to move and adjoin to an appropriate host … the INFL head ….

Therefore, the "object clitics", for PW&S, are "lexical" items with "referential properties" (p. 56), and thus are words in all respects except for their lack of phonological independence. A similar characterization is given for the "particles", though they note that these elements differ in that they "carry functional content … [and] are hosted by functional heads" (p. 56).

Thus, P-W&S argue that these elements are manipulated by the syntactic component of the grammar. They thus explicitly reject the analysis of, e.g. Joseph 1988, 1990, 1994, and others, which treats these elements as affixes, manipulated by the morphology and not by the syntax.

The argumentation PW&S provide is quite comprehensive, and they build an interesting case for their conclusions. Yet, for each of their key arguments, there are crucial facts that, when taken into consideration, lead to a different conclusion from the one they advocate. Moreover there are additional counter-arguments as well as other relevant evidence that can be adduced. Accordingly, in this paper, PW&S's arguments for treating these elements as words are reassessed, and the affixal analysis is reasserted and argued for anew.

2. A Strategy for Counter-argumentation

The linch-pin of PW&S's overall account is their analysis of the weak object pronouns as being words and not affixes. The reason that this piece is so crucial is that combinations of the

"particles" — both the modal markers and the negators — and the "clitics" are possible with the verb, as in (3):

(3) a. ∂e θa tu to ∂óso
NEG FUT him/IO it/DO give/1SG
'I will not give it to him'

b. na min tu to ∂óso
SBJ NEG him/IO it/DO give/1SG
'I should not give it to him'

Thus, working from the "inside out", so to speak, PW&S first argue that the object pronouns are words. They then argue that the particles do in fact show some properties that in their view align them with affixes, such as marking grammatical (functional) categories, not having a separate stress, not being separable from their host verb phonologically or syntactically (e.g. in co-ordination or focalization structures). However, in PW&S's view, the word-level status they assign to the object pronouns proves to be decisive for a non-affixal analysis of the modal particles *θa* and *na*:

> … an analysis that treats [pronominal] clitics as separate lexical items and particles as affixes will involve particles prefixed on to clitics … This creates a great deal of redundancy and moreover it fails to capture the obvious generalisation that the particle belongs to the verb itself and not to … the object clitic pronoun. (p. 59)

They go on to advance a similar argument for the word-level status of the negative particles, since they too can attach to object pronouns, as well as the modal markers, as in (3a), and since, moreover, in the case of the subjunctive negator *min*, the negator occurs inside of the modal marker, as in (3b).

Thus the determination the status of any one of these elements is inter-connected with the determination of all the others; a decision on one has an impact on the status of the others. Essentially, they must all be analyzed the same way, so if the weak pronouns are words, so too are

the other verbal modifiers; by the same token, though, if the weak pronouns are affixes, then the other elements can be affixal.[10]

Therefore, a reasonable strategy to follow to counter the PW&S analysis is to examine the arguments presented for the word-level status of the pronouns, for if those arguments prove to be weak or untenable, an affixal analysis becomes possible not only for the pronouns but for the other verbal modifiers as well, especially since PW&S themselves admit that there are affix-like indications for the particles.

3. Assessing PW&S's Arguments regarding the Weak Object Pronouns

PW&S give evidence of a syntactic, a morphological, and a phonological nature concerning the word-level status of the weak object pronouns. Each one of their arguments, however, can be countered, some in a fairly devastating way:

3.1 The Syntactic Arguments

PW&S offer three syntactic arguments that the weak object pronouns are not affixes. First, they say (p. 49) that since the pronouns are optional and constrained by stylistic factors (involving topicalization possibilities), they are "unlike typical agreement markers". However, there is nothing in the occurrence of the weak object pronouns that requires that one think of them as "agreement markers" in the usual sense; they could simply be transitivity markers, registering the occurrence of an object, or they could indeed be tied to overall topicalization strategies. As such, they need not be obligatory, they need not be sensitive only to grammatical factors, and they need not be barred from affixal status (topic markers on nouns, for instance, can certainly be affixal).

Second, they argue that in the presence of weak object pronouns, "the lexical object DP's form part of the background, peripheral information" (p. 50) and behave like an adjunct,[11] and that therefore, within a GB approach to syntax, the pronoun seems to function as the argument. Again, though, one can respond that there is nothing inherent in being an affix that prevents an element from being an argument; the fact that the syntax might make something of a particular configuration

of elements does not mean that all those elements must be independent lexical heads. Indeed, the marker *n't* in English has been convincingly argued by Zwicky & Pullum 1983 to be an affix, yet it interacts with the syntax with regard, for instance, to the occurrence of negative polarity items and other syntactic properties typically associated with negation.[12]

Third, PW&S argue that in one auxiliary structure that Greek has, in which the verb *éxo* 'have' functioning as an auxiliary verb combines with a non-finite form to give a perfect tense formation (e.g. *éxo akúsi* 'I have heard'), an object pronoun that is semantically associated with the main verb attaches to the auxiliary, e.g. *to éxo akúsi* 'I have heard it'. This leads, they say, to an uneconomical situation since not only monolectic verbs forms but also the auxiliary "will have to be featured in the lexicon prefixed with clitics" (p. 51) and moreover, choosing "the correct number and type … of the clitic prefixed on *exo*, in a particular syntactic context … will have to take into consideation not the subcategorisation properties of the auxiliary itself … but [those] of the main verb". Again, such reasoning is very much theory-bound; in principle, a "clause union" operation (cf. Aissen 1974, Gibson & Raposo 1986, among others) could be at work in making the auxiliary invisible to subcategorization requirements, and (as suggested in note 11), a theory with a rich system of syntactic features and feature passing and feature checking principles (where, for instance, syntactic nodes are seen as bundles of features that the morphology provides realization for) could easily guarantee that that a particular pronoun + 'have' combination satisfies the subcategorization requirements of a given main verb. In any case, moreover, the extra listing in the lexicon actually involves only a relatively small number of forms (the closed set of weak object pronouns, even in indirect plus direct object combinations, together with the closed set of forms of the auxiliary *éxo*) and is thus more benign than, for instance, the analysis Zwicky 1987 gives for the English possessive *'s*. Zwicky argues convincingly that *'s* is best considered an inflectional affix in order to explain certain instances where it unexpectedly does not show up, and claims as a result that all words in English, including adverbs and verbs, should have this possessive form listed in the lexicon in order to account for the possibility of phrases such as *the bloke who laughed's name* or *the bloke who walked in's name*.

The real issue, it seems, is what the theory one adopts allows one to do; if affixes are not allowed to have syntactic consequences, then clearly an element with syntactic effects cannot be an affix. But with different ground rules, so to speak, different analyses are possible.

Since the syntactic argumentation is so closely tied to decisions about syntactic frameworks, it cannot be considered decisive in and of itself. It is more revealing, therefore, to turn to a more neutral domain for examining the object-pronouns-as-words hypothesis, namely the morphological and phonological arguments provided by PW&S. These, too, however, turn out to be less convincing than meets the eye.

3.2 PW&S's Morphological and Phonological Evidence

3.2.1. For morphological evidence, basing themselves on Zwicky's observation (1985: 288) that "words are frequently morphologically complex … affixal units rarely are", PW&S argue that since "the object clitic pronouns … clearly reveal morphophonologically the full complement of features of person, number, and gender" just like the independent pronouns, they must be words. However, there are numerous instances of affixes that mark several categories at once, e.g. as is well known, the English verbal ending *–s* marks person (third), number (singular), and tense (present) and so in that sense is "morphologically complex". Moreover, a form such as *ton*, embodying marking for third person, singular, masculine, and direct object, could be analyzable as a string of affixes, *-t-* for third person, *-o-* for masculine singular,[13] and *–n* for masculine direct object,[14] if one were given to analyzing and segmenting the forms to the fullest extent.[15]

Furthermore, parallels in form between the independent pronouns and the weak pronouns (e.g. 3SG.ACC *aftón*/*ton*, 1SG.ACC *eména*/*me*) are interesting and certainly undeniable, but they are not decisive in any way. It is the case in many languages that full pronominal forms bear some resemblance to other markers of person, without a word-level analysis for these other forms being called for. For instance, in the Algonquian language Cree, the element *ni-* marks first person and the element *ki-* marks second person, and these are similar to the free pronouns *ni:ya* 'I' and *ki:ya* 'you', but the reduced forms seem clearly to be prefixes, showing idiosyncrasies, such as requiring

the insertion of *–t-* before most vowel-initial stems, not found with the full forms and not required by general rules of Cree phonology (see Wolfart 1973 for discussion).

The morphological evidence therefore is at best inconclusive. This makes the phonological evidence presented by PW&S especially important to consider, and, as mentioned above, there are problems with this argumentation too.3.2.2. PW&S (p. 65n.5), working from the reasonable position (taken by Zwicky, among others) that affixes typically show various types of irregularities that are not characteristic of words,[16] claim that "in Greek ... there are no ... special irregularities in the morphophonology of the clitic[pronoun]s". They use this observation of theirs as an argument against treating the weak pronouns as affixal, reasoning that if there are no idiosyncrasies, these elements should not be considered affixal. This reasoning in itself is not unassailable, since the absence of positive evidence for affixal status is not equivalent to the presence of negative evidence against such a status. Nonetheless, the nature of the reasoning is moot, since there indeed are various irregularities in the morphophonology of the weak pronouns that PW&S simply overlooked.

First, in the combination of second person singular indirect object marker *su* with any third person form (necessarily accusative since two genitives cannot co-occur), the *u* may delete, optionally, though quite commonly, as indicated in (4):

(4) su to stélno —> sto stélno

you/IO it/DO send/1SG'

'I send it to you'.

While this appears to be a simple and possibly unremarkable case of syncope, it is actually instead quite remarkable, and quite important for the possible affixal status of the weak pronouns, since there is in fact no *general* process of Standard Modern Greek that elides *unaccented -u-* in such a context.[17] There is a regular process that deletes unaccented high vowels in northern dialects, and in the Standard language (based on a southern dialect) there is deletion of unstressed high vowels in fast speech. However, the deletion in *sto stélno* is not restricted to fast speech, though it is admittedly a matter of style. Still, there is a more telling reason to separate the elision of *–u-* in

cases like *sto stélno* from the more general fast speech deletion of *–u-*. In particular, the fast-speech deletion of *–u-* in Standard Greek typically leaves a "mark" on a preceding *s* (and other consonants as well) in the form of rounding, e.g. *sutárizma* 'shooting (in football or basketball)' can surface as [s^{w}tárizma].[18] Importantly, though, this rounding effect never happens in the reduced form of the indirect object marker *su*, so that the phonetic form of (4) is [sto stélno] and not **[s^{w}tostélno]). Thus, it may be concluded that there *is* a special, idiosyncratic, morphophonological phenomenon peculiar to a combination involving weak pronouns, i.e. a morphophonological irregularity, in particular affecting the combination of *su* + *to*.

Similarly, in the combination of any third person weak pronoun with the markers *na* or *θa*, the initial *t-* of the pronoun may (optionally, with considerable idiolectal variation) be voiced to [d], as indicated in (5):

(5) θa to stélno —> [θa do stélno}

FUT it/DO send/1SG

'I'll be sending it'.

However, intervocalic *–t-* in Greek is not usually distinctively voiced and *na* and *θa* do not canonically end in the one consonant, *-n*, which typical induces voicing in Greek.[19] It is of course true that *θa* did end in a nasal in earlier stages of Greek (the historical source of the voicing) but *na* never did.[20] In any case, moreover, there is no sign of a nasal with these forms before a vowel (where it would be expected to be able to surface if there were one with these forms underlyingly). Particularly telling is the contrast of the behavior of *θa* with that of the indicative negator *ðen*; on the one hand, there is *θa stélno* 'I will be sending' but *θa alázo* 'I will be changing', where it is especially noteworthy that it is not ***θan alázo*, whereas, on the other hand, there is *ðe stélno* 'I do not send' but *ðen alázo* 'I do not change' (notably, not ***ðe alázo*).

Therefore, it must be concluded that there *is* morphophonological idiosyncrasy associated with the weak pronouns, contrary to what PW&S claim to be the case. Furthermore, even PW&S recognize (p. 65n.5) that there are unexpected and thus idiosyncratic combinatorial restrictions on

the weak pronouns; for instance, there are no combinations involving first and second persons, and therefore no way of saying "He is sending you to me" via weak pronouns:

(6) *mu se stélni / *se mu stélni
me/IO you/DO sends/3SG

Further, the weak pronouns are subject to ordering restrictions, since indirect object forms always occur before — to the left of — direct object forms. All of these facts are consistent with an affixal analysis for the weak pronouns, being the sort of idiosyncrasies that would be unexpected under a word-level analysis, though admittedly they are cross-linguistically common enough so as not to decide the issue on their own.[21] However, with the additional facts from (4) and (5), the case for the existence of various morphological and phonological idiosyncrasies associated with the weak pronouns cannot simply be dismissed.[22]

3.2.3. PW&S point to other segmental phenomena as relevant to their word-level analysis of the weak pronouns, and in particular develop an argument based on what they call the phenomenon of "euphonic *-e*" in Greek. They claim that "there is a very strong preference for open syllables in word-final position … when a word terminates in final *-n*, there is a tendency for a euphonic *-e* to be added after it in order to obtain a word final open syllable" (p. 54); for instance, alongside *milún* 'they speak' and *peðjón* 'of children' one finds also *milúne* and *peðjóne*. They observe (p. 54) that "affixes ... have no need for such a constraint nor do they show such a tendency" and noting that "clitic pronouns may appear with such final euphonic *-e*", e.g. *tone vlépo* 'him I-see' (alongside *ton vlépo*), they claim thus that these facts argue for word-level status for the weak pronouns.

This argument is problematic, though, on several grounds. First, it is not clear that there really is any such phonological "tendency" towards word-final open syllables in Greek, at least to judge from the large number of loan words that have entered Greek with final consonants and consonant clusters that remain unaltered in the language, e.g. *máts* 'match', *zéniθ* 'zenith', *tést* 'test', *fílm* 'film', *asansér* 'elevator', and *básket* 'basketball', to name just a few, as well as the

internal loans from the archaizing former high-style variety of Greek (the so-called *katharévousa*), such as *ánθraks* 'coal, or *íðor* 'water', and from the native Greek words (or word-like forms) with a wider range of possible word-final sounds, namely interjections and onomatopes and the like, e.g. *mats-muts* for 'kissing noise', *tsak* 'cracking noise', *ax* 'Oh, ah!', and also various abbreviations and acronyms based on native elements, such as *prókat* 'pre-fab', a shortening of *prokataskevasména (spítia*) 'pre-fabricated (houses)', or the political party name *PASOK* (for *panelínio sosialistikó kínima* 'Pan-Hellenic Socialistic Movement').

Moreover, basing an argument on a "tendency" is tricky in general, as it is not clear what a counter-example would be and thus what this is a useful test of. PW&S themselves admit that "not all words ending in *-n* will add a euphonic *-e*") and when one examines such words, as well as the forms that do take the *–e*, an interesting counter to their argument emerges. Among the words ending in *-n* that never take *–e* are loans such as *betón* 'cement' and native forms such as *enðiaféron* 'interesting/NTR.SG' (i.e. **bétone*, **enðiaférone*), as well as some elements whose status is controversial ("particles") which PW&S want to call words, e.g. the indicative negator *ðen* 'not' (i.e., never, **ðene*). Furthermore, the real generalization is not that words can take this *–e* but rather that inflexional morphemes do (better: "can", since not all do); the best cases of euphonic *-e* come with, e.g., 3PL.PST *-an*, 3PL.PRES *-un*, and GEN.PL *-on* (among some others). Under this view, the occurrence of "euphonic *–e*" with the accusative singular weak pronouns *ton*/*tin* would actually be an arugment that they are inflexional, since they take the *–e*. And, it explains why *betón* and *enðiaféron* do not take *–e*, since the *-n* in those words is part of the word-stem (note plural *enðiaférond-a*, for instance) and not part of an inflexional element. Moreover, the failure of negative *ðen* to take *-e* would instead be an index of idiosyncrasy, and thus be consistent with, and even argue for, an affixal treatment.

3.2.4. In some ways the most interesting of the putative phonological arguments concerning the weak pronouns presented by PW&S comes from the much-discussed accentual readjustments in

Greek, yet here too, there is at best a non-argument for intermediate status for the weak pronouns as well as some positive indications for affixal status.

As PW&S note, there is in general at most a single main stress accent in a grammatical word, underlyingly (i.e., in its lexical form), and this stress must fall on one of the last three syllables; the feminine nouns in *–a*, for instance, show all the possibilities, as in *peripétia* 'adventure', *ðimokratía* 'democracy', and *omorfiá* 'beauty'. As is well-known,[23] when a clear inflectional suffix is added to a stem, it can trigger a rightward accent shift in a stem that has (lexical) antepenultimate accent, as in (7), where the ending *–tos* found in the neuter genitive singular adds a syllable to the word and the accent shifts from *#o-* to the antepenult *–no-:*

(7) a. ónoma 'name' (NOM/ACC)

b. onóma-tos 'of a name' (GEN)

This effect has generally been treated as consistent with a principle (the modern counterpart to the Ancient Greek "Rule of Limitation"; Joseph & Philippaki-Warburton 1987: 252) that the accent in a grammatical word can fall no farther from the end of the word than the antepenultimate syllable, so that the addition of a syllable necessitates an adjustment in the accent placement. However, when a pronoun (including both the weak object pronouns of (1b) and the possessives of (1f)) is added to the end of a word with antepenultimate accent,[24] it triggers an accent addition on the syllable before the pronoun and a reduction of once-antepenultimate accent, as in (8):

(8) a. kítakse! 'look!' (IMPV.SG)

kìtaksé me 'look at me!

b. to ónoma 'the name'

to ònomá tu 'the name his' (i.e., 'his name')

This effect has also generally been considered to be induced by the modern "Rule of Limitation", with the extra syllable of the pronoun requiring a main accent nearer to the end of the combination, and the accent reduction being triggered by a well-motivated ban on more than one main stress in a word.

Thus, the pronouns behave differently from clear affixes, which shift accent, as in (7), and from clear word combinations, which have no accentual effect. For linguists inclined to treat pronouns as word-like entities of some sort (e.g. "clitics", with their own maximal projection in the syntax), these facts have motivated a higher level construct such as "prosodic word" (implicit in the accounts of Arvaniti 1991, 1992) or "clitic group" (Nespor & Vogel 1986), or perhaps simply "phonological word". And, indeed, PW&W use these facts in just this way, and consider them a basis for distinguishing the pronouns categorially from "true" affixes.

However, it must be noted that there are many idiosyncratic accentual effects with affixes, involving accent mobility and stability, a sampling of which is indicated in (9):

(9) a. the neuter GEN.SG ending *-tos* provokes placement of accent on the second syllable to the left of it; usually, this involves a shift of the basic accent position to the right by one syllable, e.g. 'name' *ónoma ~ onómatos*, but note also 'verb' *ríma ~ rímatos*, where the basic accent placement is not antepenultimate and thus is unchanged by the addition of *–tos*[25]

b. the neuter GEN.PL ending *-ton* provokes placement of accent on the syllable immediately to the left of it; usually, this involves a shift of the basic accent position to the right by two syllables, e.g. 'name' *ónoma ~ onomáton*, but note also 'verb' *ríma ~ rimáton* where the shift is one syllable to the right, and the accent ends up one the syllable before the ending[26]

c. the IMPERFECT(ive past tense) stem-formative *-ús-* always attracts the accent onto it (whereas the alternate IMPERFECT marker *-aγ-* does not attract the accent, being accented only if antepenultimate), e.g. *filó* 'I kiss' ~ *filúsa* ~ *fílaγa* 'I was kissing' (cf. 1PL *filúsame* ~ *filáγame* 'we were kissing')

d. the genitive singular ending *–u* in the neuter *i*-stem nouns is always accented, e.g. *spíti* 'house/NOM.SG' ~ *spitçú* 'of a house'[27]

e. the 1SG.PAST *-a* is never accented and provokes no accent shift or special accent placement.

Thus, accent placement in Greek requires a number of stipulations that are keyed to particular morphemes and/or grammatical categories. One could therefore simply treat accent addition with the weak pronouns, if they are affixal, as one such idiosyncratic stipulated effect

associated with a particular class of affixes. Or, in a framework (such as Lexical Phonology) in which affixes are attached at different word-formational strata, all that would be needed is the assignment of the weak pronouns to being attached at a different stratum from that for some other affixes.

Moreover, some stipulation with the accentual effects connected with the attachment of weak pronouns seems to be necessary in any account. That is, while these effects do indeed appear to be tied in some way to the antepenultimate restriction on accent placement, the particular "solution" around that restriction that they provoke, i.e. a penultimate accent in the newly formed string coupled with reduction of the new preantepenultimate accent to a secondary accent, is not the only logically possible solution.[28] Thus, even with the particular outcome found, any account of these accentual effects that derives them from an accent placement restriction is going to require some stipulation, at the very least to specify exactly how the restriction is satisfied. In that sense, then, the stipulative approach outlined here under an affixal treatment of the weak pronouns is not as "costly" and ad hoc as it might at first appear.

Finally, again by way of suggesting that the accent adjustments in question, even though they have traditionally been taken to point to the weak object pronouns as nonaffixal, can be fit into a framework in which these pronouns are affixes on the verb, it can be noted that in longer words, it has been reported that a light secondary accent can optionally occur near the beginning of the word along with the primary accent in the last three syllables. For instance, Joseph & Philippaki-Warburton (1987: 243) note the pronunciation [pròγramatikós] 'programmatic', and Eleftheriades (1985: 37) cites [pròpolemikós] 'pre-war'. Thus the accentual effects discussed here may well be a reflex of a more general effect in longer words.[29]

At this point, it is necessary to consider the possessive pronouns (cf. (1f), (8b)), inasmuch as they admittedly also provoke accent addition just as the weak pronouns do. This is potentially embarrassing — but ultimately not problematic — for an affixal analysis of the weak pronouns, since the possessives show some clear word-like properties and their analysis is not controversial in the same way that the weak pronouns are. For instance, the possessives show a stylistically based

mobility, in that they can move within the noun phrase when the noun is modified by adjective, as shown in (10):

(10) o kalós fílos mu / o kalós mu fílos

the-good-friend/NOM.SG my

'my good friend' (literally: "the good friend of-me" / "the good of-me friend")

Such stylistic reorderings are characteristic of syntactic elements, i.e. words (Zwicky & Pullum 1983, Zwicky 1985).[30]

If the possessive pronouns are words (e.g. "clitics", or atypical, i.e. prosodically special, words),[31] then, one might argue, the weak object pronouns, which share accentual effects with the possessives, should be words too. Otherwise, the argument would go, the grammar would have unnecessary duplication through the multiple statements needed for accent addition, in that some affixes would trigger it and so would "clitics" (or some words).

However, there are some highly relevant further facts to consider here. In particular, there are prosodically weak words, such as the attitudinal marker *de* (cf. (1e) above), that have different accentual properties from the possessive pronouns. That is, *dé* cannot stand alone and must always "lean" on the end of a host, thereby always being positioned phrase-finally;[32] still, it never provokes accent addition, as shown in (11):

(11) a. ∂okímase 'Try!' (IMPV.SG)

b. ∂okímase dé 'Try already!'

c. *∂okìmasé de

Therefore, with regard to their accentual properties, *de* and the possessives have to be differentiated, even though they are both words and both prosodically deficient in some way. Thus, even within the class of words, accentually distinct behaviors must be recognized, and since they do not follow from any general principles, they must be stipulated. One could of course say that the possessives are "true" clitics, but if the accentual behavior in (8b) is the basis for such a classification, then presumably weak pronouns would belong in the same class (cf. (8a)).

However, it turns out that there are some key differences between weak pronouns and possessives that distinguish them and require the grammar to treat them as different kinds of elements. Besides the issue of each being subject to a different kind of conditioning on their mobility (see (10) and note 28), they behave differently with regard to nasal-induced voicing. This voicing is a sandhi process in Greek affecting some combinations involving elements in (1) by which a nasal triggers voicing on a following voiceless stop, as in (12):[33]

(12) /tin táksi/ 'the class/ACC' —> [tin dáksi]

/ton táraksa/ 'him I-agitated —> [ton dáraksa]

/ðen teriázi/ 'not it-matches' —> [ðen deriázi]

What is relevant for the possessives and weak object pronouns is the fact that a weak object with an initial voiceless stop, i.e. a third person form, is voiced post-verbally after the imperative singular of *káno* 'do, make' — a rare instance where a weak object pronoun occurs after a nasal-final host in the standard language — e.g. / kán tu mja xári / 'do for-him a favor' —> [ká*(n) d*u ...]. However, the homophonous possessive pronoun *tu* 'his' in a phrase such as *ton anθrópon tu* 'of his men' (literally, "of-the-men/GEN.PL of-him")[34] does not undergo voicing, surfacing as [ton anθrópon tu] and not *[ton anθrópo(n) du]. Thus, these two elements need to be differentiated in the grammar in some way; if accent addition with the possessives and weak pronouns is considered to be consistent with both not being affixes but being different from other elements such as the neuter singular genitive affix *–tos* (see (7b)) or "ordinary" words such as *trapézi* 'table', *kókinos* 'red', *kríno* 'I-judge', or *tóte* 'then', the post-nasal voicing facts are consistent with each being a different kind of element. Even in a framework such as that advocated by PW&S in which "clitic" constitutes a separate type (with "intermediate status"), the differences that emerge are actually quite numerous. There would have to be at least five distinct morphosyntactic elements: ordinary words (e.g. *tóte*) vs. prosodically deficient ("clitic") words like *dé* vs. possessive-type "clitics" vs. weak-pronoun-type "clitics" vs. affix, and possibly others as well. Thus the distinction introduced in section 1 above seems to give the right characterization here: there are just words and affixes, and degrees of typicality within each class; *dé* and the possessives would be different types of

atypical words — atypical in being prosodically deficient in some way — each with its own set of accentual properties, and the weak object pronouns and the various other elements in (9) would be affixes, each with its own set of accentual properties, and the weak object pronouns being atypical in having accentual traits that parallel a certain class of atypical words.

This is not to say that there should be an unbounded number of different basic types, though the logical extension of this approach would be the possibility of each word and each affix constituting its own (singleton) class. Rather, generalizations within class types would have to be possible, with allowances for degrees of atypicality, but the basic building blocks would be maximally simple, with just a two-way differentiation into word and affix.

The upshot regarding accent in Greek, a key piece of PW&S's word-level analysis for the weak pronouns, is that it admittedly is a way in which one might motivate an affix vs. clitic distinction, or a grammatical word vs. phonological word distinction, but it is not "clean", so to speak. And, as long as there is messiness, it is not obvious what it "buys" one, what advantages it offers. Moreover, the foregoing also means that trying to generalize over accentual behavior as a way of differentiating basic morphosyntactic element types is Greek is not a promising approach (even though it is the standard followed in the literature), since there is so much stipulation and internal differentiation of behaviors needed.

4. Some Positive Data: A New Argument for Affixal Status

The discussion to this point has largely been reactive in nature, responding to claims that PW&S make about data and the interpretations they place on that data. Thus, for the most part, the stragtegy has been to counter their arguments and thus show that an affixal analysis for the weak pronouns is a viable account of the facts. In this section, one positive argument is offered, involving some data not previously considered in the controversy.

Greek has a verb doubling construction, pivoting on the indicative negator *ðen* 'not', meaning 'whether one VERBs or not', as in (13):[35]

(13) a. fíji ðen fíji

leave/3SG not leave/3SG

'whether he leaves or not' (literally, "leaves-not-leaves")

b. θéli ∂en θéli

want/3SG not want/3SG

'whether he wants (to) or not' (literally, "wants-not-wants")

The canonical form of this construction is as in (13), with one word on either side of the negator. Moreover, when there is more than one word, e.g. a full subject or object, the resulting string is ungrammatical:

(14) a. *θéli o jánis ∂en θéli o jánis

wants the-John/NOM not wants the-John/NOM

'whether John wants (to) or not'

b. *θéli to musaká ∂en θéli to musaká

wants the-moussaka/ACC not wants the-moussaka/ACC

'whether he wants the musaka or not'

Significantly, with weak pronoun objects on the verb, the doubling construction is perfect:

(15) to θéli ∂en to θéli

it/ACC wants not it/ACC wants

'whether he wants it or not' (literally, "it he-wants not it he-wants")

These facts show that for this construction at least, the weak-pronoun + verb combination behaves like a single word.[36] In that case, the pronoun would be a piece of a word, that is to say, an affix. PW&S could simply say that these facts are evidence of the ultimate phonological adjunction of the weak pronouns onto their verbal hosts, through what they refer to as a "merging operation" (p. 61-62), or look to define a particular level of 'word' that would be relevant here (e.g. "grammatical word" as opposed to "lexical word"). However, the more ways that emerge in which these elements behave like affixes, especially in the absence now (given the previous sections) of any compelling evidence that they are *not* affixes, the more PW&S's word-level analysis for the weak object pronouns appears to be a matter of either special pleading or theory-bound stipulation.

5. The Other Elements

Since, as stated earlier in section 2, the analysis of one piece of the verbal complex has implications for the analysis of the other parts, the countering of arguments that the weak pronouns are words and the positive indications that they are affixes have important consequences for the analysis of *θa*, *na*, and the negation markers. For one thing, the main piece of the puzzle, so to speak, that led PW&S to say that these other elements must be words — recall from section 2 their distaste for seeing these elements as "prefixed on to clitic[object pronoun]s" — simply is not present. Moreover, given the affixal characteristics for *θa*, *na*, and negation that PW&S themselves point to (see section 2), it now becomes attractive to consider them too to be full-fledged affixes, not entities with "intermediate status" or syntactic entities that become affixal merely by late phonological merge operations.

Furthermore, additional positive evidence regarding the analysis of these elements is available and in some instances has been presented elsewhere in the literature. Regarding *θa* and *na*, for instance, one can point to the idiosyncratic voicing of *t*-initial weak object pronouns discussed above in section 3.2.2 (and cf. (5)); although that is given above as a reason for associating some idiosyncratic behavior with the weak pronouns, it is also unexpected morphophonological behavior from the point of view of the future/mood markers since, as noted earlier, they do not end canonically in a nasal, the typical voicing trigger in Greek; this synchronically unmotivated ability to trigger voicing thus constitutes a positive indication that these elements too are affixal. Further, in Joseph 2001, additional evidence from ordering restrictions, inseparability, and some semantic anomalies is presented favoring an affixal analysis of *θa*. With regard to the negation, positive arguments are presented in Joseph 1990 for the indicative negator *ðen* as being affixal, of a by-now familiar type, also involving ordering restrictions, inseparability, and some semantic anomalies.[37] While more can certainly be said about the status of these markers, it should be clear that under the analyses provided here, nothing stands in the way of

analyzing them as affixes, and there are moreover some distinctly positive indications of affixal behavior on their part to point to.[38]

6. Concluding Remarks

The extensive commentary and discussion in the preceding sections demonstrates that PW&S certainly presented a thought-provoking and stimulating account that has enriched Modern Greek linguistics and general morphological theory. Just as much of their argumentation was tied to particular theoretical assumptions they made, so too can it be said that the counter-arguments provided here are linked to a particular framework for analysis, one based on a parsimony principle in which only the minimum number of morphosyntactic building blocks or "atoms" is posited, and on the utility of recognizing typical/atyplical members within each of these minimal categories. These two central notions together warrant having just two basic elements, words and affixes, with degrees of typicality within each such class, thus allowing for typical vs. atypical words, and typical vs. atypical affixes. A by-product of this account is that so-called "clitics" do not form a unified — much less a basic — category in and of themselves, but rather generally fall into the atypical groups within the two basic category-types.

The goals of the present study have been to work within this restrictive framework and demonstrate that coherent, internally consistent, and even compelling accounts are possible of the range of facts that characterize the various "little elements" that make up the Modern Greek verbal complex. Not only were the theory-bound aspects of previous analyses exposed, but new facts overlooked in earlier accounts have been brought to light and brought to bear on the proper analysis of these elements. What emerges is that the affixal analysis of the weak object pronouns and of associated parts of the verbal complex does indeed find support from the behavior of these elements and cannot be dismissed out of hand. This finding advances our understanding of what it takes to identify and define 'word' in Modern Greek: much of the elaborated "machinery" relegated to the syntax or to models of phonology can more simply and straightforwardly be treated as part of the lexically internal build-up of words. The lexicon as a component plays an enriched role in this

view, with full listing of inflexional forms and a wide range of word-formation processes available, and words can thus be seen as lexical creations that feed directly into — as the "spelling out" of — syntactic nodes with rich featural composition.

As the list in (1) indicates, there is still more to be done to fully understand how all of the pieces of words and phrases in Modern Greek are to be classified and accounted for, since the discussion here has not covered all of the potentially controversial elements, but the strong claim to be made here by way of closing is that all of them will be able to be accommodated into the binary word/affix opposition argued for here.[39]

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than could be fit into my contribution to the volume arising from the conference proceedings (Joseph, To appear a), as well as a somewhat different focus, thus making the present paper appropriate. Parts of this version were developed while I was a Visiting Fellow at the Centre in the summer of 2001, so that my thanks are due to Bob and Sasha for their multiple parts in this paper. In addition, Amalia Arvaniti, Panayiotis Pappas, and Giorgos Tserdanelis provided invaluable help with some of the data. Audiences at a few other conferences have heard versions of this paper (see, e.g. Joseph 2001a), and I thank Cleo Condoravdi, Paul Kiparsky, and Angela Ralli for their useful comments on those occasions. Rich Janda has provided much healthy and insightful criticism of various points presented here. Finally, I would like to acknowledge the considerable intellectual debt I owe to my friend and former colleague Arnold Zwicky, whose influence on the positions I hold here should be evident. The usual disclaimers hold as to the complicity of these friends and colleagues in what is written here. I use the symbol *ð* here for the voiced interdental fricative in Greek.

[1] See Robins 1993, where, amongst other interesting discussion, the following definition of *léxis* 'word' is given (p. 57):

> léxis estì méros toû katà súntaxin lógou elákhiston
> word/NOM is/3SG part/NOM of-the concerning syntax/ACC expression least/NOM
> 'On the word: A word is the minimal part of a syntactic construction'.

[2] Such views, of course, may well be fueled by such external factors as the conventions of literacy and thus may have no theoretical significance, even if no less real to the speakers themselves.

[3] See Zwicky & Pullum 1983 and Zwicky 1985 for discussion of several traits that are characteristic of words and of affixes.

[4] Forms such as *po po po* raise the intriguing general question of whether interjections and exclamations are 'words'. They certainly can stand as independent utterances and thus in some sense are 'minimal syntactic units'. At the same time, though, they are functionally quite different from ordinary nouns such as *spíti* 'house' or verbs such as *líno* 'I loosen'. Still, characterizing

'word' on a functional basis so as to exclude interjectional utterances might be problematic, since there are (apparent) interjections that are 'quasi-grammatical', for instance the one-word prohibitive utterance *mi*! 'Don't!', which shows a synchronic connection (of a complicated sort — see note 38) to the bound subjunctive negator *mi(n)* listed in (1a).

[5] I label *mi(n)* as the subjunctive negator here since that is its role insofar as negation of finite verbs is concerned; it also negates the active participle, the verbal form with the suffix *–ondas* (e.g. *min éxondas* 'not having'), but it is not simply a general non-indicative negator since imperatival forms cannot be negated per se (thus there is no direct negative counterpart to a form such as *fíje*! 'Leave!"; rather "surrogate" prohibitives consisting of *mi(n)* plus a finite form are used). Nor is *mi(n)* describable as the general participial negator, in addition to its use as the subjunctive negator, since mediopassive participles are negated with an obligatorily *n*-less form *mi*, e.g. *mi episkeptómenos* 'not visiting', that is related to *mi(n)* synchronically in a complicated way, as hinted at in notes 4 and 38, but is not simply another instantiation of *mi(n)* (note for instance that *mi(n)* obligatorily shows *-n* before vowels whereas the mediopassive participle negator does not). A similar caution about the connection between *mi(n)* and the one-word prohibitive utterance *mi*! 'Don't!' mentioned in note 4 should be voiced here; the forms have some connection with one another but are not simply the "same" element, due to various characteristics that differentiate them.

[6] This label derives from the customary name used in the literature on Greek, and reflects the fact that the Ancient Greek genitive case forms encroached upon and eventually took over some of the earlier dative case's functions, including that of marking indirect objects (though prepositional marking of indirect objects also occurs).

[7] These are discussed in Joseph 1994, 2001c, and Joseph, Forthcoming.

[8] As suggested in the literature on grammaticalization, e.g. in Hopper & Traugott (1993: 6; 106ff.).

[9] For example, Rivero 1990; even those who have called these elements "clitics" seem to be operating with the assumption that clitics are merely prosodically deficient words, without confronting the question of whether the elements in question are even words at all.

[10] Similar argumentation was given in Joseph 1988, 1990, though it was pointed out that the leftmost elements, especially *na* and *as*, which are never internal in the verbal complex, need not be affixal even if all the other "inner" elements are. This is so because prosodically weak words can attach at the margins of hosts. Figuring into such arguments too is the claim (e.g. by Zwicky 1977, 1985) that there are no "endoclitics", i.e. clitics that are positioned word-internally, a claim that is based on the aforementioned Lexical Integrity Principle. See now Harris 2000 for a discussion of facts from Udi that provide a direct counterexample to any ban on endoclisis, thus calling into question both Lexical Integrity and the arguments discussed here regarding the need to analyze all the pieces of the verbal complex in the same way.

[11] Greek is a language that allows so-called "Object (or "clitic") Doubling", in which a weak object pronoun can co-occur with a full lexical noun phrase, e.g.

i. ðen tin íða akómi tin María
NEG her/ACC saw/1SG yet the-Mary/ACC
'I have not seen Mary yet'

[12] And, it should be pointed out, typically handled by movement rules (e.g. "NEG-Lowering"), even though there are other conceivable ways of encoding the relationship between a negative marker and other elements dependent on it, such as reference to features. By allowing reference to features, by the way, one can say moreover that it is not the affix *n't* per se that is interacting with the syntax but the feature(s) for which *n't* is the overt realization.

[13] More accurately, perhaps, nonfeminine, since *–o-* is found in the neuter singular forms as well (see also note 14).

[14] More accurately, nonneuter, since *–n* is found as well in the feminine singular forms (thus, marking for "masculine" emerges out of the intersection of nonfeminine (see note 13) and nonneuter marking.

[15] One must however be cautious about "hyperanalysis" or "hypersegmentation", as discussed by Janda & Joseph 1992 with regard to the person/number endings on the Greek verb; it may instead be better to treat the forms as units that are the spelling out of a number of different features in combination than to try to identify a single feature or feature combination with each segmentable piece.

[16] Or of clitics, if one believes in them!

[17] This is not to say that all elisions and contractions are remarkable or irregular, only that a distinction should be drawn between those that affect an unpredictable set of elements (and thus are not characterizable in purely phonological terms) and those that are generally applicable (and thus can be characterized purely phonologically). The contractions that are evident in the common fast-speech pronunciation of /su to ípa/ 'I said it to you' as [stópa] show this distinction well, for in addition to the unpredictable (and, as argued here, nonphonological) elision of *–u-* seen in (4), there is also the perfectly regular (predictable and thus conceivably phonological) contraction of junctural /o + í/ to [ó].

[18] This word of course is a based on a borrowing, deriving ultimately from English *shoot* (a ball), though here with a Greek derivational suffix *–izma*, working from the base verb *sutáro* 'I shoot a football/basketball'. There are actually very few Greek words, native or otherwise, which begin with *sut-* and would thus provide the crucial contrast with *su + to* in combinations like *sto stélno*.

[19] Some relevant facts on this process are given in section 3.2.4 regarding (12); see also note 33.

[20] The marker *θa* derives from earlier *θéli na*, literally 'it-wants that" via, among other stages, *θan* (see Joseph 1978/1990 for a summary of the various steps in the development of the future marker, with relevant literature, and Pappas & Joseph 2002 for a recent reaffirmation of this view in the face

of some counter-proposals); *na* derives from earlier *hina*, a subordinating conjunction originally meaning 'in order that'.

[21] As PW&S point out (p. 64, n.5), the person restrictions and ordering restrictions can be handled by "postsyntactic morphological filters" as proposed in Warburton 1977; see also Heath 1998 on restrictions cross-linguistically on combinations involving first and second person markers in various languages, although his discussion, being focused on agent-patient combinations may be only tangentially relevant here.

[22] Furthermore, there are some additional semantic/morphosyntactic idiosyncrasies to reckon with. For instance, the intransitive verb *péfto* 'fall' can occur in an ostensible transitive structure with an apparent (yet non-referential) weak object pronoun in an idiom with an intransitive meaning (cf. Joseph 1988):

i. pu θa tin pésume?
where FUT her/ACC fall/1PL
'Where will we go?' (literally: "Where will we-fall her")

Here the anomalies in argument structure and interpretation — and thus the complete non-compositionality of the morphosyntactic and morpholexical combination — are consistent with an affixal analysis for weak object pronouns. In a word-level analysis, the semantic anomaly could be treated as a mere idiomatic meaning, since phrases can of course be noncompositional — that is the essence of what it means to be an "idiom", after all — but the morphosyntactic anomaly in apparent argument structure would not be so easily accounted for.

[23] See, e.g. Newton 1972a, Joseph & Philippaki-Warburton 1987: §3.5, and Holton, Mackridge, & Philippaki-Warburton 1997: 23-26 for standard presentations of the relevant facts.

[24] The weak object pronouns, in the standard language, are regularly attached at the end of their verbal host when the verb is nonfinite (imperative or active participle) and at the beginning of other (i.e., finite) verbal forms; the possessives regularly follow the noun they are associated with though, as noted below, they do show some mobility. It should be noted that there are dialects that show

different attachment patterns for the weak object pronouns from that found in the standard language, e.g. in Cypriot where they typically follow the verb except when a modal element occurs, at which point the weak pronouns are preverbal. As interesting as it would be to pursue the question of the behavior of these elements in such dialects, I leave that for others, since my interest here is the standard language, the object of PW&S's analysis. For a penetrating and insightful discussion of the positioning of weak object pronouns in various dialects, with conclusions that in some ways accord well with the affixal analysis argued for here for the standard language, see Condoravdi & Kiparsky 2002.

[25] Because of nouns like *ríma*, it is more revealing to talk in static terms of the placement of the accent rather than the dynamic terms of accent shift and movement.

[26] This accentual effect with *–ton* reflects the fact that the *–o-* in this suffix was long and by the rules of Ancient Greek accentuation, therefore, could not permit antepenultimate accent in the word it attaches to and required penultimate accent. In Modern Greek, vowel length is not distinctive and as a result there is no basis — other than the historical facts, which are not relevant to the synchronic analysis — for treating the vowel of *–ton* as different in any way from the vowel of *–tos*; yet, the differential placement of the accent associated with each suffix persists, thereby making the accentual effect with *–ton* wholly unpredictable and idiosyncratic.

[27] With a substitution as well of [ç] for the stem-final *–i*, historically the result of a desyllabification and development from an intermediate stage with [j].

[28] For instance, the new accent could emerge on any other of the last three syllables; there is nothing in Greek word-level accentuation that favors the new penultima.

[29] There is some interesting dialect evidence that can be noted here, even though what happens in regional dialects is not directly relevant for the analysis of standard language. In particular, in Thessalian alongside the 1SG form *érxu-mi* 'I come' with, as expected, a single antepenultimate accent, there is the 1PL form *érxu-másti* 'we come' with "double" accent similar to the pattern found in (8); such forms contrast with the situation in Standard Modern Greek, where the 1PL is

erxó-maste, with shifted accent vis-à-vis 1SG *érxo-me*. This double accent in apparently affixal formations is found also in Cretan, and elsewhere (see Newton 1972b for discussion and further data, and Joseph 2001b). One could of course say that these endings have been reanalyzed as "clitics", but there is considerable circularity in such a step.

[30] The mobility shown by the weak pronouns, in that they occur preverbally with finite verbs and postverbally with nonfinite (imperative and participial) forms, is of a different type from that shown by the possessives. The differential placement of weak pronouns is grammatically conditioned (by finiteness/nonfiniteness) whereas the mobility of the possessives is a matter of stylistics. Only stylistic reordering is considered to be a word-level property. See Nevis & Joseph 1992 for a discussion of mobile affixes in Lithuanian and more generally. With regard to the matter of mobility, one anonymous reviewer suggested that English pairs such as *Have I not seen you here before?* and *Haven't I seen you here before?* show mobility for *n't* and thus run counter to Zwicky & Pullum's claim alluded to earlier (§3.1) that it is an affix; they specifically claim, however, that *n't* is not synchronically a reduction of *not*, so the difference between *have I not* and *haven't I* is not a matter of moving *n't* or moving *not* and reducing it, but instead reflect different stylistically controlled options for spelling out [+negative] in the syntactic bundle of features that accompany and determine such sentences.

[31] An anonymous reviewer made the interesting observation that "in Greek the shift of the possessive to post-adjectival position also results in a 'reduction' of in the 'wordiness' of the item in question — e.g. it may be stressed contrastively when post-nominal but not when post-adjectival". It may well be the case that the post-nominal possessives are in the process of splitting off from the post-adjectival ones and establishing themselves as separate and distinct elements despite their etymological identity (note the same has happened, it is argued below, with the etymologically identical possessive pronouns and weak indirect object pronouns); the force of this observation, of course, depends on the extent to which ability to take contrastive stress is indeed a characteristic of words and not affixes (note English *We will win the game through our DEfense*

not our OFfense, suggesting that in at least some languages apparent affixal material can be contrastively stressed).

[32] As noted in (1e), there is a fixed expression *dé ke kalá* 'with obstinate insistence' that would appear to be an exception to this claim about *dé*. While this can simply be treated as a lexical exception that does not disrupt the otherwise general validity of the claim about the positioning of *dé*, I would like to suggest that it need not be the case that *dé* in this expression must be treated as the same element as that in (11); to be sure, it has different positional properties and different combinatorial properties. In any case, if we can indeed take positional restrictedness to be an index of prosodic weakness, then it is clear that there is a positionally restricted *dé* whose accentual behavior is striking when compared with that of the positionally restricted weak pronouns.

[33] All that is given here are the bare necessities to make the point about the possessives and weak object pronouns, as there is actually much more that can be said about this process. For instance, the nasal assimilates in place to the stop when they differ (e.g. /ton pátera/ 'the father/ACC' —> [tom pátera] and subject to a complex of sociolinguistic conditions, the nasal can be weak or even completely absent. In addition, there are word-internal and post-lexical situations to consider, and both the influx of loan words and some knowledge of foreign languages on the part of many speakers have had an effect on an otherwise straightforward distribution of voiced and voiceless stops vis-à-vis adjacent nasals. See Arvaniti & Joseph 2000 for a recent discussion of some of the issues, with relevant literature.

[34] There are not all that many noun forms that end in *–n* in Greek, hence the choice here of a genitive plural.

[35] The verb in this construction is typically in the perfective aspect form, as with *fíji* in (13a), though not always (*θéli* in (13b) is perhaps imperfective though the verb may not be aspectual in the usual sense); it is admittedly rare for perfective present tense forms to occur more or less independently as here (thus *fíji* cannot stand by itself to determine a sentence the way an imperfective present tense verb can).

[36] One small complicating factor is that with a pronoun object and a full object co-occurring, as is allowed in Greek, the resulting doubling is not completely ungrammatical:

i. ??to θéli to musaká ∂en to θéli to musaká

it/ACC wants the-moussaka/ACC not it/ACC wants the-moussaka/ACC

'whether he wants the moussaka or not'

(literally, "it he-wants the moussaka not it he-wants the mousaka").

While I have no explanation for this, except to suggest that the one-word condition on each part of the verb doubling construction may not be so strong a constraint, the contrast between (14) and (15) is striking (and thus possibly quite telling).

[37] I consider the interesting observation of PW&S (p. 59) that there are nominalizations (with the definite article) of the "particles" in the phrase *ta θa ke ta min* 'the wills and the nos' to say more about the nature of the nominalization process than about the status of the grammatical uses of *θa* and *min*. That is, these apparently delocutive derivations give insight into the type of material that can be nominalized with the definite articles. Moreover, it is known that affixes can provide the basis for lexical creations via some form of clipping, presumably if they are salient enough, as in the case of English *ism* 'a distinctive doctrine', extracted out of words like *communism*, *socialism*, etc. Thus, the occurrence of *θa* and *min* in this phrase says nothing about their categorial status in general. Finally, in any case, the grammatical uses in the verbal complex are sufficiently separated functionally from the nominalizations to mean that the status of one use need not have any bearing on the status of the other.

[38] The situation with the subjunctive negator *mi(n)* is somewhat more complicated, since there is a complex set of inter-related functional and formal traits that various instantiations of *mi(n)* show; see Joseph & Janda 1999, Joseph 2001b, Joseph, To appear b, for discussion of *mi(n)* in the context of a construct dubbed the "morphological constellation" (a set of elements united by some similarity in form, but divided by differences of form and function such that they cannot be collapsed together into a single "morpheme" in the traditional sense).

[39] See Joseph (1994, 2001, Forthcoming) for some discussion of the weak subject pronouns of (1c), which are analyzable as affixes, and the weakened forms of (1d), analyzable as phonologically conditioned fast-speech variants of the strong nominative forms (the account given in most standard grammars of Greek, e.g. Holton, Mackridge, & Philippaki-Warburton (1997: 95)). Joseph (To appear b: §4n.13) has some brief thoughts on the definite article of (1g) and the dative/locative preposition of (1h) both as being prosodically deficient words, and Joseph 1990b suggests halfheartedly that imperatival *ja* could be treated as part of a serial verb construction (on which see Raptis 1997). I am not sure what to say about comparative *pjo* of (1i), except that given the promising results with the other elements in (1), I would surmise it will turn out to be analyzable as a word-level entity.