

## THE BENEFITS OF MORPHOLOGICAL CLASSIFICATION: ON SOME APPARENTLY PROBLEMATIC CLITICS IN MODERN GREEK\*

Brian D. Joseph  
The Ohio State University (USA)

### 1. Introduction and Theoretical Background

Any theory of grammar, and more particularly any theory of the component of a grammar, the morphological component, that is concerned with words and word-like units and the pieces that make them up, must provide some means of classifying "elements", i.e. morphemes and morpheme combinations, as to their morphological status. Of particular concern is the classification of elements into different types along the scale in (1):

(1) word - clitic - affix

with affix on one end of the scale as the typical bound morpheme, word on the other end as the typical free or complex morpheme, and clitic somewhere in between as a quasi-word/quasi-affix.

A concern for classification with regard to these three constructs is not meant to deny the importance of other taxonomic parameters for morphemes, such as, for words, content versus function, or for affixes, inflectional versus derivational. However, there is a special significance to the division of elements suggested in (1).

First, knowing where a given element falls on the classificatory scale in (1) permits one to make predictions about expected behavior of particular items in specific languages. Thus, once it is determined that the plural marker (*// s //*) in English is an affix, then certain properties automatically follow. For example, under the frequently held assumption of the integrity of stem-plus-affix combinations (see Kanerva 1987, for instance), the affixal status of *// s //* would guarantee, accurately, that other, nonaffixal, material could not interrupt its attachment to a particular noun.

Second, precise classification is necessary if cross-linguistic generalizations and putative universals concerning the elements in (1) are to have any empirical content. As Zwicky 1985 has emphasized, it is only by making a decision on such a classification that testable generalizations about the behavior of such units within individual languages and across different languages, i.e. universally, can emerge.

Particularly troublesome here are claims concerning clitics and clitic behavior, for their ambiguous status, lying somewhere between words and affixes, represents an implicit challenge to linguistic theory. Nonetheless, several generalizations about clitics have been proposed in recent years, and these claims need the benefit of precise classification in order to be tested adequately.

Two examples deserve mention here, for the facts to be considered below bear on their viability as linguistic universals. First, Kaisse 1982 has proposed, as a modified version of the generalization widely known as Wackernagel's Law, that S' (= "S-bar") clitics must occur in second position within their clause. Second, Zwicky 1987, following Klavans 1983 and others, has claimed that there are no endoclitics, i.e. clitics that are positioned within the morphological unit defined by a word (as if \*Bo-ll-b come were an acceptable variant of Bob'll come, with the clitic variant 'll of the future auxiliary will).<sup>1</sup>

In order to carry out the classification necessary for the testing of such hypotheses, though, it is essential to have a set of criteria which will allow for a decision as to the categorial status of a given element. Although many linguists have proposed criteria for distinguishing among words, clitics, and affixes (see, for example, Carstairs 1981 or Muysken 1981), those put forth recently by Zwicky, in Zwicky 1985, Zwicky 1987, and Zwicky & Pullum 1983, are adopted here. These "Zwicky criteria" present the strongest basis for deciding categorial status, for they are both internally consistent and derivative from the architecture of overall theory of grammar he assumes. In particular, Zwicky's

conception of grammar has a highly modular system (whose modules generally correspond to different "components" of grammar recognized in traditional frameworks) that has only limited interaction among the different modules; moreover, it has a monostratal phrase structure syntax that is maximally general, in that it refers to classes of items rather than to individual lexemes per se in its statements, and is further characterized by a rule-to-rule mapping between syntax and semantics.

Among the criteria that Zwicky proposes for distinguishing words, clitics, and affixes from one another are those given in (2); (2a) through (2d) distinguish affixes from nonaffixes (i.e., clitics and words), while (2e) and (2f) distinguish words from nonwords (i.e., clitics and affixes):

- |        |     |  |
|--------|-----|--|
|        | (2) | a. selectivity in combinatory possibilities (affix: high selectivity; nonaffix: low selectivity))  |
|        |     | b. morpho(phono)logical idiosyncrasies (affix: shows idiosyncrasies; nonaffix: few or no idiosyncrasies)   |
|        |     | c. semantic idiosyncrasies (affix: shows idiosyncrasies; nonaffix: few or no idiosyncrasies)   |
|        |     | d. paralleled by a morphophonological process (affix: can show such parallels; nonaffix: shows no such parallels)                                  |
| degree |     | e. ordering with respect to other elements (nonword: strictly ordered; word: some of free ordering (within other grammatical/semantic limitations) |
|        |     | f. phonological dependence (nonword: dependent; word: independent)   |

Other criteria are proposed in Zwicky's discussions, but those in (2) are the most relevant for the discussion below.

The overall thrust of these criteria is that affixes are characterized by a high degree of idiosyncrasy in their realization and behavior, while nonaffixes, i.e. clitics and words, show a high degree of regularity and predictability in realization and behavior. This general characteristic of affixes derives from the theory assumed in Zwicky's model of grammar because only the occurrence of clitics and words--but not of affixes--in particular phrasal positions is licensed by the (maximally general) syntax, and further, all such syntactically licensed elements must correspond to overt and fully regularly derived phonological material and must have a direct and transparent, hence nonidiosyncratic, semantic translation; with affixes so characterized, the basis for distinguishing between clitics and words is provided by other behavioral characteristics, such as extent of independence of one sort or another, most typically of a phonological nature.

With these criteria in place, the two hypotheses about clitic behavior mentioned above--second position for S-bar clitics and the ban on endoclititics--can be explicitly tested. More particularly, apparent counterexamples to each of these claims provided by some facts from Modern Greek can be subjected to rigorous testing via Zwicky's criteria.

## 2. The Greek Facts

The problems posed by the Greek facts both center on the finite verbal complex, a unit composed of the inflected verb plus various elements traditionally called "clitics", in the case of the weak object pronouns (1SG ACC me, 1SG GEN mu, 3SG ACC NTR to, etc.), and "particles", in the case of the modal markers na and as, the future marker qa, and the negation markers den and mi. These elements modify the inflected verb for tense, mood, negation, and argument structure (see Joseph 1985 for some discussion). The general schema for the verbal complex is sketched in (3), and some examples of the expansions of the verbal complex are given in (4):

- |     |        |   |          |   |        |   |                            |   |      |
|-----|--------|---|----------|---|--------|---|----------------------------|---|------|
| (3) | ( na ) | - | ( min )  | - | ( qa ) | - | (WEAK PRONOUNS)            | - | VERB |
|     | as     |   | den      |   |        |   | [1SG.ACC me, GEN mu, etc.] |   |      |
|     | MOOD   |   | NEGATION |   | TENSE  |   | ARGUMENT.MARKER            |   | HEAD |

- (4) a.  $\partial$ en qa ta fáo  
 NEG FUT 3PL.ACC.NTR eat/1SG  
 'I won't eat them'  
 b.  $\partial$ en tus to  $\partial$ ósame  
 NEG 3PL.GEN 3SG.ACC.NTR give/1PL  
 'We didn't give it to them'.

The classification of these elements is crucial for the claims concerning clitics noted above, for if any of the interior ones are true clitics (note especially the traditional label of "clitic" for the weak pronouns) while the exterior ones are affixes, the clitics would present a clear case of endoclitisis, being positioned within the bounds of a word unit consisting of a stem plus affixes. Similarly, the negation markers, whose distribution correlates with verbal mood-- $\partial$ en occurring with indicative mood and min with subjunctive mood--pose a problem for the modified Wackernagel's Law second-position generalization. To focus just on the indicative negator, relevant evidence concerning which is discussed below,<sup>2</sup> it need not occur in second position (note (5a) with sentence-initial  $\partial$ en) even though its scope is demonstrably sentential.<sup>3</sup> In particular, the occurrence of a negative marker with the verb determines the selection of the negative polarity indefinite pronoun kanénas as subject, as opposed to the nonnegative kápjós; this situation is illustrated in (5):

- (5) a.  $\partial$ en írqe kanénas / \*kanénas írqe  
 NEG came/3SG no-one/NOM  
 'No one came'  
 b. kápjós írqe / \* $\partial$ en írqe kápjós  
 someone/NOM came/3SG  
 'Someone came'.

It turns out, however, that there is a solution to these problems posed by the Greek facts for the hypotheses noted above. In particular, a close examination of the properties of the morphemes in question--the weak pronominals and the indicative negator--with regard to the Zwicky criteria allows for an analysis of these elements as affixes and not as clitics in the strict sense that these criteria now permit. Crucial to this solution is the ability to classify the problematic elements on a principled basis as being outside the domain of these generalizations. In that way, both the negator  $\partial$ en and the weak pronominals become irrelevant for these hypotheses, and so do not constitute counterexamples to them.

### 3. Evidence for the Affixal Analysis from Standard Modern Greek

The affixal analysis that provides the key to preserving the above-mentioned generalizations is well-supported by facts from Standard Modern Greek. In particular, evidence is available that is relevant to the various criteria noted above.

With regard to the indicative negator  $\partial$ en, it is clear first of all that must be a nonword. In particular, it is a phonologically dependent element: it cannot stand alone, for instance as a negative response word. By itself, \* $\partial$ en does not constitute a well-formed utterance, and cannot, for example, mean 'no; don't; not' independently. Second, it shows the strict ordering with respect to other elements it combines with that is characteristic of nonwords; as (6) shows, it must be leftmost in the verbal complex:

- (6) a.  $\partial$ en qa vlépo / \*qa  $\partial$ en vlépo / \*qa vlépo  $\partial$ en  
 NEG FUT see/1SG  
 'I will not be seeing'

- b.  $\partial$ en ton vlépo / \*ton  $\partial$ en vlépo / \*ton vlépo  $\partial$ en  
 NEG him/ACC see/1SG  
 'I don't see him'.

Other evidence suggests that of the nonword possibilities,  $\partial$ en shows some of the idiosyncratic behavior characteristic of affixes, and thus can be classified as a nonword, nonclitic, i.e. an affix. For instance,  $\partial$ en is highly selective in its combinatory possibilities, occurring only with indicative finite verbs, as in (7a), but not with subjunctive finite verbs, as in (7b), nor with nonfinite verbs, as in (7c):4

- (7) a.  $\partial$ en vlépo 'I don't see (PRES)'  
 $\partial$ en évlepa 'I wasn't seeing (IMPRF)'  
 $\partial$ en íða 'I didn't see (AOR)'  
 $\partial$ en qa vlépo 'I won't see (FUT)'  
 b. \* $\partial$ en na vlépo / na  $\partial$ en vlépo 'that I not see (SUBJUNC)'  
 c. \* $\partial$ en vlépondas 'not seeing/ACT.PPL'  
 \* $\partial$ en  $\partial$ és 'Don't see/IMPV.SG'  
 \* $\partial$ en  $\partial$ éste 'Don't see/IMPV.PL'.

Also,  $\partial$ en shows a semantic idiosyncrasy in its use in the expression  $\partial$ en mu lés 'tell me ...', which introduces an inquiry without a trace of negative meaning, even though its literal meaning is "you don't tell me". While admittedly, the nonnegative meaning of  $\partial$ en mu lés may lie partly in the pragmatics, it is nonetheless true that in this expression,  $\partial$ en idiosyncratically does not have its usual negative value, and so prevents a fully compositional meaning for this phrase. The other criteria--morpho(phono)logical idiosyncrasies and parallelism with a morphophonological process--do not yield any further support for the affixal analysis, but neither do they point towards a clitic analysis of  $\partial$ en, for there simply is no relevant evidence from them at all bearing on the classification of  $\partial$ en. Thus, all the available evidence from Standard Modern Greek supports the claim that indicative negation is realized by means of an affix.

With regard to the weak pronominal elements, a similar case can be made for analyzing them as affixal elements. The facts are discussed more fully in Joseph (1988a, 1988b) but a sketch of the relevant data can be made here.

As with  $\partial$ en, it is clear that the weak pronominal forms cannot be independent words. In particular, they are phonologically dependent, not being able to occur, for instance, as one-word answers --the corresponding strong form must occur instead:

- (7) pjón íðe o jánis? eména / \*me  
 whom/ACC saw/3SG the-John/NOM me/ACC.STRONG me/ACC.WEAK  
 'Whom did John see? Me.'

In addition, they are strictly ordered with respect to the other elements they combine with, as (8) indicates:5

- (8)  $\partial$ en ton vlépo / \*ton  $\partial$ en vlépo / \*ton vlépo  $\partial$ en / \* $\partial$ en vlépo ton  
 NEG him/ACC.WEAK see/1SG  
 'I don't see him'.

On other criteria, moreover, the weak pronouns test out as affixal, and not as clitics.<sup>6</sup> They show selectivity of combination, in general occurring only with verbs, although accusatives also occur with the adverb kalós 'well' in a collocation meaning 'welcome' (e.g. kalós ton 'welcome to him!') and genitives occur with some prepositions (e.g. brostá mu 'near me') and with a few adjectives (e.g. mónos mu 'on my own'). Though the existence of these occasional nonverb hosts for the weak

pronouns suggests a lesser degree of selectivity, at the same time, it is possible to point to extreme selectivity with respect to combinations with adverbs, for only *kalós* among the adverbs can support the weak pronouns. Also, the weak pronouns show various gaps in combinations, such as the absence of first person genitives with second person accusatives, e.g.:<sup>7</sup>

- (9) \*mu                      se                      ðósane  
me/GEN.WEAK you/ACC.WEAK gave/3PL  
'They gave you to me'

and such gaps constitute a type of selectivity recognized by Zwicky & Pullum 1983 as typical of affixes.

In addition, the weak pronouns show several idiosyncrasies. With regard to morphophonology, the second person singular genitive weak form /su/ in combination with any third person weak accusative form, all of which begin with /t-/, e.g. the neuter singular /to/, anomalously undergoes a contraction to [s], e.g. /su + to/ ---> [sto] 'to you it', even though there is no regular elision process affecting /u/ in that context in the standard language. Also, for at least some speakers, in some speech styles, the initial /t-/ of the weak third person pronouns may undergo voicing to [d-] in combination with the future morpheme *qa* and the modal marker *na*, e.g. /qa to káno/ --> [qa do káno] 'I will do it', even though intervocalic voicing of stops is not a regular feature of Greek phonology. With regard to morphosyntactic and semantic idiosyncrasies, it is significant that the weak pronouns can occur in idiomatic phrases with verbs which are ordinarily intransitive, e.g.:

- (10) pú      qa      tin                      pésume  
where FUT her/ACC.WEAK fall/1PL                      'Where will we go?'  
(literally "\*Where will we fall her").

In such phrases, the idiosyncratic behavior is twofold--not only is the weak pronoun empty, without any interpretation as an argument, but its cooccurrence with the intransitive verb is entirely irregular.

Given this behavior, from the perspective provided by the Zwicky criteria, one has to conclude that the weak pronominal elements of Standard Modern Greek, despite their traditional label, are best treated as affixes.

#### 4. Dialect Evidence

Beyond the evidence from the standard language presented in section 3, various facts from Greek dialects can be adduced to strengthen the case for the affixal analysis of the indicative negator and the weak pronouns pan-Hellenically. The modifier "pan-Hellenically" is needed, for the dialect evidence cannot of course bear on the analysis in Standard Modern Greek per se, but they lend a typological credence to the analysis proposed here since the dialects, as varieties of Greek, are closer to Standard Greek in all respects--lexically, structurally, grammatically--than any other human language.

First, evidence bearing on the status of the indicative negator comes from the Tsakonian dialect of the southwest Peloponnesos, based on the description in Pernot 1934. In this dialect, the indicative negator is *ó*, but it is parallel to Standard Greek *ðen*, coming historically from the first part (*ou*) of the Ancient Greek form *oudén* 'in no wise; not at all' (composed of *ou* 'not' + *dé* 'but' + *hén* 'one/NTR') which yielded *ðen*. Moreover, some bidialectal Tsakonian speakers produced a hybrid negator *ðon*, with the vocalism of the native Tsakonian form and the consonantism of the standard form, suggesting a closeness between the two forms that would permit inferences about the categorial status of the standard form from an examination of the dialectal form.

Two pieces of data are relevant here. As (11) shows, Tsakonian has innovated a virtual negative auxiliary through the fusion of *ó* with the verb 'to be', which is used in the formation of all present and imperfect tenses periphrastically in this dialect:

- (11) 1SG *óni* 'I'm not' (< *ó* + *éni*)      1PL *óme* 'we're not' (< *ó* + *éme*)  
           2 *ósi* 'you're not' (< *ó* + *ési*)      2 *óthe* 'you're not' (< *ó* + *éthe*)  
           3 *óni* 'he's not' (< *ó* + *éni*)      3 *úñi* 'they're not' (< *ó* + *íñi*).

Not only does the fusion give the appearance of an inflected negative verb, but the details of the contraction process that gave rise to it, especially in the 3PL form *úñi*, would require its synchronic derivation from *ó* plus 'be' to involve some morphophonological irregularities. In particular, /*ó* + *í*/ does not regularly yield [ú] synchronically (rather, [o]), so that *úñi* would require a synchronically idiosyncratic treatment. Thus, if not inflectionally affixal because of the fusion, Tsakonian *ó* would nonetheless present a synchronic idiosyncrasy, i.e. a characteristic of affixes.

Also, for certain forms of the paradigm in (11) irregular truncated variants are possible, specifically: 1SG *ói*, 3SG *ó*, and 3PL *úi*, and at some point in the history of Tsakonian, the old 3SG form, *óni*, separated off from the paradigm and was lexicalized as the emphatic 'surely not!' (the current 3SG being a reformation). Such specialization of individual forms is characteristically found with affixal formations, according to Zwicky & Pullum 1983, and not with those involving clitics, which are syntactically and semantically transparent. Thus, from this evidence, Tsakonian, and by extension, Greek in general, has affixal indicative negation.

Second, several dialect facts point to an affixal analysis of the weak pronouns. In particular, in many Northern dialects (e.g. of Thessalia, Macedonia, etc., cf. Thavoris 1977), the first person singular weak pronoun *m(é)* has come to occur inside of an indisputable affix, the plural imperative ending *-ti*; examples of such forms are given in (12):

- (12) a. *pé-m-ti* [= 'tell/IMPV + 'me' + PL]      '(You/PL) tell me!'  
           b. *ðó-m-ti* [= 'give/IMPV + 'me' + PL]      '(You/PL) give (to) me!'  
           c. *féri-mé-ti* [= 'bring/IMPV + 'me' + PL]      '(You/PL) bring (to) me!'

Such placement is unusual and unexpected for clitics, for it amounts to endoclysis, an otherwise unattested positioning for clitics.<sup>8</sup> On the other hand, such interior placement is not unusual if *m(é)* is an affix.

Also, in Tsakonian, a singular weak pronoun regularly occurs in a semantically empty usage as an optional but preferred accompaniment to a plural weak pronoun, as in (13):

- (13) *tsi m epétsere námu*  
           what me/ACC.WEAK said/2SG us/ACC.WEAK  
           'What did you say to us?' (literally: "What did you tell me to us?").

Thus, in such a construction, there is anomalous nonagreeing "doubling" of the plural weak pronoun. Not only does (13) reveal a semantic idiosyncrasy, in the form of a null interpretation, of the weak pronouns in Tsakonian, but it also reveals a syntactic idiosyncrasy, in the form of an irregular sort of agreement pattern, for person only and not for person and number, as is found, for instance, with doubling of a strong pronoun by a weak pronoun.

Finally, the dialect of Tírnavo in Thessalia, as described by Tzartzanos 1909, presents a clear case of processual realization of an entire weak pronoun (criterion (2d) above). In this dialect, the feminine accusative singular weak pronoun, which has the form [tn] before vowels, is realized with verbs having an initial dental stop or affricate simply as voicing on the verb's initial consonant. For example, contrasts such as those in (14) occur:

- (14) a. [táraksi] 'he disturbed' vs. [dáraksi] 'he disturbed her'  
 b. [tsákusi] 'he caught' vs. [dzákusi] 'he caught her'  
 c. [tsímsi] 'he pinched' vs. [dzímsi] 'he pinched her'.

Processual realization--here by the process of voicing--is expected in Zwicky's system only for affixes, not for clitics, so Tírnavo offers clear-cut evidence in this framework for the affixal analysis under consideration.<sup>9</sup>

Both the indicative negator and the weak pronouns, therefore, show themselves clearly in these dialects to be affixal in nature.

## 5. Conclusion

What emerges from this brief discussion is that these elements from Modern Greek, which at first glance seem so problematic for claims regarding clitics universally, turn out to present no problem, once a stringent set of classificatory criteria is applied to the data. Rather than being clitics, they are instead well-behaved affixal elements and as such are irrelevant to the hypotheses discussed at the outset. A ban on endoclitisis and second-position for S-bar clitics can therefore be maintained as viable universals, given present knowledge. To be sure, more examination of the Modern Greek verbal complex is needed, though the preliminary indications<sup>10</sup> are that it is a word-level unit, built up of a verbal stem plus clitic modal markers, tense prefixes, negation prefixes, affixal argument markers (realized prefixally for finite verbs, and suffixally for nonfinite forms), plus regular aspectual suffixes and suffixes for the person and number of the subject.

Thus the principles of morphological classification inherent in Zwicky's framework have enormous benefits for research in this area. To the extent, then, that the Zwicky criteria lead to satisfying results in dealing with these seemingly difficult facts, the analyses presented here can be said to lend considerable credence to the overall framework and approach to morphological classification embodied in Zwicky's theory.

### Footnotes

\*This work was supported by a Grant-in-Aid from the College of Humanities of the Ohio State University, and by a Fulbright Research award that enabled me to spend time in Greece collecting data and consulting with colleagues there. I would like to thank Tasos Christides and the other linguists at the University of Thessaloniki and my colleague Arnold Zwicky for stimulating discussion on these topics; Alexandra Aikhenvald, Vit Bubenik, Brent de Chene, Claude Hagège, Richard Janda, Evangelos Petrounias, and Elmar Ternes all contributed useful comments at the presentation of this paper at the Third Morphology Meeting in Krems, Austria, in July 1988.

1. Some apparent cases of endoclititics have been reported for various languages, but upon closer inspection each putative case has turned out to have a better analysis in some other way (see e.g. Nevis 1984, Klavans 1985, Macauley 1986). Thus, at present the claim of nonoccurrence for endoclititics constitutes a relatively secure working hypothesis. Moreover, it is theoretically desirable to maintain such a ban on endoclititics (data permitting), under an assumption that words, as the output of the morphological component, have an internal integrity (see Kanerva 1987) that is not subject to alteration by the syntax, the component responsible for the distribution of syntactic classes, including clitic elements, and for the internal structure of phrases, but not for the distribution of word-formatives (affixes) and the internal structure of words.

2. I am deliberately ignoring the potential counterexample posed by the modal negator *min*, largely for reasons of space; although it is a safe assumption that the considerations to be discussed regarding the classification of *den* carry over into the classification of *min*, *min* presents other analytic

problems that go beyond the scope of this paper so that all the relevant evidence regarding min can not really be explored here (see Joseph & Janda 1987 for some discussion of min).

3. Similar problems for the modified Wackernagel's Law would arise, of course, if any of the MOOD and TENSE markers in (3) are sentential in scope and are clitics (so also with the modal negator min (see footnote 2)).

4. On finiteness in the Greek verbal system, see Joseph (1983: Chapter 2) and Joseph 1985.

5. There is one predictable difference in the ordering of the weak pronominals, namely that besides the leftward placement evident with finite verbs, as in (6b) and (8), they regularly occur to the right of nonfinite verbs, e.g. with the active participle as in vlépondás ton 'seeing him'. Since this ordering difference is predictable based on finiteness (see also footnote 4), it does not contravene the import of the strict ordering criterion for affixhood. Similarly, the fact that weak pronominals, in some dialects of Greek, regularly follow even finite verbs is irrelevant to the question of strict ordering, for in such dialects, the ordering of these elements with respect to those they combine with is still strict.

6. Note also that based on evidence too detailed to present here from vowel contraction, stress assignment, and voicing assimilation, Malikouti-Drachmann & Drachmann 1988 conclude that the weak pronouns of Greek pattern more clearly with verbal prefixes than with free words, suggesting that phonologically, the weak pronouns need not be referred to with a separate class label such as "clitic".

7. See Warburton 1977 for some discussion of the relevant facts from Greek concerning weak pronominal combinations.

8. Admittedly, one could say that these are prima facie cases of endoclititics, the very construct the weak pronouns are being argued not to constitute in the verbal complex (e.g. in (4)). In the cases in (4), endoclitisis depended on a demonstration that some controversial elements, e.g. the negator *den*, are in fact affixes and not clitics, whereas in the forms in (12), an obvious affix (-ti) is involved, so that alternatives to an endoclititic analysis should at least be considered.

9. There is of course a possible synchronic derivation for this processual realization, one which mirrors the diachronic source: /tn + táraksi/ ---> tn dáraksi ---> tdáraksi ---> [dáraksi]; however, what is relevant in Zwicky's system is the surface realization of particular morphemes, so that the contrasting pairs in (14) are significant.

10. This work is part of a larger research project into the morphosyntax of the Modern Greek verbal complex, the full results of which have been made public in various lectures in the United States and Europe in 1987 and 1988 and should appear in print in the near future.

## References

- Carstairs, Andrew. 1981. Notes on Affixes, Clitics, and Paradigms. Bloomington: Indiana University Linguistics Club.
- Joseph, Brian D. 1983. The Synchrony and Diachrony of the Balkan Infinitive: A Study in Areal, General, and Historical Linguistics. Cambridge: Cambridge University Press (Cambridge Studies in Linguistics, Supplementary Series, Volume 1).
- Joseph, Brian D. 1985. "Complementizers, Particles, and Finiteness in Greek and the Balkans", *Folia Slavica* 7.3.390-411.



- Joseph, Brian D. 1988a. "Modern Greek Pronominal Affixes: The Case Against Clisis", paper presented at 24th Regional Meeting of the Chicago Linguistic Society (to appear in conference proceedings volume).
- Joseph, Brian D. 1988b. "Diachrony and Linguistic Competence--The Evidence from Morphological Change", paper presented at Conference on the Theory and Practice of Historical Linguistics, University of Chicago (to appear in conference proceedings volume, University of Chicago Special Publications in Linguistics Volume 2).
- Joseph, Brian D. & Richard D. Janda. 1987. On Generalizations as Linguistic Categories: Of Rules, Redundancy-Rules, Meta-Rules, Rule-Conspiracies, and Rule-Constellations. Paper presented at Conference on Linguistic Categorization (16th Annual University of Wisconsin-Milwaukee Linguistics Symposium), April 1987.
- Kaisse, Ellen. 1982. "Sentential Clitics and Wackernagel's Law", West Coast Conference on Formal Linguistics 1.1-14.
- Kanerva, Jonni M. 1987. Morphological Integrity and Syntax: The Evidence from Finnish Possessive Suffixes. *Language* 63.498-521.
- Klavans, Judith. 1983. The Morphology of Cliticization. Papers from the Parasession on the Interplay of Phonology, Morphology, and Syntax. Chicago: Chicago Linguistic Society, pp. 103-121.
- Klavans, Judith. 1985. The Independence of Syntax and Phonology in Cliticization. *Language* 61.95-120.
- Malikouti-Drachmann, Angeliki & Gaberell Drachmann. 1988. On Greek Clitics and Lexical Phonology. Paper presented at Sixth International Phonology Meeting, Krems, Austria, July 1988.
- Macauley, Monica. 1986. Karok avis: Endoclititic vs. Suffix., paper presented at Annual Meeting of the Linguistic Society of America, New York (abstract published in Meeting Handbook, p. 31).
- Muysken, Pieter. 1981. Quechua Word Structure. In F. Heny (ed.) *Binding and Filtering*. Cambridge: MIT Press, pp. 279-327.
- Nevis, Joel. 1984. A Non-Endoclititic in Estonian. *Lingua* 64.2/3.209-224.
- Pernot, Hubert. 1934. *Introduction à l'étude du dialecte tsakonien*. Paris: Société d'Éditions "Les Belles Lettres".
- Thavoris, Andonis. 1977. "Μορφολογικά μερικά ιδιώματα της θιτικής μακεδονίας", in First Symposium for Northern Greek Linguistics. Thessaloniki: Institute for Balkan Studies, pp. 75-95.
- Tzartanos, Ahilefs. 1909. *Pragmatía perí tis sinxrónu qesalikís ðialéktu*. Athens: P. A. Petráku.
- Warburton, Irene P. 1977. Modern Greek Clitic Pronouns and the 'Surface Structure Constraints' Hypothesis. *Journal of Linguistics* 13.259-281.
- Zwicky, Arnold M. 1985. "Clitics and Particles", *Language* 61.283-305.
- Zwicky, Arnold M. 1987. "Suppressing the Zs", *Journal of Linguistics* 23.133-148.
- Zwicky, Arnold M. & Geoffrey K. Pullum. 1983. "Cliticization vs. Inflection: English n't", *Language* 59.502-513.