A note on ‘shared’ allomorphs*

Gaberell Drachman

University of Salzburg

The paper first questions the traditional assumption that all derivations are in fact ‘derived’ from more basic forms. Examples of such ‘shared allomorphy’ are examined from diverse areas of Modern Greek morphology, such as de-verbal Nominals, plural-extensions, loss of voiced spirants in Cypriot, and initial vowel-loss. We conclude that allomorphs have independent status, but are (as in Burzio 1998) more or less closely/distantly interrelated, so that there is no need for the notion ‘derived from’ or even the prime ‘paradigm’. The paper goes on to ask how semantic ambiguities arise in complex verbs, comparing the idiosyncratic vs. cumulative readings provoked by one and the same prefix. To answer the question we adopt a syntax-based analysis (as in Marantz 2001) for all complex forms, extending this approach to so-called ‘incorporation’ for Greek.

Keywords: morphology, shared allomorphs, base-less allomorphs, syntax-based ‘derivations’, Distributed Morphology, incorporation

1. Introduction

Stated in traditional terms, the morphological component of a grammar is responsible for the formation of words. Also traditional is the tripart internal division of morphology into inflection, derivation and compounding, the first involving changes of grammatical relations (Tense, Aspect, Mood, Person, Number, Case, etc.), the latter two involving changes in conceptual content.¹ In such a framework it has often been tacitly assumed that derivations are, quasi by definition, always in fact derived; for examples referring to Modern Greek, see Holton et al. 1997.² However, the bulk of the present paper questions this assumption, viz. that all complex forms are derived from others more ‘basic’ and asks especially how far such a claim is tenable and reasonable at least in the case of Modern Greek.

The following seven example-types will be discussed, in illustration of the diverse aspects of the problems surrounding what we will call ‘shared allomorphy’ in Modern Greek. They are presented mainly in the form of questions concerning the notion ‘derivation’ as referred to above. Thus:

1. Do Nominalisations/Participles derive from Aorist stems?
e.g. Pres *vgáz-o* “take out”. Aor *é-vgal-a*, Pass.Aor *vgal-thik-a* and Action Nominal *vgál-simo* “taking out” derived from both Aor stems. But: *dérn-o* “beat”, Aor *é-dir-a*, Pass.Aor *dar-thik-a*, yet Act.Nom *dár-simo* “beating” agreeing only with Pass.Aor. For Greek spelling see note 5.
2. Deverbal Nominals and Adjectives take *-simo* or *-ma*. Is either suffix derived from the other? e.g. Aor *dí-dak-sa* “I taught” > Nominal *dí-dag-ma* “teaching”, but Aor *é-gdar-a* “I skinned” > Nominal *gdár-simo* “skinning”. Prosody will predict the allomorphy.
3. Plural extensions occur in *-d*, and in bi-thematic Nouns in *-t*. Are the extended forms ‘derived’? e.g. *kafé* “coffee”, Pl. *kafé-d-es*; *kréa-s* “meat”, Pl. *kréat-a*. But either allomorph may partake of derivation/compounding.
4. *d*-loss in Cypriot; is there reconstruction? e.g. Standard Greek *ládi* “oil”, Gen.Sg *ladyú*, Cypriot *lain*, Gen.Sg *lathk’ú*. Must we ‘reconstruct’ e.g. *lad*- and derive the Genitive?
5. Initial-V-losses often alternate with ‘fuller’ forms, as in: *iméra* ~ *méra* “day”. Are the shorter forms ‘derived’? But compounding and suffixation e.g. *meró-nixto* “day and night” vs. *imer-ísio* “daily” again suggest independence for the allomorphs.
6. Is there a case for paradigms? E.g. we observe stress-levelling. Thus, Standard Greek has the stress alternation seen in Nom.Sg *ánthropos* “person”, Gen.Sg *ánthrōpu*; but some dialects have (e.g.) *ánthropos* Gen.Sg *ánthropu*, while others have *ánthrōpos* Pl. *ánthrōpi*.
7. Can we speak of ‘derivation’ where candidate ‘bases’ are lacking? Thus, despite the occurrence of *is-ágo* “introduce”, and *dí-agogí* “behaviour”, there is in Modern Greek no verb **ag-o*. Again, the ‘derivation’ hypothesis fails.

The paper concludes with speculations on verbal-prefixing and ‘incorporation’. The basic problem is simple to illustrate: while e.g. *vlép-o* simply means “I see/look at”, the prefixed *para-vlép-o* is ambiguously “overlook” or “look intensely”. But the aorist roots disambiguate allomorphically, as in *pará-vlep-sa* “I overlooked”, vs. *para-íd-a* “I looked intensely”. Such data demands a fresh, in fact a syntax-based approach.³ The resulting tension with respect to the theoretical assumptions of the earlier sections of the paper remains unresolved.

2. The case of Action Nominals (AN) and Participles in Greek

2.1 Action nominals

We begin with action nominals and participles, and divide the relevant forms into two types: the allomorphs of the nominalising suffix are *-ma* and *-simo*, respectively responding to polysyllabic vs. monosyllabic stems.⁴

Let us come now to the view that 'Y is derived from X'. It has for example been claimed (most recently, in Holton et al. 1997) that Active/Passive Perfectives derive from the corresponding Imperfectives. Such a claim was always accompanied by a disclaimer — viz. a note on the occurrence of fairly large numbers of exceptions. Holton et al. list some 150 such verbs. We begin with an analysis of a selection of such verbs, in particular with their irregularity with respect to the macro-paradigms including the formation of the Present, Aorist, Past Passive and Past Participle, to which we add the Action Nominal. Let us take first the simple case,⁵ that of polysyllabic stems, as in Table 1 below.

Table 1. Polysyllabic stems

Gloss ⁶	Present	Aorist	Past Passive	Past Particip.	Action Nom
Teach	<i>dī-dā-sk-o</i>	<i>dī-dak-sa</i>	<i>dī-dāx-t-ika</i>	<i>dī-dag-méno</i>	<i>dī-dag-ma</i>
Light up	<i>anáv-o</i>	<i>ánap-sa</i>	<i>anaf-t-ike</i>	<i>ana(p)-méno</i>	<i>ána(p)-ma</i>
Pay	<i>pliró-n-o</i>	<i>plíro-sa</i>	<i>pliró-th-ika</i>	<i>pliro-méno</i>	<i>plíro-ma</i>
Treat	<i>ker-n(a)-ó</i>	<i>kéras-a</i>	<i>kerás-t-ika</i>	<i>keraz-méno</i>	<i>kéraz-ma</i>
Pass	<i>per-n(a)-ó</i>	<i>péras-a</i>	<i>perás-t-ika</i>	<i>peraz-méno</i>	<i>péraz-ma</i>
Spoil	<i>xal(a)-ó</i>	<i>xálas-a</i>	<i>xalás-t-ika</i>	<i>xalaz-méno</i>	<i>xálaz-ma</i>
Suck	<i>ruf(a)-ó</i>	<i>rúfik-sa</i>	<i>rufix-t-ika</i>	<i>rufig-méno</i>	<i>rúfig-ma</i>
Pull	<i>trav(a)-ó</i>	<i>trávik-sa</i>	<i>travíx-t-ika</i>	<i>travig-méno</i>	<i>trávig-ma</i>
Throw away	<i>pet(a)-ó</i>	<i>pétak-sa</i>	<i>petáx-t-ika</i>	<i>peta(g)-meno</i>	<i>péta(g)-ma</i>
Fly	<i>pet(a)-ó</i>	<i>pétak-sa</i>	<i>petáx-t-ika</i>	<i>petag-méno</i>	<i>pétag-ma</i>
Look	<i>kit(a)-ó</i>	<i>kítak-sa</i>	<i>kitáx-t-ika</i>	<i>kitag-méno</i>	<i>kítag-ma</i>
Love	<i>agap(a)-ó</i>	<i>agápi-sa</i>	<i>agapí-th-ika</i>	<i>agapi-méno</i>	–
Walk	<i>perpat(a)-ó</i>	<i>perpáti-sa</i>	<i>perpatí-th-ike</i>	<i>perpati-méno</i>	<i>perpáti-ma</i>

Polysyllabic stems share all Non-Present stems, including Aor/Ptc/AN, so that, *ceteris paribus*, 'X is derived from/based on Y' is not unreasonable for such stems. There are subclasses of stem-extensions (e.g. *ker-n* : *ker-as*, *ruf-a* : *ruf-ik*, *pet-a* : *pet-ak*, *agap-a* : *agap-i*). However, when we come to the monosyllabic stems, a surprisingly different situation obtains, as in Table 2 below.

Table 2. Monosyllabic stems

Gloss	Present	Aorist	Past Passive	(Obj) Past Ptc	Action-Nom.
Take out	<i>vgáz-o</i>	<i>é-vgal-a</i>	<i>vgál-th-ik-a</i>	<i>vgal-méno</i>	<i>vgál-simo</i>
Write	<i>graf-o</i>	<i>é-grap-sa</i>	<i>gráf-t-ik-a</i>	<i>gra(f)-méno</i>	<i>gráp-simo</i>
Skin	<i>gdér-n-o</i>	<i>é-gdar-a</i>	<i>gdár-th-ik-a</i>	<i>gdar-méno</i>	<i>gdár-simo</i>
Cry	<i>klé-o</i>	<i>é-klap-sa</i>	<i>kláf-t-ik-a</i>	<i>kla(p)-m-éno</i>	<i>kláp-simo</i>
Play	<i>péz-o</i>	<i>é-pek-sa</i>	<i>péx-th-ik-a</i>	<i>peg-méno</i>	<i>pék-simo</i>
Wet	<i>vréx-o</i>	<i>é-vrek-sa</i>	<i>vráx-ik-a</i>	<i>vre(g)-méno</i>	<i>vrék-simo</i>
Steal	<i>klév-o</i>	<i>é-klep-sa</i>	<i>kléf-tika</i> <i>~kláp-ik-a</i>	<i>kle(v)-méno</i>	<i>klép-simo</i>
Turn	<i>stréf-o</i>	<i>é-strep-sa</i>	<i>stráf-ika</i>	<i>stre(f)-méno</i>	<i>strép-simo</i>
Beat	<i>dér-n-o</i>	<i>é-dir-a</i>	<i>dár-th-ik-a</i>	<i>dar-méno</i>	<i>dár-simo</i>
Sew seed	<i>spér-n-o</i>	<i>é-spir-a</i>	<i>spár-th-ik-a</i>	<i>spar-méno</i>	<i>spár-simo</i>
Corrupt	<i>fthír-o</i>	<i>é-fthir-a</i>	<i>fthár-th-ik-a</i>	<i>fthar-méno</i>	<i>fthár-simo</i>
Wash	<i>plé-n-o</i>	<i>é-plin-a</i>	<i>plí-th-ik-a</i>	<i>pli-méno</i>	<i>plí-simo</i>
See ⁷	<i>vlép-o</i>	<i>id-a</i>	<i>id-ó-thik-a</i>	<i>id-o-méno</i>	<i>vlép-simo</i>
Say	<i>lég-o</i>	<i>íp-a</i>	<i>ip-ó-thik-e</i>	<i>ip-o-mén-</i>	
Enter	<i>bé-n-o</i>	<i>b-ík-a</i>	–	<i>baz-méno</i>	<i>bá(s)-simo</i>
Exit	<i>vgé-n-o</i>	<i>vg-ík-a</i>	–	<i>vgal-méno</i>	<i>vgál-simo</i>

The Action Nominal (AN) ALWAYS shares its root (i.e. its root is in an identity relation) with that of the Past Participle. The motivation here is that both PPTc and AN are ‘nominal’, thus closer than either of them is to the verb-parts.

Consistent with the no-derivation hypothesis, we must postulate the following ‘short’ allomorphs with respect to the corresponding data in Tables 1 and 2.

In Table 1, for *anávo* ‘light-up’, *ána-ma*, *ana-méno*; and for *petáo* ‘throw-away’,⁸ *péta-ma*, *peta-méno*.

In Table 2, for *vréxo* ‘wet’, *vre-méno*; for *gráfo* ‘write’, *gra-méno*; for *kléo* ‘weep’, *kla-méno*; for *klévo* ‘steal’, *kle-méno*; and for *stréf-o* ‘turn’, *stre-méno*; as also for *bén-o* ‘enter’, *bá-simo*.

There are several different sets of roots shared with Ptc/AN. This confirms for our first case that M-sharing sets (not, derivations) are in principle arbitrary, as predicted in our model, and summarised in the display in Table 3 below.

Table 3. Shared Roots

ROOT	Ptc/AN share stem with		
1. <i>graf</i> -:	Pres	Aorist	Passive
2. <i>gdern</i> -:	–	Aorist	Passive
3. <i>vrex</i> -:	–	Aorist	–
4. <i>dern</i> -:	–	–	Passive
5. <i>ben</i> -/ <i>vgen</i> -:	–	–	–

Reverting to Table 2, the form *ple-n-o* is an N-Present, despite the occurrence of the Active Aorist *é-plin-a*; there is no form **é-pli-s-a*, and **épli-a* would be equally illicit. And the related forms *plí-th-ik-a*, *pli-méno*, *plí-simo*, *pli-si* support this suggestion. Contrast also forms like *diefthín-o*, Passive *diefthín-thike*, where the nasal is retained and is thus apparently part of the stem itself.

Granted the arbitrary fact of zero-grade (syllabified *-r-*) in Passive *dár-th-ik-a*, why should the PPtc and AN follow this option (*fthár-th-ik-a*), rather than the commoner Aorist (here, *fthira*)?

Most troublesome is the question as to what causes the distinctions we have found between polysyllabic and monosyllabic stems. It is reasonable to assume some role for prosody, i.e. to the very fact that mono-vs.-poly-syllabicity is operative here. No augment being required, the disyllabic non-pasts exhibit either the perfective *-s*, OR the Past-marker *-Vk* — but as part of the (shared) ‘derived’ stem. On the other hand, it is not clear why the monosyllabic stems follow diverse non-Present shared-stem patterns, while the disyllabic ones (largely, the *-á-o* descendents of the old contract verbs) uniformly share their non-Present stems. Still, it seems reasonable to repeat that morphological paradigms consist of elements constituting independent exponents of feature-bundles, but yet closely related in form and meaning.⁹

2.2 Participles

Taking now the same range of verbs with respect to the Present Participle, we consider the shared distribution across the categories Present Active, Passive, and Ptc, as in Tables 4–5 below.

Table 4. Disyllabic stems

Gloss	Present Act	Pres.Pass	Pres.Ptc
Teach	<i>di-dá-sk-o</i>	<i>di-dásk-ome</i>	<i>di-dask-ómeno</i>
Light up	<i>anáv-o</i>	<i>anáv-ome</i>	<i>anav-ómeno</i>
Pay	<i>pliró-n-o</i>	<i>plirón-ome</i>	<i>pliron-ómeno</i>
Treat	<i>kern-n(a)ó</i>	<i>kernyéme</i>	–
Pass	<i>per-n(a)ó</i>	<i>pernyéme</i>	–
Spoil	<i>xal(a)-ó</i>	<i>xalyéme</i>	–
Suck	<i>ruf(a)-ó</i>	<i>ruf-yéme</i>	? <i>ruf-ómeno</i>
Pull	<i>trav(a)-ó</i>	<i>travyéme</i>	–
Fly	<i>pet(á)-o</i>	<i>pet-yéme</i>	? <i>pet-á-meno</i>
Look	<i>kit(á)-o</i>	? <i>kityéme</i>	–
Love	<i>agap(a)ó</i>	<i>agapyéme</i>	? <i>agap-ómeno</i>
Walk	<i>perpat(a)ó</i>	<i>perpatyéme</i>	

Table 5. Monosyllabic stems

Gloss	Pres.Act	Pres.Pass	Pres.Ptc
Take out	<i>vgáz-o</i>		
Write	<i>gráf-o</i>	<i>gráf-ome</i>	<i>graf-ómeno</i>
Drag	<i>sér-n-o</i>	<i>sér-n-ome</i>	<i>sir-ómeno~ser-n-ómeno</i>
Skin	<i>gdér-n-o</i>	<i>gdérn-ome</i>	<i>gder-n-ómeno</i>
Cry	<i>kléo</i>	<i>klég-ome</i>	? <i>kleg-ómeno</i>
Play	<i>péz-o</i>	<i>péz-ome</i>	? <i>pez-ómeno</i>
Wet	<i>vréx-o</i>	<i>vréx-ome</i>	<i>vrex-ómeno</i>
Steal	<i>klév-o</i>	<i>klév-ome</i>	<i>klep-t-ómeno</i> * <i>klevómeno</i>
Turn	<i>stréf-o</i>	<i>stréf-ome</i>	<i>stref-ómeno</i>
Beat	<i>dérn-o</i>	<i>dérn-ome</i>	<i>dern-ómeno</i>
Sew seed	<i>spérn-o</i>	<i>spérn-ome</i>	<i>spern-ómeno</i>
Corrupt	<i>fthír-o</i>	<i>fthír-ome</i>	<i>fthir-ómeno</i>
Wash	<i>plén-o</i>	<i>plén-ome</i>	? <i>plen-ómeno</i>
Say	<i>lé(g)-o</i>	<i>lég-ome</i>	<i>leg-ómeno</i>
Exit	<i>vgén-o</i>		
See	<i>vlép-o</i>		
Enter	<i>ben-o</i>		

Of course the Present markers (-sk-, -n-, even -t-) continue to be activated for the Ptc. What is notable is that the Ptc and the corresponding Pres.Pass occur or fail to occur jointly. Nevertheless, exceptions again confirm the ‘shared forms’ hypothesis rather than the claim that the Ptc derives from the M/Passive.

Our claim finds further support in sets like *klév-o klév-ome*, but *klep-t-ómeno* (and not **klev-ómeno*), the Ptc *klep-t-ómeno* reverting to the historically earlier stem with *-t*, rather than sharing with the later *klev-*. Compare the further support in *sér-no*, but *ser-n-ómeno* as also *sir-ómeno*, and see below (Section 7) on paradigms.

3. Shared allomorphs — a prosody–semantics interface

We compare now the distribution of the Nominal and Adjectival allomorphic suffixes *-simo* and *-ma*. For Action-Nominals, prosody dictates the choice of suffixes: suffix *-simo* chooses monosyllabic stems, as in *kláp-simo*, while suffix *-ma* chooses polysyllabic stems, as in *skúpiz-ma*. The motivation for this alternation has of course nothing to do with ‘derivation’, in whichever direction. Rather, the choice is a prosodic one,¹⁰ guaranteeing Non-Final Trochaic stress in each case. The default template is simply that seen in (*klá.p-si*)*mo* but (*skú.piz*)-*ma*, that is: ((σ σ) σ)###.

Now let us compare the Resultatives. Thus, with monosyllabics we have the (unmarked) assimilations seen in

- (1) a. *kláp-simo* and *klá-ma*, “cry”
- b. *plék-simo* and *plég-ma*, “knit”

However, with polysyllabics there is no *-sima* suffix available, so that *skupiz-ma* must stand for both Active and Resultative. To illustrate this ambiguity compare:

- (2) a. *Sto gráma, mas léi tin istoría tu spityú tu*
 “In the letter, he tells us the story of his house”, vs.
 **Sto grápsimo, mas léi...*
- b. *To grápsimó tis ine anómalo*
 “Her writing is irregular”, vs.
 ?? *To gráma tis ine anómalo*
- c. *To psárema ine endiaféron and*
 To psàremá-tu diarkúse óres

When we ask why this ambiguity occurs with polysyllabics, we are forced to consider also the *-able* construction, as in:

- (3) a. *diavivá-simo* “transferable”
- b. *ergá-simo* “working (day)”
- c. *diathé-simo* “available”

- d. *eksigí-simo* “explicable”
- e. *konservopíi-simo* “conservable”

This construction apparently employs a morpheme *-simo*, i.e. one homophonous with Action-*simo*. Now *-able -simo* makes adjectives rather than nominals. But *-able -simo* creates a complementation with Action *-simo* and selects only polysyllabic roots. This is perhaps why we get the contrast *rép-simo* “belching” (an Active Nom) but *vrvavév-simo* “rewardable” (an *-able* Adjective).

Here we add examples from Italian and English. For Italian consider the Table 6 below (from Burzio 1998).

Table 6. Italian *-ore* Nominals

Gloss(Infin)	Infinitive	Participle	-ore Noun
a. adapt	<i>adatt-are</i>	<i>adatt-at-o</i>	<i>adatt-at-ore</i> (NounBase=Ptc)
b. compress	<i>comprim-are</i>	<i>compres-s-o</i>	<i>compres-s-ore</i> (NounBase=Ptc)
c. win	<i>vinc-ere</i>	<i>vin-to</i>	<i>vinc-it-ore</i> (NounBase=Inf & Ptc)
d. ascend	<i>ascend-ere</i>	<i>asce-s-o</i>	<i>ascen-s-ore</i> (NounBase=Inf & Ptc)
e. aggress	<i>aggred-ire</i>	<i>aggred-it-o</i>	<i>aggres-s-ore</i> (NounBase=neither Inf nor Ptc)

In this seminal article, Burzio showed that for Table 6 (a) and (b) above the Nominal could be said to have the Participle as its ‘base’. For (c) and (d), the Nominal could be said to access both the Infinitive and the Participle for its base(s). However, for the Nominal under (e) above, neither the Infinitive nor the Participle are relevant: the forms can only be explained via correspondence with other nouns in *-ore* like (b) *compres-s-ore*.

For English, consider the following (Aronoff 1976:116ff): In disyllabics the verb has final stress, as in *fragment*, *segment*, but the corresponding noun has initial stress with reduced final vowel, as in *frágment*, *ségment*. But in trisyllabics the verb has initial stress, as in *órnamént*, *cómplément*. So does the noun, but without a reduced final-syllable vowel, as in: *órnamEnt*, *cómplémEnt*.

Now Chomsky & Halle (1968) proposed accounting for these differences by deriving the nouns from the corresponding verbs, a proposal that proved unfeasible. Moreover, there appear to exist some 75 nouns of the form *X-ment* which have (recall the Italian examples above) no corresponding verbs; thus, *element*, *sediment*, *monument*. This suggests that we might derive the verbs from the nouns, but it equally supports the view that neither set is derived from the other, as pointed out in Aronoff, again just as for the Italian case above, and just as in our ongoing presentation on Greek.

4. Extended plural stems, and bi-thematic nouns

Continuing our exploration of shared allomorphy and the ‘derivation’ hypothesis, we take now the case of bi-thematic Nouns such as *papá-s papád-es* and *kréa-s kréat-a*. As Triandafilides (1996: paragraph 244) points out, either allomorph may partake of derivations and compounding, which yet again militates against ‘derivation’. Typical allomorph-distributions are given below. In discussing this data, we first acknowledge that Triandafilides’ taxonomy foresees the present insight, viz. that these are all cases where Vowel-Vowel hiatus is being avoided in ‘derived’¹¹ environments. That in each case the variants are all accessible to derivation and compounding (though apparently only on a lexical basis) is a second important common factor. What distinguishes the two sets of cases (Table 7 vs. Table 8 below) is the domain of the inflectional allomorphy; in Table 7, it embraces singular vs. plural, but in Table 8 all vocalic endings (singular or plural).

We see that, for each of the pairs of allomorphs, both members are represented, albeit on a lexeme-by-lexeme basis, under either derivation or compounding or both. Three sub-classes of stems can be distinguished: a) roots like *polítis* with only simple *-es* plurals; b) stems like *papá* with *d*-extension plural allomorphy; and c) the *i*-class including *nífi* ‘bride’ (as well as *kathigitís* ‘professor’, *aféntis* ‘boss’, *despótis* ‘despot’) with the alternant suffix allomorph *-ád-es*, again also found under derivation.

Table 7. *d*-zero alternation

Inflection	Derivation	Compounding
Sg. <i>papá-s</i>		<i>Papa-yánis</i>
Pl. <i>papád-es</i>	<i>Papad-ópulos</i> , ¹² <i>papad-ístikos</i>	<i>papad-o-pédi</i> , <i>papad-ó-spito</i>
Sg. <i>kafé-s</i>	<i>kafe-dzís</i> , <i>kafedzíd-iko</i>	<i>kafe-koptiras</i> <i>kaf-ó-briko</i> <i>kafed-ó-briki</i>
Pl. <i>kaféd-es</i>		
Sg. <i>papú-s</i>	<i>papú-lis</i>	
Pl. <i>papúd-es</i>	<i>papud-áki</i> , <i>papud-ístiko</i>	
Sg. <i>alep-ú</i>		<i>alep-ó-pulo</i> , <i>alepó-guna</i> , <i>alep-o-folyá</i>
Pl. <i>alepúd-es</i>	<i>alepud-áki</i> , <i>alepud-yá</i> , <i>alepud-ísyo</i>	
Sg. <i>nífi</i>	<i>nif-ikó</i>	
Pl. <i>níf-es</i>		<i>nif-o-stóli</i>
<i>nif-ádes</i>	<i>nif-ád-iko</i>	

Glosses for Table 7

papás “priest”, *papadístiko* “priest-like”, *papadopédi* “priest’s child”, *papadóspito* “priest’s house”.

kafé “coffee”, *kafedzís* “coffee-maker”, *kafedzídiko* “coffee-shop”, *kafekoptíras* “coffee-grinder”, *kafóbriko* “small coffee-pot”.

papús “grandfather”, *papúlis* “grandpa”, *papúdes* “grandfathers”, *papudáki* “grandpa” (dim.), *papudístiko* “grandfatherly”.

alepú “fox”, *alepópulo* “fox-whelp”, *alepóguna* “fox-fur”, *alepofoliá* “fox-den”, *alepúdes* “foxes”, *alepudáki* “young fox”, *alepudyá* “related to fox”, *alepudísyo* “fox-like”.

nífi “bride”, *nífikó* “bridal”, *nifes* “brides”, *nifostóli* “bridal decorations”, *nifádes* “brides”, *nifádiko* “bridal”.

Table 8. *t*-zero alternations

Inflection	Derivation	Compounding
Sg. <i>kré-as</i>		<i>kre-o-pólis</i> , <i>kre-o-fágos</i> <i>kre-o-kof-tíras</i>
Pl. <i>krét-a</i>	<i>kreat-eró</i> , <i>kreat-íla</i> , <i>kreat-inó</i>	<i>kreat-o-polío</i> , <i>kreat-o-sanída</i> <i>kreat-ópita</i>
Sg. <i>ém-a</i>		<i>em-o-sféria</i> <i>em-o-dosía</i> <i>em-o-ragía</i>
Pl. <i>émat-a</i>	<i>emat-áki</i> , <i>emát-oma</i>	<i>emat-o-vaménos</i> <i>emat-o-kílisma</i> <i>glik-o-émat-os</i>
Vb. (e) <i>mat-óno</i>	<i>mat-o-ménos???</i>	
Sg. <i>málam-a</i>		<i>malam-o-kapnisménos</i>
Pl. <i>malámat-a</i>	<i>malamat-éno</i> , <i>malamat-iká</i>	
Vb. <i>malamat-óno</i>		
Sg. <i>yér-os</i>	<i>yer-úlis</i> <i>yerat-ía</i>	<i>yer-o-jánis</i> <i>yer-o-komío</i>
Sg. <i>yéron-d-as</i>	<i>yerond-ikó</i> , <i>yerond-áki</i>	<i>yerond-o-kóri</i>
Sg. <i>elpíd-a</i>	<i>elpid-úla</i> <i>ap-elpis-ía</i>	<i>elpid-o-fóra</i>
Vb. <i>elpíz-o</i>		

Glosses for Table 8.

kréas “meat”, *kreopólis* “butcher”, *kreofágos* “meat-eater”, *kreokoftíras* “meat-cutter”, *kréata* “meats”, *kreateró* “fleshy”, *kreatíla* “meat-smell”, *kreatinó* “of flesh”, *kreopolío* “butcher’s”, *kreatosanída* “meat-board”, *kreatópita* “meat-pie”.

éma "blood", *emosféria* "blood corpuscles", *emodosía* "blood donation", *emorayía* "hemorrhage",

émata "bloods", *ematáki* "blood" (dim), *emátoma* "hematoma", *ematovaménos* "bloody", *ematokílisma* "carnage", *glikoéματος* "loveable", *ematóno* "bleed", *matoménos* "bloody".

málama "gold", *malamokapnizménos* "golden-smoked", *malámata* "golds", *malamaténio* "golden", *malamatiká* "golden jewels", *malamatóno* "gild".

yéros "old man", *yerúlis* "oldie", *yeroyánis* "old Yannis", *yerokomío* "old-folks-home", *yeratiá* "old-age", *yérondas* "old man", *yerondikó* "senile", *yerondáki* "old man" (dim), *yerondokóri* "spinster".

elpída "hope", *elpidúla* "hope" (dim.), *elpidofóra* "hopeful", *apelpisía* "hopelessness", *elpízo* "hope".

Is the choice of allomorphs in derivation and compounding random or arbitrary? In derivation, though there are few enough consonant-initial suffixes to check by, the generalisation seems warranted that vowel-initial suffixes attach only to consonant-final stems. We interpret this as a constraint on hiatus at morpheme boundaries (C+C and V+V sequences), which accounts for the majority of the derivational forms above, in particular the affinity of V-initial suffixes to the extended allomorphs. Notable is the adjectival-participial form *mat-o-menos*, and not **em-ménos* or **mat-ménos*, both of which would result in consonantal hiatus. But then where does the internal -o- in *mat-o-ménos* come from? This is a derivation, certainly not a compound. From the Table 8 above, one might claim that this -o- is part of the stem of -ono verbs,¹³ cf. *mat-ó-n-o*, *mát-o-sa*, *mat-o-ma*.

On the other hand, the compounds behave differently, with the compound joining vowel -o- seemingly indifferent to (or violating) the V+V constraint; this we see in alternations like *kreat-o-polío* but also *kre-o-pólis*, as well as *glik-o-éματος*. And this may well constitute a criteria difference between derivation and compounding. We note here that the C-C hiatus constraint is not violated (there are no compounds of the shapes **kreat-polis*, **mat-ménos*) — where o-epenthesis resolves the hiatus. For the stressing of the compounds, see Drachman & Malikouti-Drachman 1994.

5. b/d/g-loss and a Cypriot Greek reconstruction

The *d*-extension problem (already discussed for MGk in Section 4 above) has yet wider ramifications in Cypriot Greek, provoked by the general loss of intervocalic voiced spirants. Consider the following data (from Newton 1972: 48–57):

(4)	<u>St.Gk</u>	<u>N/Acc.Sg</u> vs. <u>Gen.Sg</u>	
	<i>ládi</i>	<i>láiin</i>	<i>lathkyú</i> “oil”
	<i>karávi</i>	<i>karáin</i>	<i>karafkyú</i> “boat”
	<i>arpági</i>	<i>arpáin</i>	<i>arpayú</i> “hook”

Here we find alternations between Nom/Acc.Sg and Gen.Sg. We confine our discussion to the presence~absence of stem-final voiced spirants in such forms.¹⁴ Newton cites various kinds of evidence for the ‘restoration/reconstruction’ of voiced fricatives in these (underlying) forms, and hence for the ‘derivation’ of the surface forms concerned.

a. The influence of recent borrowings of standard origin. Thus he compares:

- (5) dialect *póin* “foot” with borrowed *podílaton*
láiin “oil” with borrowed *retsinóladon*
 as also *karáin* “ship” with borrowed *karávin*

- b. VV hiatus is rare in the underlying phonology. Reconstruction avoids this asymmetry.
 c. The shape of related forms in the extended paradigm is also cited. Further support for reconstructing *arpáin* comes from the perfective stem of the cognate verb *arpasso*, which is seen (Newton 1972:84) to have an underlying /g/. Non-Perfective -ss alternates with Perfective -x, g, k, as in *arpass-*, but *erpák-sen* “he seized”.
 d. The blocking of an illicit process

- (6) *tiánin* *tianyú* “frying-pan”
aérfin *aerk’ú* “sibling”

For the *d*-forms showing no alternation, an underlying voiced fricative is postulated in order to prevent the (incorrect) yodisation of [i] before a vowel, so that we get the correct

- (7) *tigánin* “frying pan” > *tiánin*, and not **thk’ánin*
rigón “shivering fit” > *rión*, and not **rkón*

e. The relevance of standardising variants

Where no alternation occurs in the dialect form, the standardising variants enable the choice between [v, d, g], as with *ti(g)áni*, *rí(g)os*, *pettera(d)es*, *kafe(d)es*. This allows the simple statement that stem-final vowels are deleted before vowel-initial endings (Newton’s Rule N1, 1972:50); with stress-transfer, this gives (e.g.) *voskó+u* > *vosk-ú*.

On the other hand, as Newton also points out (1972:49), one might as easily put the burden of the alternation on allomorphy of the Gen.Sg morpheme. The latter may well constitute the better option, and we will indeed claim that V-final stems (*la-*, *kara-*, *arpa-*) are in the pure¹⁵ dialects lexically selected by the corresponding Gen.Sg morphemes (*-fk'ú*, *-thk'ú*, and *-yu*).¹⁶ If the above story is on the right track, the loss of stem-final intervocalic voiced spirants led to complex allomorphy of an affix, with concurrent anti-allomorphy¹⁷ of the (new) stems, by the restructuring of the Gen.Sg morphology of Cypriot. To uphold this claim, we are bound to respond to and neutralise Newton's supporting evidence for what we will (with Hale) call 'the phonological solution', as distinct from Hale's alternative 'conjugational solution' above.

Our general position is that allomorphs are all too often independently generated forms, an approach that effectively bans or at least circumvents reconstruction of underlying forms. The influence of standardising variants, recent loans, and larger paradigms all merely confirm the range of the final network of related forms. As to the frequency of VV: VV does occur elsewhere, even if rarely. As for the yodisation problem, we claim that for stem-internal /i/ + vowel (e.g. *tiánin*), the /i/ is fully specified as syllabic/vocalic, which of course blocks consonantisation.

6. Shared allomorphs from initial vowel-loss

Let us now turn to a further perspective on shared allomorphy, again in the light of our 'independent allomorphs' claim. The allomorphy now in question is one that results from a second prosodic cause (cf. the alternation *-simo* ~ *-ma* in Section 1 above), viz. the loss of word-initial vowels. We will ask how the resulting 'shorter' allomorphs are distributed with respect to the related 'full' forms across inflection, derivation and compounding. Appropriate parameters here are anchoring-edge for the stress-algorithm, distance from the stressed vowel, vowel-strength hierarchy, and paradigm-distances.

We note first that in Germanic languages, with (historically) early initial stress, final syllables were lost, with consequent wastage of inflectional endings in both noun and verb systems. On the contrary, Greek stress has always been right-anchored, which protects the three end syllables.¹⁸ However this at the same time exposes unstressed initial syllables, especially those defective through lack of an Onset, to potential loss. We interpret such losses in terms of the corresponding parameters, viz. stress-edge, stress-distance, vowel-strength, and paradigm-distance.

The ‘no word-initial-vowel’ constraint is to be reinterpreted as the requirement for a left-edge (i.e. word-initial) Onset. Recall that German supplies such an Onset, realised as an initial glottal-stop, as in /alt/ ‘old’ giving phonetic [ʔalt].¹⁹ In contrast, now, Greek sometimes simply fails to metrify such a vowel — the vowel does not become part of the prosodic word and remains unpronounceable.

We note too the apparently contradictory process in Spanish, where Latin *schola* > Spanish *escuela*. But the contradiction is only an apparent one, for Spanish underlies an even stronger constraint, viz. one militating against initial clusters such as #sk-. Such clusters are resolved by initial-vowel epenthesis, which functions to break the offending cluster into a coda and an Onset (*escuela*). Compare French, which added the same vowel but still simplified the cluster as in *é-cole*.

Now while an initial Greek unstressed vowel may be optionally [(i)perífanos] ‘proud’ or obligatorily [(i)psilós] ‘tall, high’ unpronounced, a final extrametrical vowel, e.g. as in the -ka in the Accusative and Genitive Sg. of a nominal such as [{fíla} ka] ‘prisoner’ or in the -na in 1sg.Present in a verbal form such as [{éka} na] ‘made, did’, is always pronounced; this is presumably because a) it carries critical morphological information (theme vowel, or inflection²⁰), b) it is fully supported by an Onset consonant, c) it is in each case supported by the remainder of its paradigm, and d) its loss would often leave a form with a forbidden final consonant (adverbial *ístera* *ister, nominal *filaka* *filak, verbal *érava* *erav ‘I sewed’). And we note too the optional epenthesis of a final [e] in cases like *skupisé-ton* ~ *skupisé-tone* ‘sweep it!’.

But let us return to and elaborate on the theme ‘initial-vowel-loss’. Take first the simplest cases of initial vowel-loss in Greek, those honouring Hadzidakis’ claim (1905:219) that initial vowel loss is favoured at least two syllables before the main stress and not in the syllable immediately before the stress.²¹

- (8) (i) *psilós* ‘tall’, *perífanos* ‘proud’
- (ε) *mudyázo* ‘get numb’, *matóno* ‘bleed’
- (o) *rolói* ‘watch’, *mologó* ‘I confess’, *xtapódi* ‘octopus’

To these we add

- (9) (i) *lyakáda* ‘sunshine’, (e) *norís* ‘early’, (a) *yeláda* ‘cow’

noting that initial /a/ is rarely lost, presumably a reflex of its status as the ‘strongest’ vowel in the five-vowel Greek hierarchy.²²

Consider next the cases where an initial vowel is lost even when it indeed immediately precedes the stressed syllable. Here Hadzidakis defuses the

apparent contradiction, by invoking the influence of a related form,²³ which in fact honours his proposed stress condition, as in

- (10) (e) *níki* "rent", but *nikyázo* "I rent",
(o) *níxya* "nails", but *nixyázo* "I scratch with my nails"

And the following related pairs may be added, in Hadzidakis' favour.

- (11) (i) *méra* "day", *imerísio* "daily"
(e) *níkyo/níkyazma*, *nikyastís* "rent, renting, renter"
ksádelfos, *ksadélfya* "cousin, cousins"
léfteros, *Leftéris/Lefteriá/lefteróno* "free, PN/PN/I free"

Although we have also apparent contradictions such as:

- (12) (i) *merónixta*, BUT *imero-místhio* (**mero-místhio*)
vrízo, *vrisídi*, but *ivristís*
(u) *den* "not", BUT *udemía* "not one" (**demía*)
(e) *matóno* "bleed", BUT *emosfério* "blood-corpuscle"
(**mosfério*)
ksigo "explain", BUT *eksígisi* "explanation"
(o) *mílise* "he spoke", *miló* "I speak", BUT *omilitís* "speaker"
(a) *yeláda* "cow", BUT *ayeladinó~yeladinó* "bovine"

It is so far unclear whether smaller morphological-distances are indeed more effective in provoking or supporting levelling (the closer the distance, the greater the mutual attraction) than larger ones, e.g. between Noun and Verb, or between inflection and derivational or compound sub-paradigms. But the solution may well be to claim that compounds show root-preservation.

On the other hand, there are further problem forms, viz. initial-vowel-loss forms with no support at all from a rescuing paradigm. Such are:

- (13) (i) *na* "subjunctive", *pes* "say!", *des* "look!", *vres* "find!", *bes* "enter!"
(e) *láfi* "deer", *yída* "goat", *léfandas* "elephant"
(a) *yeláda* "cow"

These forms may well be held to cast doubt on the views of Hadzidakis above. On the other hand, they surely do (though by default) support the thesis that the allomorphs involved here are as before not 'derived' but simply related yet independent, as before.

Cross-dialectally, we may mention the Cypriot parallel, or rather contrast. Cypriot behaves like Standard Greek with respect to final-vowel loss. But (see Menardos 1969:137–146),²⁴ there seems to be a far greater incidence of

initial-vowel loss in Cypriot than in SGk. We want to claim that this is not accidental. Rather, the dominating Cypriot requirement for a syllable Onset seems to be responsible, also creating a strong Onset after another consonant forming a closed syllable, as seen in the alternation SGk *avgó*, but Cyp *af.kó*.²⁵

7. A case for paradigms?

Hankamer (1989) shows that there are words in Turkish of the shape

- (14) *cep-ler-imiz-de-ki-ler-den miş*
 (pocket-Pl-Poss1Pl-in-Relativizer-Pl-from (among) Dubitative)
 “It was presumably from (among) those which were in our pockets”

that includes the equivalent of a whole English relative clause; this makes it difficult to speak of morphological paradigms in the case of Turkish. And the impoverished state of the English verb creates a similar difficulty for English. All the same, it may well make sense to talk not only of inflectional but even of derivational paradigms, at least for so-called inflectional languages such as German and Greek. We give here several exemplary reasons for such an assumption, e.g. morphological levelling, cross-dialect levelling and diachronic change. See also Drachman 2003.

7.1 MGk stress

A good example of cross-dialectal levelling concerns stress-levelling in Modern Greek. For a noun of the type *ánthropos* “man”, *tu-anthrópu* Gen., we find the variants below (and see Drachman & Malikouti-Drachman 1999).

- (15) *ánthropos ánthropu*, with levelling of the Gen.Sg, as also
anthrópi anthrópon, with levelling of the Nom.Pl

7.2 Diachronic change

Diachronic change again apparently supports the notion paradigm, as already claimed e.g. in Halle (1973). Compare the following examples.

7.2.1 *Provençal preterites*

The Modern Provençal dialect of Charente (Bybee 1985) shows levelling of verb-stems (except 1Sg) to the 3Sg form: thus the 3sg.inflection marker *-et* (as in O.Prov *cant-et*) became a stem-extension.²⁶

(16) Old Provençal

Present "to love"		Preterite	
Sg.	Pl.	Sg.	Pl.
1. <i>am</i>	<i>amam</i>	<i>améi</i>	<i>amém</i>
2. <i>amas</i>	<i>amátz</i>	<i>amést</i>	<i>amétz</i>
3. <i>amát</i>	<i>áman</i>	<i>amét</i>	<i>améren</i>

(17) Charente (Meyer-Lübke 1923, cited in Bybee)

Preterite "to sing"	
<i>cantí</i>	<i>cantétem</i>
<i>cantétei</i>	<i>cantétei</i>
<i>cantét</i>	<i>cantéten</i>

7.2.2 *Paradigm levelling in AGk*

The irregular AGk paradigm of *ne:-os* "temple" was partly remodelled in the Attic dialect, so that the seven of its ten forms with syllables Heavy+Heavy (e.g. Gen.Sg *ne:o:*) in Ionic became Light+Heavy in Attic (e.g. *neo:*). Later, the levelling was completed by the remodelling of the remaining three paradigm-members from Heavy+Light (e.g. Nom.Sg *ne:os*) to the now-dominant Light-Heavy (*neo:s*).

But let us reanalyse so-called Quantitative Metathesis in Attic vs. Homeric/Ionic. First, we have an Attic sequence constraint for long vowels in hiatus, in a derived (inflectional) environment (see Drachman et al. 1999), viz.

(18) *H+H (Heavy syllabic + Heavy syllabic)

Now if we honour such a weight constraint, mora-identity for one of the two nuclei can no longer be maintained — although a given language may allow the endangered mora to be transferred to the adjacent syllabic.

For proto-Attic, seven of the ten members of the *ne:-os* paradigm show the barred H-H configuration, in (19) below. Now note that we cannot here save the endangered mora by transferring it to the second syllable, for that syllable would then become Super-Heavy — which is banned by a Universal markedness constraint against tri-moraic, (μμμ) syllables. In this Last Resort situation, the endangered mora is therefore simply lost — leaving LH.

(19)	<u>Ionic</u>	<u>Attic</u>	<u>Ionic</u>	<u>Attic</u>
Sg.Gen	ne:-o:	ne-o:	Pl.Gen	ne:-o:n
Dat	ne:-o:	ne-o :	Dat	ne:-ois
			Acc	ne:-o:s
Du NA	ne:-o:	ne-o		
G/D	ne:-oi:n	ne-o:n		

But the rest of the members of the paradigm (below under 20) showed the permissible sequence H-L in proto-Attic. And these members were now levelled to match the majority case, viz. to L-H. Of course, since the second syllabic here was originally Light, mora-transfer was possible and hence obligatory.²⁷

(20)	<u>Ionic</u>	<u>Attic</u>
Sg. Nom	ne:-os	ne-o:s
Acc	ne:-on	ne-o:n
Pl. Nom	ne:-oy	ne-o:y

7.3 Macro-paradigms

7.3.1 *Initial-vowel loss*

Recall the cases (in Section 6 above) of initial-vowel-loss immediately before a stressed syllable, for which Hadzidakis invoked the influence of a related form in which his stress condition is in fact honoured, as *(e)níkio* influenced by *(e)níkyázo*, *(o)níxya* influenced by *(o)níxyázo*. By appealing to verb forms to justify noun shapes, Hadzidakis seems to implicate macro-paradigms, at least in the sense of the section below.

7.3.2 *Unifying the components*

If we allow the paradigm criterion ‘morphophonologically related forms’ then we might unify inflection, derivation and even compounding. Consider the data in Table 9 below, with some repetition of data.

Of perhaps special interest is the support for paradigms inducible from forms like *kléftis*. The *-f-t-* sequence has ambiguous relationships: it relates to the root *klev-* simply by voice assimilation — *klev-tis* : *klef-tis*. But it also relates to the allomorph *klept-* (also found in the compound *klept-o-mania*) by the OCP (Obligatory Contour Principle), a constraint militating here against a sequence of stops at a morpheme boundary *-klev/klep-tis* : *kléf-tis*.

More general is the point (often made, e.g. in Spencer 1991) that languages with participles show us the impossibility of clearly demarcating derivation from inflection. Greek participles show the category-changing property of

Table 9. Macro-Paradigms

Inflection	Derivation	Compounding
<i>kón-o</i>	<i>kóp-simo</i>	<i>kafe-kop-tíras</i>
<i>anáv-o, anáp-s-o</i>	<i>ána-ma</i>	<i>anap-tíras, kandil-o-náftis</i>
<i>klév-o</i>	<i>kléf-tis, klép-simo</i>	<i>klept-o-manía</i>
<i>trógo, fáo/éfaga</i>	<i>fayitó, fagósimo</i>	<i>fag-o-póti</i>
<i>éma, émat-os</i>	<i>mat-o-ménos</i>	<i>em(a)-o-dosía</i>
<i>kréas</i>	–	<i>kre-o-pólis</i>
<i>kréat-os</i>	<i>kreat-eró</i>	<i>kreat-o-pólis</i>
<i>yéros</i>	<i>yer-úlis</i>	<i>yer-o-Yánis</i>
<i>yírat-os</i>	<i>yírat-yá</i>	
<i>yérondas</i>	<i>yerónd-isa/áki</i>	<i>yerondo-kóri</i> <i>yir-o-komío</i>

Glosses to Table 9

kóvo ‘cut’, *kópsimo* ‘cutting’, *kafekoptíras* ‘coffee-grinder’,
anávo ‘light’, *ánama* ‘lighting’, *anaptíras* ‘lighter’, *kandilonáftis* ‘candle-lighter’,
klévo ‘steal’, *kléftis* ‘thief’, *klépsimo* ‘theft’, *kleptomanía* ‘kleptomania’,
trógo/fáo/éfaga ‘eat’, *fayitó* ‘food’, *fagósimo* ‘edible’, *fagopóti* ‘wassail’,
éma/émato ‘blood’, *matoménos* ‘bloody’, *emodosía* ‘blood-donation’,
kréas/krétos ‘meat’, *kreopólis* ~ *kreatopólis* ‘butcher’, *kreateró* ‘fleshy’,
yéros ‘old man’, *yerúlis* ‘old man’ (dim.), *yero-Yanis* ‘old Yannis’, *yíratos* (Gen)/*yíratyá* ‘old age’, *yérondas* ‘old man’, *yeróndisa* ‘old woman’, *yerondáki* ‘old man’ (dim.), *yerondokóri* ‘spinster’, *yirokomío* ‘old folks home’.

derivation ((a) below) but also the person, number and case of Noun and adjective inflection ((b) below).

- (21) a. verbal *kal-ó* ‘I invite’, but nominal *kalesménos* ‘invitee/invited’
 b. *o kalesménos filós* ‘the invited (masc) friend (masc)’,
 c. *i kalesméni fili* ‘the invited (fem) friend (fem)’,
 d. *ta kalesména pedyá* ‘the invited (neut) boy(neut)’.

7.4 Pro-drop

For a last example of ‘paradigm’, this time showing how a morphological paradigm may influence even a syntactic process consider what has been called Pro-Drop. In Greek as in (e.g.) Italian and Spanish, a pronominal subject may be omitted (*egó thélo* > *thélo*, ‘I want’). Clearly, the verb endings enable the hearer to identify the person and number of the missing element and it is true that languages with rich Person/Number (P/N) verbal paradigms (again Italian,

Spanish and Greek) allow this kind of pronoun omission. It is equally clear that French, German and English cannot allow this kind of omission, since the phonetic merger for the French singular (*je/tu/il* [*em*] *Marie*, “I/thou/(s)he loves”) and the German plural respectively (*wir/Sie/sie lieben Maria*), not to mention the total merger for English, give us defective paradigms that preclude P/N identification.²⁸

7.5 Conclusion

But in the end, it is by no means clear that ‘paradigm’ is a prime of the theory, for in each case the ‘nearness’ criterion we have invoked is sufficient: near forms (within or across grammatical sets) will influence each other. Which forms will be triggers, and which forms will constitute targets, is hardly predictable under either the ‘nearness’ or the ‘paradigm’ hypothesis.

8. Impossible ‘derivations’

8.1 General

There are, finally, a number of cases where the relation of derivation cannot hold for the simple reason that no putative ‘base’ occurs, as with English *re-fer* (**fer*) as against *re-new* (*new*). But also compare *in-fer*, *con-fer*, *de-fer*, *pre-fer*, etc., where it is claimed that *-fer* is a morpheme even though it has no independent meaning.²⁹ For Greek we find

- (22) *en-kata-lípo* “abandon” is idiosyncratic,
 but *en-thar-ín-o* “encourage” relates to *thár-os*;
 sin-érxome “recover” is idiosyncratic,
 but *sin-ipo-gráfo* “co-sign” relates to (*ipo*)*gráf-o*

where the left-hand form in each pair is treated as a simplex lexical item. Further examples of missing bases in Greek are

- (23) *ana-kénisi* “refurbishing” (cf. *kenúryo*),
 but not **kenisi* (cf. *ana-kenízo*)
 ana-neóno “renew” (cf. *néos*) **neono*
 sin-enóisi “agreement” (cf. *enoó*) **enoisi*
 (but cf. *sin-enoúme*)
 sin-opsízo “summarize” (cf. *ópsi*) **opsizo*

8.2 The fallacy of the 'missing base'

There are cases where 'derivation' is misleadingly called in question. For example, Holton et al. (1997:164) claim that "some verbs which do not have finite passive forms nonetheless form a perfect Passive participle". But the problem is here perhaps infelicitously stated. Consider the range of data from the passive particle, under (a–d) below.

- (24) a. *pin-az-ménos* "hungry", *yer-az-ménos* "aged", *dips-az-ménos* "thirsty"
 b. *aganaxt-iz-ménos* "indignant", *lipothim-iz-ménos* "faint",
navag-iz-ménos "wrecked"
 c. *thim-o-ménos* "angry", *arost-i-ménos* "sick", *apost-a-ménos* "tired"
 d. *taksid-e-ménos* "traveled"

The verbs under (a–b) above apparently take an (-Vz-) extended stem as the base form for the derivations in *-ménos*. But while forms (a) employ the extension-vowel *-a-*, those under (b) employ *-i-*. In contrast, the verbs under (c) employ only an extension-vowel (viz. *-o-*, *-i-*, or *-a-*), while on the contrary the forms under (d) have suffered stem-shortening.

Where do these extensions/shortenings come from, and how should we account for the variants? If we compare other 'parts' of the verb, it becomes clear that the forms under (a–b) relate to oxytone (Class II) verb roots, and that the Ptc forms share their stems with the simple Aorist, as in e.g. *pin-ó*, *pín-a-s-a*, *pin-az-ménos*. This also automatically explains the choice of the V-part of the extensions in (a–b).³⁰

The (c) forms are somewhat more complex. Again, the Ptc shares allomorphs with the Aorist (*arost-én-o*, vs. Aor. *arósti-s-a-* and Ptc *arostí-ménos*). But now note that these examples also relate to Nasal-present stems. Thus, *thimoménos* shows the same vowel as the present and aorist forms (*thim-ón-o*, *thim-o-s-a*) while the remaining forms share only the relevant (lexically determined) aorist vocalism — *arostí-ménos* like *aróstis-a*, *aposta-ménos* like *apóstas-a*.

Lastly, consider the verbs under (d), where *taksid-ménos* also shows that the relationship of shared allomorphy need not be 'true on the surface'. Thus the Aorist stem *taksidēp-* of *taksidēpsa* only indirectly relates to the Ptc *taksidēp-* stem of *taksidē-ménos*.

A potential explanation might take into account two facts of Greek morpho-phonological assimilation: a) first that before *-s-*, the shared stem *taksidēp-* will relate to an Aorist *taksidēp-s-a* (cf. *gráf-o*, *é-grap-s-a*) by partial assimilation of manner, while b) that total assimilation of a labial to a following nasal will automatically explain not only *taksidē-ménos* but also *gráf-o*, *gra-méno*.

But this ‘local’ type of assimilation can hardly be reconciled with the overall claim concerning the ‘related but independent’ status of allomorphs, and we will continue to treat forms like *graméno* as involving an allomorph *gra-*, as already discussed in connection with Tables 1 and 2, in Section 2.1 above.

8.3 Multiple derivations with no base

More extreme (though not uncommon in Greek) is the case we now consider. Just as there is no simple verb **fer* behind English *re-fer*, *de-fer*, *in-fer*, etc. (discussed under 8.1. above), so although in Greek the putative base-verb *ag-o* has not survived, yet a fairly rich set of ‘derived’ verbs and nouns do, as exemplified below.

(25) Verbs	Nominals
<i>is-ág-o</i> “introduce”	<i>is-ag-og-í</i> “introduction”
<i>pros-ág-o</i> “adduce”	<i>pros-ag-o-gí</i> “presentation”
<i>di-ág-o</i> “live”	<i>di-ag-o-gí</i> “behaviour”
<i>sin-ág-o</i> “extrapolate”	<i>sin-ag-o-gí</i> “induction”

And similar data applies to the further verbs (data from Holton et al. 1997):

(26) <i>dí-do</i> “give”, <i>légo</i> “say”, <i>stélo</i> “send”
--

8.4 Putative negatives

We now consider the Greek adjectival negative employing the derivational prefix *a-*, and enquire about its ‘derivational’ relation to the corresponding positive adjective. Examples are in Table 10 below.

Table 10. Putative Negatives

Adj.Ptc	Adjective	Negative	Gloss for Neg
a. <i>gra-méno</i>	<i>graf-tó</i>	<i>á-graf-to</i>	“not written”
<i>kuraz-méno</i>	<i>*kuras-tó</i>	<i>a-kúras-to</i>	“not tired”
<i>mayire(v)-méno</i>	<i>mayiref-tó</i>	<i>a-mayíref-to</i>	“not cooked”
b. <i>xoriz-méno</i>	<i>xoris-tó</i>	<i>a-xóris-to</i>	“in-separable”
c. <i>dyavaz-méno</i>	<i>dyavas-tó</i>	<i>a-dyávas-to</i>	“un-read” ~ “unreadable”

First, it is clear from the above data that there are (at least) three cases so far as semantics is concerned. Under this criterion, the (a) forms seem to (only) negate the adjective-participle (e.g. “un-written”). In turn, while the (b) forms

(only) express a negated ability (e.g. "in-separable"),³¹ the (c) forms may express either simple negation (*akséxasto* "unforgotten") or ability-negation (*ak-séxasto* "unforgettable").

Second, consider stressing. Notice that for the forms under Adj.Ptc, there is no stress alternation, which is clearly due to the fact that the Ptc-morpheme *-méno* is a stressed suffix.³² In turn the Adjective forms exhibit a stressed suffix *-tó*. On the other hand, the Negative forms show stress alternations. Here, we might first postulate that the prefix negative is itself a stressed morpheme, since a monosyllabic root like *graf-* gives *á-graf-to*. But these alternations are perhaps better seen as resulting from two prosodic factors frequently operative in complex forms. First, the choice of unstressed allomorphs for the complex {prefix, root, suffix}; and second, the effect of the three-syllable constraint on stress, by which a putative unstressed **a-kuras-to* must emerge with third syllable (non-final trochee) stress as in *a-kúras-to*.

So far, the positive-negative relations we have discussed were between different adjectivals, a paradigmatically close relation. But negatives may be even more indirectly related to their putative positives, as in

- (27) *á-timos* "dishonest" (vs. *tímios* "honest")
a-thánatos "immortal" (vs. *thnit-ós* "mortal")

Here we suggest that *-timos* relates more closely to *timí.NOUN*, *-gnoris-* to *gnoriz.VERB*, and *than-* to *thánatos.NOUN*, rather than to the corresponding adjectives (in brackets above).

And finally, where no 'base' or relation to a positive occurs, we must concede that the negative is simply lexicalised, as in

- (28) *á-dolos* "unsophisticated", but *dólos* "deceit"
a-dranís "inactive" (**dranis*)

Compare English examples like

- (29) unkempt (**kempt*), uncouth (**couth*), uncanny (**canny*)
dis-hevelled (**hevelled*), unnamable (*?namable*)

8.5 Missing bases in German

We add here the case of compound Adjectives in German, showing cases of element B having no base, as:

- (30) *blau-äug-ig* "blue-eyed" (cf. *Auge*, but not **Äuge*)
ein-tön-ig "monotonous" (cf. *Ton*, but not **tönig*)
gegen-seit-ig "mutually" (cf. *Seite*, but not **seitig*)

There is here an apparent contradiction to the ‘balance of complexity’ thesis as maintained in Drachman (2001), as well as the principle ‘Emergence of the unmarked in derived environments’ (Drachman 2000): for the derived (e.g.) *-äug-ig* and *tön-ig* are in one sense more P-complex than their bases *Auge* and *Seite*, since they contain umlauted stems. But in fact the allomorphy here is contextual, i.e. morpheme-dependent, involving as it does one of the morphemes (here, *-ig*) that frequently provoke umlaut in German.

9. Speculations on verbal prefixes

9.1 Basic considerations

As a contrasting topic to the foregoing morphological alternations, we examine now a semantic alternation, as found with the prefix *sin-* in (e.g.) *sin-érxome* “recover” vs. *sin-taksidévo* “co-travel”. To see the relevance of such alternations, we must first outline however briefly the alternative theoretical standpoint we will take.

Following Marantz (2001),³³ let us assume that merging a Functional head (i.e. a suffix, for Greek) with a root specifies the category of the root; thus *graf+o*, *grap+s*, *graf+i*, *gra+meno* or *psom+as* (understood as the features involved) make a verb, noun, adjective/participle or nominalization respectively. And indeed most of our examples so far concerned such category-making suffixation. On the other hand and only sparsely discussed so far in this paper, is the case of adjoining a non-head (for Greek, most prefixes³⁴) to a root. Prefix-adjunction may apparently create either an idiosyncratic meaning (*érxome* “come”, but *sin-érxome* “recover”) or a transparent meaning (*taksidévo* “travel” and *sin-taksidévo* “co-travel”) for the complex form, as already mentioned.

Such contrasts (crucially recalling that *sin-érxome* may also mean “come with others”) can hardly be random, and call for an approach quite distinct from the Burzio-inspired ‘related but independent’ hypothesis deployed for suffixation above. Thus, again following and extending Marantz’ (2001) discussion on where and how words are made in the grammar, we will claim that

- a. if a prefix is merged in the syntax with a root before category-merger,³⁵ it still has access to the conceptual content of that root, and participates in the resultant meaning, which is thus more or less idiosyncratic with respect to the semantics of the root itself;

- b. but if, on the other hand, prefix-adjunction applies in the syntax after category-merger, the new affix is isolated from the root³⁶ and contributes its independent conceptual content cumulatively.³⁷

- (31) With root-merged/opaque 'sin-' vs. with post-Cat-merged
/transparent 'sin-'
gráfo "write" [*singráf*]o "I write (a book)"
but *ipo-gráfo* "sign", *sin* [*ipo-gráfo*] "co-sign"

And strong support for the present hypothesis comes from the behaviour of the prefix *para-*, where the distinct opaque vs. transparent readings are accompanied by distinct root-allomorphy, as in

- (32) *vlép-o* "I see, look at"
[*para-vlép*]o "I overlook", gives Aorist [*pará-vllep*]sa
but *para*[*vlép*]o "I look intensely" gives Past.Aor *para*-[*íd*]a³⁸

However, we note that opacity may, at least at first glance, obtain for both root-merged and post-Cat-merged affixes, as in:

- (33) *fér(n)i* "brings", [*dia-fér*]i "differs",
but *en-dia-féri* "interests"
stél(n)o "send", *dia-stélo* "enhance",
but *anti-dia-stélo* "distinguish"

How are we to account for the opaque meaning with *en-* or *anti-* as outermost prefix, within the proposed theoretical framework? We might claim that (like *ep-ana-* as in *epana-lamváno*, Drachman (to appear) *en-dia* and *anti-dia* are potentially single morphemes. Rather, we will assume that in this case the two prefixes are successively root-merged, thus constituting a complex root inserted in the syntax, as in [[*en*[*dia*[*fer*.ROOT]]]+*i*.CAT]. Contrast the transparent readings for *anti-* in post-Cat-merged inner as well as in outer prefixing, as also the corresponding nominalisations, below

- (34) *anti-dró* "react, respond", *antí-drasi* "reaction"
anti-dia-dilóno "counter-demonstrate"
anti-dia-dilosi "counter-demonstration"

9.2 Further examples of degrees of opacity and ordering are:

- (35) Forms with *epi-*
epi-vlépo "watch over, supervise"
epi-gráfo "inscribe", *epi-dia-skópio* "epidiascope"

- (36) Forms with prefix *sin-*
si-légo “collect”, *dia-légo* “choose”
sin-déo “connect”, *dia-sin-déo* “inter-connect”
 but *dia-légome* “choose”, *sin-dia-légome* “discuss”

plír-óno “pay”, but [*sim-plír*]-*óno* “I supplement”
 cf. the nominalization [*plír*]-*omí* “payment”
 vs. [*sim-plír*]+*oma* “supplement” (result)
 [*sim-plír*]+*osi* “supplementation” (process)

ipo-gráfo “sign”, but *sin[ipo-gráf]o* “co-sign”
 cf. the nominalisation [*sin*-[*[ipo-gráf]+í*]]
- (37) Forms with prefix *kata-*
 a. root-merged
stréf-o “turn”, but *kata-stréfo* “destroy”
 cf. the nominalisation *kata-strof-i* “destruction”
gráf-o “write”, but *kata-gráf-o* “record, write down”
déxome “accept”, but *katadéxome* “condescend”
févg-o “leave”, but *kata-févg-o* “take refuge”
 b. post-Cat-merged
polem-ó “fight”, but *kata-polem-ó* “fight intensively”
théto “place”, but *kata-théto* “deposit, testify”
 c. intensive, thus post-Cat-merged³⁹
vréx-o “wet” and *kata+vréx-o* “wet completely”
dikáz-o “judge” and *kata+dikáz-o* “condemn/sentence”
diók-o “chase” and *kata+diók-o* “persecute”
thlív-o “make unhappy” and *kata+thlív-o* “depress”
klév-o “steal/rob” and *kata-klév-o* “steal entirely”

Since the corresponding nominalizations are also licit, as in e.g. *katá-vreg-ma*, *katá-thlip-si*, the intensive prefix must be considered underspecified as a Category-maker.

- d. Forms with no verb-base

As so often cited above for other cases, some prefixed verbs in fact have no verbal ‘base’, as in:

- (38) *kat-ik-ó* “inhabit” (**ik-o*)
 though cf. the root, in *kat-ik-ía* “dwelling”, *ik-os* “house”
kate-vén-o “descend” (**vén-o*)
 cf. the root in *kat-é-v-ika* “I descended”

9.3 The case of 'incorporation'

In the light of the 'two-places for word-formation' analyses above, we may now re-approach an earlier interpretation of so-called 'incorporation' for adverb+verb complexes such as *kalo-éfaga* "I ate well" in Greek, which claimed that they constituted morphological compounding in the syntax (Drachman & Malikouti-Drachman 1994). The present syntax-based variable-attachment hypothesis replaces that attempt, thus circumventing the earlier need to decide whether we have to do with compounding in the syntax or the lexicon. Those adverbials showing pre-Cat-merger of course fail to show the equivalent non-merged (i.e. phrasal) equivalents, as may be seen from the examples below:

- (39) a. With pre-Cat-merger for some adverbials, with idiosyncratic readings *éfaga* "I ate", but *kutso-éfaga* "I ate a little" (vs. **éfaga kutsá* "I ate lamely")
kuvéndyasa "I conversed", but *psilo-kuvéndyasa* "I chatted"
 (vs. **kuvéndyasa psila* "I chatted")
- b. With post-Cat-merger, giving compositional semantics
kalo-tróo "I eat well" (and *tróo kalá* "I eat well")
krifo-yeláo "I laugh secretly" (and *yeláo krifá* "I laugh secretly")

10. Coda

Let us now draw together the diverse threads of the argumentation. The main body of this paper addressed the question: Are some forms of a given verb or noun 'derived' from another form of the same verb or noun? In answering this question, based in part on work by Burzio, a number of Greek 'irregular' verbs as well as noun plurals and derivations among other cases were examined. For each data-type, we concluded that the derivation hypothesis as traditionally formulated is neither necessary nor (often enough) even possible. Rather, we made the simplifying assumption that morphological forms are independently generated, but are more or less closely related to others in semantics and/or form, an assumption from which we also derived (e.g.) the notion 'paradigm'.

However, in the last section of the paper the nature of the data for complex verbs involving (adverbial) prefixes forced a contrast in theoretical approaches. Especially, we saw that collocations of the same prefix and root sometimes result in alternative semantic readings, and sought a principled explanation for this. For the theory, Marantz' claim was explored and exploited, that ALL complex forms are in fact derived, not one from another, but by Merger of

Root+Affix in the syntax. Thus a common root may underlie the variety of allomorphy triggered by the functional morphemes whose merger generates the different categories. But that merger may precede or follow the prefix-merger, and it is this distinction that is responsible for the alternant readings; simply put, the prefix can either access the root-concept and make it opaque, or not. We finally showed how we might assimilate the cases of multiple-merger as well as so-called ‘incorporation’ to this conceptual paradigm.

But we left outstanding for a further study the resolution of the contrast between the two different, if not contradictory theoretical approaches employed here. For instance, just how might the (quite traditional⁴⁰) ‘abstract underlying forms plus Readjustment Rules’ invoked in Distributed Morphology (DM), of which Marantz’ claims are integral elements, handle the quite complex (non-suppletive⁴¹) Greek verbal and nominal morphophonemic allomorphies illustrated in the present paper? Drachman (forthcoming) seeks a reconciliation in an attempt to retain the syntactic insights of DM, while not sacrificing the ground gained under the present treatment of ‘shared’ allomorphs.

Notes

* This paper is a revised and expanded version of a chapter in ‘Parameters of Greek Morphology’, to appear. Where not otherwise indicated, language data is drawn partly from Aronoff 1976 for English, Fleischer & Barz 1992 for German. I owe debts to A. Malikouti-Drachman, and to the goodwill of the Greek Socrates students in the Summer Semester 2005 Seminar in Morphology of the Dept. of Linguistics, Salzburg University. Last but not least, my fellow-editors contributed invaluable remarks. Of course I don’t impute co-guilt to any of the above-mentioned.

1. In traditional generative studies, we see fresh distinctions, e.g. from Chomsky-Halle 1968 and even in Anderson 1992 inflection was syntactic, but spelled out in the phonology; from Chomsky 1970, derivational morphology was ‘lexical’, i.e. full-derived forms were inserted into syntactic trees; while from Kiparsky 1982 morphological derivation processes became interleaved with the level-corresponding phonological processes. Cf. notes 3 and 4 for further relevant developments.

2. Compare the claims (a) in Matthews 1972, that the formation of the Future Active Participle of Latin is ‘parasitic’ on the Past Passive Participle; and (b) in Mel’čuk 1986, that one nominal case-form of Lezgian is the base on which others are built.

3. By contrast to the approaches outlined in note 2 above, we witness from Baker 1988 to Marantz 2001 an ever clearer emphasis on the syntactic sources of all morphology. It follows that word-formation is root-based, rather than stem-based, as assumed in Sections 8 and 9 below.

4. For the alternation itself, see sec. 2 below.
5. In the tables that follow, forms with shared stems are in **Bold** type. I write *v*, *d*, *g* throughout for /β,δ,γ/, and *f*, *th*, *x* for /φ,θ,χ/; and *y* for the palatal semi-vowel wherever the written VV sequence is in fact monosyllabic. Further, relevant internal-Sandhi phenomena are:
 - a. spirant > stop before /s/, as in *graf-o*, but *grap-s-o*
 - b. stop > voiced after Nasal, as in *Taso*, but *ton-daso*
 - c. *th* [θ] > *t* after a spirant, as in *agapí-th-ika*, but *kurás-t-ik-a*
6. Glosses in Tables and lists are not repeated in the accompanying text.
7. The forms *id-o* and *ip-o* are assumed to show common roots with *id-*, and *ip-*, despite the intervening *-o*, since we may suppose the *-o-* is either protective in avoiding illegal clusters such as *id-thik-a*, *ip-th-ik*, or alternatively a morphophonemic hiatus-resolver.
8. But cf. *pro-vlép.ome*.
9. See the discussion in Drachman 2001.
10. Discussed at length in Drachman et al. 1995.
11. Unexplained remain 'derived' forms retaining the hiatus, like *a-óratos*. The classical view was that such forms were indeed compounds.
12. It is unreasonable to assume a 'joining-vowel' *-o-* here in a 'derivation', for this would invalidate the claim that such vowels are unique to compounding. But see below (*t-zero*) for an explanation.
13. Such a formulation does not yet account for the *-o-* vowel in forms like *id-óthika id-o-méno*, or *ip-ó-thika ip-o-méno*. This vowel probably again functions to block C-C hiatus, or even the information-loss that would follow from its resolution (**ip-meno* would give us the illegal **immeno*, etc.)
14. But note that the problem in fact also applies to the whole of the plural.
15. A contrast between dialects assimilating vs. dialects not assimilating (pure) to Standard Greek is intended.
16. This recalls a similar historical re-analysis, one involving Passive-suffixes in Maori (Hale 1973). Confessedly, however we do not find support in Greek for such a suffix-allomorphy in new forms, i.e. a move to regularise or over-generalise one of the alternative Gen.Sg morphemes to V-final forms not originally involving a final voiced stop, a move seen most clearly for Polynesian in the Hawaiian Passive.
17. A morpheme which 'resists allomorphy', as in Burzio 1996: Within a constraint-family, the allomorphs must be faithful to each other.
18. So much so that a right-edged epenthetic vowel is optionally employed as an alternative to the augment in forms like *é-grapsan ~ grápsan-e*, as also even *skúpisan ~ skupísan-e*. Since there is an alternative, this form of epenthesis is never obligatory.

19. Compare bi-morphemic *Verein* [fer-ʔain] “society, club”, but monomorphemic *herein!* [*herain* ~ *rain*] “come in!”
20. Although this is exactly what was lost in the history of (e.g.) Germanic and Romance languages, where phonological factors apparently overwhelmed morphological ones.
21. Contrast the evidence in Ronga (1977) that the second syllable before the stress is protected, viz. by its potential for counter-stress, in certain Northern Greek dialects. But it may well be that Hadzidakis’ *i*-deletions in fact only apply to such dialects as do not protect the relevant syllable.
22. For the first mention of this hierarchy, see Hadzidakis (1905).
23. This perhaps constitutes evidence for macro-paradigms, though see Section 7 below.
24. I.e. ignoring here the cases of epenthesis, which seem to arise in external (phrasal) sandhi.
25. A comparison that is surely relevant, since the vast majority of Cypriots today are not mono-dialectal speakers.
26. Cf. the remodeling of the Maori Causative suffixes, as also Cypriot Genitive Sg (above, Section 5).
27. The ranked constraints for Attic are thus:

$$*μμSyll > Preserve-mora > *HH > Mora-LocalIdent > Mora-loss$$
28. Contrast the case of English “(I’m) coming!”, German “(*Ich*) *bin schon da!*”, or even the case of inflection-less Chinese, all attributable purely to discourse conditions. So, for Chinese, discourse licenses Pro-Drop, and may even identify P/N.
29. The chances are better with *con-* than with the *pre-* of *pre-fer*, presumably on grounds of type-frequency.
30. Recalling further that the alternation between Aorist *-s-* and Ptc *-z-* responds to the automatic voice assimilation provoked by the immediately following *m*-initial Ptc suffix.
31. We recall that ‘ability’ is also carried by *-simo*, as in *fagó-simo*, *pó-simo*, etc.
32. We add that a stressed morpheme has priority, so that we get *kuras-tó* and not the default **kúras-to*.
33. Cf. the purely morphological approach to such data in Ralli (2003).
34. The exceptions include the morphological causative, which clearly involves a head *en-*, as in *en-sklavóno* “I enslave”.
35. Note that this concept under Distributed Morphology is a syntax-relevant one, in that words are formed only by merger of roots and Functional affixes in the syntax, and replaces the traditional morphological notion of lexicalisation. A further characteristic distinguishing root-merger from post-Cat-merger concerns the degree of productivity associated with the relevant affix — higher for post-Cat-merger than for root merger.

36. Under the interpretation of Marantz', category-merger constitutes a form of closure by completing a Chomskian (2001) 'phase' in the derivation, upon which material is delivered to PF and LF. Later-introduced elements, as elements higher in the hierarchical structure, can no longer access and hence modify information within the already-closed phase.

37. I set aside here (and see Section 10 below) the question of readjustment, i.e. the introduction of the root allomorphy provoked by tense, aspect, case, under category-adjunction, recalling that allomorphs were treated as 'related but independent' in the discussion so far, and thus give only the output forms of verbs.

38. The mere existence of root allomorphy of course does NOT imply that distinct constructions and hence meanings are always available under prefixation. Thus we have *dín-o* "I give" vs. *é-do-sa* "I gave", but not **kata-díno*; yet *kata-* is compatible with the nasal-less root allomorph *did-* as in *kata-díd-o* "I tell on", as well as the (common) Aor *-do-* in *kat-é-do-sa*. On the other hand, *para* is compatible with both *dido* (*para-dído tin thési mu* "I resign my position", but not **para-díno*) and *dino* (*para-díno ta ópla mu* "I surrender my weapons", but not **para-dido*), though it not clear whether these meaning preferences witness the variable merger effect or whether the difference is in this case only stylistic.

39. Intensive is perhaps better looked on as an F-morpheme, equivalent to a Cat-maker.

40. In the sense that they are strongly reminiscent of the treatment e.g. of 'sing-sang-sung', with underlying /s-ŋ/ in Chomsky & Halle 1968. Compare here the abstract root $\sqrt{\text{DESTRUCT}}$ supposedly underlying the derivation of both 'de-stry' and 'de-struc-tion'.

41. DM recognises suppletion only for functional morphology; suppletion for roots is impossible, since these are introduced in the syntax. Apparent suppletion, e.g. as in go-went, is assumed to apply to 'light' verbs, and hence again to functional morphology. Greek has in this respect problematic forms such as *lég-o* "say", but Aor *íp-a*; *vlép-o* "see", but Aor *íd-a*; *pin-o* "drink", but Aor *ípy-a*; *tró-o* "eat", but Aor *é-fag-a*.

References

- Anderson, Stephen R. 1992. *A-Morphous Morphology*. Cambridge, UK: Cambridge University Press.
- Aronoff, Mark. 1976. *Word Formation in Generative Grammar*. (= *Linguistic Inquiry Monographs*, 1.) Cambridge, Mass.: MIT Press.
- Baker, Mark. 1988. *Incorporation: A Theory of Grammatical Function Changing*. Chicago: University of Chicago Press.
- Burzio, Luigi. 1996. "Surface Constraints versus Underlying Representations". *Current Trends in Phonology: Models and Methods* ed. by Jacques Durand & Bernard Laks, 97–122. Salford, Manchester: European Studies Research Institute, University of Salford.
- Burzio, Luigi. 1998. "Italian Participial Morphology and Correspondence Theory". *Proceedings of the First Mediterranean Conference of Morphology (Mytilene, Greece, Sept. 19–21, 1997)* ed. by Geert Booij, Angela Ralli & Sergio Scalise, 42–53. Patras: University of Patras.

- Bybee, Joan. 1985. *Morphology: A study of the relation between meaning and form*. Amsterdam: John Benjamins.
- Chomsky, Noam. 1970. "Remarks on Nominalisation". *Readings in English Transformational Grammar* ed. by Roderick A. Jacobs & Peter S. Rosenbaum, 184–221. Waltham, Mass.: Ginn and Company. A Xerox Company.
- Chomsky, Noam. 2001. "Derivation by Phase". *Ken Hale: A Life in Language* ed. by Michael Kenstowicz, 1–52. Cambridge Mass.: MIT Press.
- Chomsky, Noam & Morris Halle. 1968. *The Sound Pattern of English*. New York: Harper & Row.
- Drachman, Gaberell. 2001. "Why are there allomorphs?" *Greek Linguistics '99: Proceedings of the 4th International Conference on Greek Linguistics, Nicosia, September 17–19, 1999* ed. by Georgia Aguraki et al., 112–119. Thessaloniki: University Studio Press.
- Drachman, Gaberell. 2003. "Back to Paradigms". *Μελέτες για την ελληνική γλώσσα [Studies in Greek Linguistics]* 23.507–519. Θεσσαλονίκη.
- Drachman, Gaberell. To appear. "Parameters of Morphology". Ed. by Spiros Moschonas.
- Drachman, Gaberell & Angeliki Malikouti-Drachman. 1994. "Stress and Greek Compounding". *Phonologica 1992: Proceedings of the 7th International Phonology Meeting* ed. by Wolfgang U. Dressler, Martin Prinzhorn & John R. Rennison, 55–64. Torino: Rosenberg & Sellier.
- Drachman, Gaberell, René Kager & Angeliki Malikouti-Drachman. 1995. "Allomorphy: An OT Account". *Greek Linguistics 95: Proceedings of the 2nd International Conference on Greek Linguistics (Salzburg 22–24 Sept 1995)* ed. by Gaberell Drachman et al., 151–160. Graz: W. Neugebauer Verlag GmbH.
- Drachman, Gaberell & Angeliki Malikouti-Drachman. 1999. "Greek Stress". *Word Prosodic Systems in the Languages of Europe* ed. by Harry van der Hulst, 897–937. Berlin ; New York: Mouton de Gruyter.
- Drachman, Gaberell & Angeliki Malikouti-Drachman. 2001. "Concrete Morphology, Affix-typology and Concord Chains". *Proceedings of the First International Conference of Modern Greek Dialects and Linguistic Theory (Patras, Greece, Oct. 12–14, 2000)* ed. by Mark Janse, Brian D. Joseph & Angela Ralli, 51–66. Patras: University of Patras.
- Drachman, Gaberell, Angeliki Malikouti-Drachman, E.Georgiou, G.Stavrou, R.Symeou & E.Tryfonos. 2001. "Sximatismos ypokoristikon kyrion onomaton stin Kypriaki" [The formation of the hypocoristics of proper names in Cypriot]. *Greek Linguistics '99: Proceedings of the 4th International Conference on Greek Linguistics, Nicosia, September 17–19, 1999* ed. by Georgia Aguraki et al., 487–495. Thessaloniki: University Studio Press.
- Fleischer, Wolfgang & Irmhild Barz. 1992. *Wortbildung der deutschen Gegenwartssprache*. Tübingen: M. Niemayer.
- Hadzidakis, Georgios. 1905. *Μεσαιωνικά και Νέα Ελληνικά [Mediaeval and Modern Greek]*, vol. 1. Athens: P.D. Sakellariou.
- Hale, Kenneth. 1973. "Deep-surface canonical disparities in relation to analysis and change: an Australian example". *Current trends in linguistics* 11.401–458.
- Halle, Morris. 1973. "Prolegomena to a theory of word-formation". *Linguistic Inquiry* 4.3–16.
- Hankamer, Jorge. 1989. "Morphological Parsing and the Lexicon". *Lexical Representation and Process* ed. by William Marslen-Wilson, 392–408. Cambridge, Mass.: MIT Press.

- Holton, David, Peter Mackridge & Irene Philippaki-Warbuton. 1997. *Greek: A Comprehensive Grammar of the Modern Language*. London & New York: Routledge.
- Joseph, Brian D. & Jane Smirniotopoulos. 1993. "The morphosyntax of the modern Greek verb as morphology and not syntax". *Linguistic Inquiry* 24:2.388–398.
- Kiparsky, Paul. 1982. "From cyclic phonology to lexical phonology". *The Structure of Phonological Representations* ed. by Harry van der Hulst & Norval Smith, 1:131–177. Dordrecht, Holland & Cinnaminson, U.S.A.: Foris Publications.
- Marantz, Alec. 2001. "Words". Unpublished keynote speech at the 20th West Coast Conference on Formal Linguistics, held at the University of Southern California on February 23–25, 2001.
- Matthews, Peter H. 1972. *Inflectional Morphology*. Cambridge: Cambridge University Press.
- Meščuk, Igor Alexandrovič. 1986. "Towards a definition of case". *Case in Slavic* ed. by Richard D. Brecht & James S. Levine, 35–38. Columbus, Ohio: Slavica Publishers.
- Menardos, Simos. 1969. *Γλωσσικά Μελέται* [*Language Studies*]. Lefkosia: Center of Scientific Research.
- Meyer-Lübke, W. 1923. *Grammaire des langues romanes*. New York: Stechert.
- Newton, Brian. 1972. *Cypriot Greek: its phonology and inflections*. The Hague: Mouton.
- Ralli, Angela. 2003. "Prefixing vs compounding: The case of Greek preverbs". *Asymmetry in Grammar: Morphology, Phonology, Acquisition* ed. by Anna Maria Di Sciullo, 37–64. (= *Linguistics Today*, 58.) Amsterdam & Philadelphia: John Benjamins.
- Ronga, Marianna. 1977. "Παρατηρήσεις στην αποβολή των άτονων ι, υ στο ιδίωμα της Σιάτιστας [Remarks on deletion of unstressed i, u in the dialect of Siatista]". *First Linguistics Symposium on Northern Greece (Epirus, Macedonia, Thrace), 28–30 April 1976: Proceedings*, 51–58. Thessaloniki.
- Spencer, Andrew. 1991. *Morphological Theory: An Introduction to Word Structure in Generative Grammar*. Oxford, UK; Cambridge, Mass.: Basil Blackwell.
- Triandafilidis, Manolis. 1996. *Γραμματική (της δημοτικής)* [*Grammar of Demotic*]. Thessaloniki, reprinted from 1941 edition.