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Bitte Herausgeber hinzufügen und formal anpassen.

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116. From Ancient Greek to Modern Greek

1. Bibliographic sources
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Abstract

This article deals with word-formation in the diachrony of the Greek language. It provides a basic description of the structure, the properties and the evolution of affixal

derivation (prefixation and suffixation) as well as compounding, while there are hints
about the evolution of formations created by processes such as ablaut, backformation
and reduplication. All issues are illustrated with examples, which, for reasons of clarity,
are given in a phonological transcription.

1. Bibliographic sources

Unexpectedly for such a well-researched language as Greek, word-formation has re-
ceived little attention from a diachronic point of view, and, in the case of Ancient Greek
(hereafter AG), from a theoretical point of view as well. No diachronic accounts exist
of the phenomenon, apart from the brief comparative overview (AG derivational suffixes
and their survival or loss in Modern Greek (hereafter MG)) in the outdated Jannaris
(1897: 287−311) and Dieterich's (1928) list of MG derivational prefixes and suffixes
with their previous history and origins. The only full-length description of AG word-
formation remains Debrunner (1917), which can be complemented by Chantraine (1933)
and Lühr (2008) for the nominal domain only. Fortunately, the historical description of
Homeric word-formation by Risch (1973) can be applied to AG in general. The data
(lists of suffixes by part of speech) is set out in the traditional grammars of Buck (1933:
441−530), Schwyzer (1939: 415−544) and Bornemann and Risch (1978: 306−319),
while a survey of suffix productivity is possible through the reverse dictionaries of Buck
and Petersen (1945) (for nominal suffixes only, but with an historical introduction and a
bibliography for each suffix) and Kretschmer and Locker (1977). There is, on the other
hand, a considerable bibliography on specific suffixes or word-formation types, for
which cf. Meier-Brügger (1992: 33−39), Meissner and Tribulato (2002) and Lühr (2008).
    Word-formation in Koine Greek (ca 3rd c. BC to 3rd c. AD) is much less researched;
the data can be viewed in the grammars of Mayser (1923: 415−510), Moulton (1963:
267−410) and Palmer (1964), while much information is provided by Filos (2008). For
Medieval Greek (hereafter MedG), no grammatical description is available apart from
Minas (1994: 139−159), and data can be collected only through historical overviews of
MG derivation, such as Dieterich (1904, 1909, 1928), Anastasiadi-Symeonidi (1983),
Andriotis (1939, 1956). Considerable evidence concerning suffixation in late Medieval
and Early MG can be found in Karantzola and Giannoulopoulou (2000, 2001) and Karan-
tzola (2004).
    Studies dealing with specific suffixes in MG usually include a diachronic component,
where the origin of the suffix and its use in the medieval, early modern and modern
period is discussed, but ~~the~~ data are rare. A comparison of the amount of research on
word-formation for each period, as listed in Heidermanns (2005), easily shows how far
behind research in Koine and MedG is lagging.

2. Word-formation overview

Greek word-formation can be subdivided in two main domains, derivation and composi-
tion. Both domains are ~~generally~~ comparatively stable diachronically, as Greek is a re-
markably conservative language from a morphological point of view, mainly due to the

fact that there is no phonological erosion at the end of the word, which would have destroyed inflectional and derivational suffixes as has happened in most Indo-European (hereafter IE) languages. An additional factor is the long diglossic history of the language, which has led to the retention of archaic derivational and compounding patterns. In a similar vein, the diachronic prestige of AG and its influence on European civilization (and thence, European languages) has caused the re-importation of much AG word-formation material into MG through borrowing: the so-called "neo-classical" suffixes and neo-classical compounds fit easily into MG and contribute to its overall conservative morphological outlook.

The morphological make-up of Greek words is diachronically stable. They consist of roots (bearers of the main lexical meaning of the word) + derivational suffixes and/or prefixes + inflectional suffixes. The combination of root + affix gives the stem, which is available for further derivational processes, i.e. affixation of additional derivational suffixes. One may therefore distinguish between simple and complex stems.

IE and to a large extent AG made a fundamental distinction between athematic and thematic formations which affected their inflectional behaviour: athematic nouns and verbs are formed by the direct affixation of inflectional suffixes onto the stem, while in thematic nouns and verbs a so-called "thematic vowel" intervenes between the root (or the stem) and the inflectional suffix. In the nominal domain, analyses of AG word-formation thus make a basic division between root nouns (*Wurzelnomina*, from a traditional point of view belonging to the 3rd "athematic" declension) (1) and nouns derived through suffixation of the base with a thematic vowel (2). In the verbal domain, one may distinguish between the athematic conjugation (the so called *-mi* verbs) (3), in which the inflectional suffix is attached directly onto the stem, and the thematic conjugation (the *-o* verbs), in which a thematic vowel intervenes (4).

(1)   a.   *thɛ:r-*   +   ∅   →   *thɛ́:r*
                root   infl. suffix
                'animal'   nom. sg.

         b.   *phylak-*   +   *-s*   →   *phýlaks*
                root   infl. suffix
                'guard'   nom. sg.

(2)   *log-*   +   *-o-*   +   *s*   →   *lógos*
                root   them. vowel   infl. suffix
                'reason'   nom. sg.

(3)   *deik-ny*   +   *-te*   →   *deíknyte*
                stem   infl. suffix
                'to show'   2nd pl.

(4)   *leg-*   +   *-e-*   +   *-te*   →   *légete*
                root   them. vowel   infl. suffix
                'to say'   2nd pl.

NB: Following the IPA model, the AG pitch accent is noted as a tone on the vowel that bears it, whereas MedG and MG dynamic accent is noted as a stress mark preceding the accent-bearing syllable.

The status of the thematic vowel in a synchronic theoretical analysis of AG inflectional and derivational morphology is debatable, in view of the fact that it also has inflectional

properties (see, e.g., Luraghi 2004, Kakarikos 2010 for nominal inflection; Duhoux 2000 for verbal inflection).

The distinction between athematic and thematic inflected items disappeared from Greek when the overall inflectional system changed, and led to the incorporation of the thematic vowel onto the stem (or onto the suffix, depending on the approach ~~which is followed~~, see Ralli 2005). In the nominal domain, this happened in conjunction with important changes in the inflectional system, which brought about the demise of the athematic 3rd declension and its merger with the 1st (*a-* stem) one. In the verbal domain, the athematic declension disappeared entirely during the Koine period, and all its members were reformed according to the thematic pattern (see Holton and Manolessou 2010 and references therein for these changes).

From the viewpoint of the overall evolution of Greek morphology, therefore, the most important diachronic changes in Greek word-formation do not consist in the creation of new suffixes or loss of old ones (although both processes do take place) but in the reanalysis of the same words in different ways.

As already mentioned, another major difference between AG and MG word-formation is caused by the influence of the diglossic history of the language. All historical phases of Greek, from the Koine onwards, display a distinction between learned/high and vernacular/low which widens with the passage of time, involving more and more phonetic and morphological differentiation. As a result, the vocabulary contains lexical items of different chronological periods and different morphological properties. Thus, there are many ~~members in the category of~~ non-productive derivational and compositional patterns, which makes their synchronic morphological analysis difficult. Moreover, several suffixes have two allomorphs, one learned and one popular, both of which might be productive (e.g., AG suffix *-téːrion* > MG *-ˈtirio* and *-ˈtiri* (5a, b); AG denominal agent suffix *-eús* > MG *-ˈeas* and *-ˈjas* (6a, b)), and some suffixes combine exclusively with either learned or popular lexical bases. To take an example from adjective-forming suffixes: *-iˈðis* (< AG *-eidéːs*) and *-ˈoðis* (< AG *-oːdɛːs-* see Anastasiadi-Symeonidi 2001) are learned suffixes (7a, b), whereas *-ˈenjos* and *-ˈutsikos* are exclusively popular (8a, b). For the notion of "learned" in the MG vocabulary, see Symeonidi and Fliatouras (2004).

(5) a. *poˈlo* 'to sell'   →   *poli-ˈtirio* 'sales point'
         proskaˈlo 'to invite'   →   *proskli-ˈtirio* 'invitation'
     b. *poˈtizo* 'to water'   →   *potis-ˈtiri* 'watering can'
         ksiˈpno 'to wake up'   →   *ksipni-ˈtiri* 'alarm clock'

(6) a. *ˈɣrama* 'letter'   →   *ɣramaˈt-eas* 'secretary'
         ˈfero 'bear'   →   *foˈr-eas* 'bearer, vector'
     b. *ˈfonos* 'murder'   →   *foˈn-jas* 'murderer'

(7) a. *oˈsto* 'bone' (learned)   →   *oste-ˈoðis* 'bony' vs.
         ˈkokalo 'bone' (pop.)   →   **kokalˈ-oðis*
     b. *ˈialos* 'glass' (learned)   →   *ialˈ-oðis* 'glassy' vs.
         jaˈli 'glass' (cognate pop.)   →   **jalˈ-oðis*

(8) a. *moˈlivi* 'lead' (pop.)   →   *moliˈv-enjos* 'made of lead' vs.
         molivðos 'lead' (cognate learned) →   **molivˈð-enjos*

b. *'sinefo* 'cloud' (pop.)   →   *sine'f-enjos* 'cloudy' vs.
    'nefos 'cloud, smog' (cognate learned)   →   **ne'f-enjos*

3. Derivation

3.1. Suffixation and prefixation

3.1.1. Suffixation

The basic properties of AG suffixes are the following:

– Most ~~of them~~ are of IE descent, and their previous history is discussed in works on
  IE word-formation, such as Lindner (2011). AG suffixes are therefore almost exclu-
  sively native, and there is no borrowing of suffixes in AG, if one exempts a number
  of pre-Greek loans (for details see Beekes 2010: xxxiii-xl), which are opaque and
  non-productive and, thus, no longer felt as suffixes. On the contrary, in later periods
  there is considerable suffix borrowing, initially from Latin (cf. Filos 2008), e.g., *-ari-*
  us, and later from Italian/Venetian (*-are, -ada*) and Turkish (*-lı, -lık* > MG *-lis, -'liki*);
  examples will be given under (d) below.
– ~~They~~ may have several allomorphs with an initial vowel added through reanalysis
  (shift of morpheme boundary) and analogical extension. For example, *-Vrós* has the
  allomorphs *-erós, -arós, -yrós, -ɛ:rós* (9):

(9) a. *ký:d-os* 'glory', *kýd-istos* 'very glorious'   →   *kyd-rós* 'glorious'
        anth-éo: 'to bloom', *ánthɛ:-sa* 'bloomed'   →   *anthɛ:-rós* 'blooming'

     b. *trém-o:* 'to fear, tremble', *tróm-os* 'terror'   →   *trom-erós* 'terrible'
        steíb-o: 'to tread', *stíb-os* 'trodden track'   →   *stib-arós* 'compact, sturdy'
        haîma 'blood', *haímat-os* 'blood GEN.SG.'   →   *haimat-ɛ:rós* 'bloody'

– Nominal suffixes may be used for more than one part of speech, i.e. both for nouns
and adjectives. For example, the AG suffix *-mós* creates adjectives from nominal stems
and nouns from verbal stems (10). This suffixal property of polyfunctionality is also
shared by the later phases of the language.

(10) *thér-os* 'warmth, summer'   →   *ther-mós* 'hot' (cognate with Engl. *warm*)
     dió:k-o: 'to pursue, chase'   →   *dio:k-mós* > *dio:g-mós* 'chase, persecution'

One may distinguish the following types of evolution in Greek suffixal derivation:

a) Preservation of morphologically-intact suffixes: Of course, one can-
    not speak of complete identity of form, since AG and MG phonology are quite differ-
    ent; identity can be understood as a phoneme-per-phoneme correspondence, where
    correspondence has its usual historical linguistic meaning of "direct inheritance
    through regular phonological evolution". For example, the masculine deverbal suffix
    -tɛ:s (Leukart 1994) was in AG and still is in MG one of the main suffixes creating

agent nouns, e.g., *po:lô:* 'to sell' → AG *po:lɛ:té:s*, MG *poliˈtis* 'seller' (for reasons of clarity, the derivational suffix is taken together with the inflectional ending). Phonologically, the suffix appears in AG as /tɛ:s/ and in MedG and MG as /tis/, while in the Pontic dialect of MG it preserves its ancient form /tes/ when unaccented (e.g., Pontic *ˈrafto* 'to sew' → *ˈraftes* 'tailor'). In other cases, the phonological difference is minimal, e.g., the adjective-creating suffix *-imos* (AG and MG /imos/): AG and MG *nóm-os* 'law' → *nóm-imos* 'legal', AG *nóst-os* 'return' → *nóst-imos* 'belonging to the day of the return' → MG 'tasty'.

b) Preservation of suffixes with major phonological and morphological changes: Evolution in the inflectional morphology of the language has led to changes in the "citation form" (the nom. sg.) and the inflectional pattern of many nominal suffixes: e.g., AG fem. denominal suffix *-tɛ:s*, gen. *-tɛ:t-os* > MG *-tita*, gen. *-titas* (11) or AG masc. deverbal suffix *-tɛ:r, gen. -tɛ:r-os* > MG *-tiras*, gen. *-tira* (12):

(11) AG *ánthro:pos* 'man'   →   AG *anthro:pó-tɛ:s*, MG *anθroˈpo-tita* 'humanity'
      AG *takʰýs* 'quick'   →   AG *takhý-tɛ:s*, MG *taˈxi-tita* 'quickness'

(12) AG *só:-idzo:* 'to save'   →   AG *so:-té:r*, MG *so-ˈtiras* 'saviour'
      AG *antidrô:* 'to react'   →   MG *andiðras-ˈtiras* 'reactor'

The major vowel change of "synizesis" (glide formation), which took place around the 13th c. AD, has greatly altered the form of several suffixes, e.g., the deverbal neuter suffix [ion] > [ˈjo] forming nouns where an activity takes place: MedG *maɣir-évo* 'to cook' → *maɣiˈrio /maɣiˈrjo* 'kitchen, cook-shop'.

As already mentioned, due to the double (learned and vernacular) linguistic tradition, a suffix may have two allomorphs in MG, one forming high register words and one for "lower" vocabulary. See the "high" *metaksurˈɣ-io* 'silk factory', *zaxaroplasˈt-io* 'pastry shop', *kosmimatopoˈl-io* 'jewellery store', *stratoðiˈk-io* 'court martial' vs. the "low" *krasopuˈl-jo* 'wine shop, tavern', *ljotriˈv-jo* 'olive press', *kambanaˈr-jo* 'belfry'. Occasionally, the same stem may be combined with the two allomorphs of the same suffix, creating words with different meanings (etymological doublets), e.g., *stiˈx-io* 'element' but *stiˈx-jo* 'ghost'. Synizesis has also caused merging of initially distinct suffixes, as in the case of AG *-éa, -ía, -eia* and *-iá*, now all *-ja*, e.g., *maˈxeri* 'knife' → *maxeˈr-ja* 'knife-wound', *ˈmilo* 'apple' → *mil-ˈja* 'apple tree', *tarˈzan* 'Tarzan' → *tarzaˈn-ja* 'foolhardy action'. It is doubtful whether the contemporary native speaker makes any distinction between the homophonous suffixes, and the distinctions made by the Ancient and the Medieval speaker must have also been different from each other. The picture is further complicated by the existence of "learned" variants of the suffix, preserving the form [ˈia] without synizesis, and creating etymological doublets, sometimes without a change of meaning (e.g., *elefθeˈr-ia/lefteˈr-ja* 'freedom', *sxoˈl-io/sxoˈl-jo* 'school') and sometimes with difference of meaning (e.g., *ðuˈl-ia* 'slavery'/*ðuˈl-ja* 'work'). Additionally, a number of MG dialects, such as those of Megara, Mani and Pontus, also preserve the Medieval form [ˈea] without synizesis, e.g., *miˈl-ea* 'apple tree', *maxeˈrea* 'knife-wound'. For the complex history of these suffixes see Petrounias (1987).

Another characteristic example is the nominal suffix *-eús* (Leukart 1994), which, due to alternative phonological or analogical evolutions as well as to the learned tradition,

has acquired the allomorphs *- ˈeas, - ˈjas* and *- ˈjos*, applying to the same stem (13a), depending on the register or dialect, or to different stems (13b): nouns ~~created~~ with this suffix constitute a problem for MG morphology, because they form a small inflectional class with a mixed paradigm. In MG, this suffix has acquired an additional colloquial meaning (apart from the formation of agent nouns), giving pejorative augmentative nouns (13c).

(13) a. AG *basil-eús* 'king'   >   MG *vasiˈl-eas, vasiˈl-jas, vasiˈl-jos*
          AG *graphᵸ-eús* 'scribe'   >   MG *γraˈf-eas / γraˈf-jas* 'clerk'

      b. AG *grammat-eús* 'secretary' >   MG *γramaˈt-eas*
          AG *drom-eús* 'runner'   >   MG *ðroˈm-eas*
          AG *phᵸon-eús* 'killer'   >   MG *foˈn-jas*
          AG *gon-eús* 'parent'   >   MG *γoˈn-jos*

      c. MG *psiˈl-os* 'tall'   →   *psiˈl-eas* 'tall guy'
          MG *ˈmavr-os* 'black'   →   *maˈvr-eas* 'Blackie (surname)'

c) Loss of suffixes: A number of AG suffixes were lost during the Koine or the Medieval period. "Loss" means cessation of productivity and of ability to create new lexical items, although, due to the conservative character of the language a suffix may survive. For example, AG possessed a neuter suffix creating instrument nouns, with four allomorphs: *-tron, -tʰron, -tlon, -tʰlon*, e.g., *aró-o:* 'to plough' → *áro-tron* 'plough', *kleí-o:* 'to close' → *kleí-tʰron* 'latch', *gén-os* 'race, kin' → *géne-tʰlon* 'offspring, descent'. The suffix ceased to be productive in MedG, but survives lexically, as a number of AG words bearing the allomorph *-tro* are still used, having recognizable verbal stems: *ˈθea-tro* 'theatre', *ˈkini-tro* 'motive', *ˈγoi-tro* 'charm', *ˈplik-tro* 'key (of keyboard)', *ˈkomis-tro* 'fare' etc. In the case of the much rarer survivals of the allomorph *-tʰron,* the derivational process is probably no longer felt: *ˈelki-θro* 'sledge', ~~ˈar-θro 'article'~~. The allomorphs *−tlon* and *-tʰlon* have completely disappeared.

d) Borrowing of new suffixes: As already mentioned, a number of derivational suffixes were borrowed into Greek during different periods. These are mostly nominal suffixes. ~~E.g.,~~ Latin *-arius* > *- ˈarios/- ˈaris* (forming nouns, e.g., *periˈvoli* 'garden' → *perivoˈl-aris* 'gardener' and adjectives, e.g., *ˈzil-ja* 'jealousy' → *ziˈlj-aris* 'jealous'), Latin *-atus* (forming adjectives, e.g., *ˈtrexo* 'to run' → *treˈx-atos* 'running'), Turkish *-ci* (forming professional nouns, e.g., *taˈksi* 'taxi' → *taksi-ˈdzis* 'taxi-driver', *ˈsuvla* 'roasting spit' → *suvla-ˈdzis* 'souvlaki seller'), Venetian *-ada* (forming nouns, e.g., *ˈeksipnos* 'clever' → *eksiˈpn-aða* 'cleverness', *portoˈkali* 'orange' → *portokaˈl-aða* 'orange juice'). The borrowing of verbal suffixes, such as the Italian *-are*, is much rarer, and limited to stems of foreign origin, e.g., Italian *sollazzo* 'amusement' → *sollazz-are* 'to entertain' > MG *suˈlatso* 'stroll' → *sulaˈts-aro* 'to stroll' or English *google* → *guˈgl-aro* 'to google' '(Ralli in print). As this distribution shows, the borrowing of suffixes may have started from borrowing the entire lexical items bearing the suffix in question, which initially combines with stems from the language of origin, and has the same function. A suffix may later extend its meaning range and its usage to native stems. For example, the Turkish suffix *-cı* first appears with stems of Turkish origin: the Medieval dictionary of Kriaras (1967−) contains items like

balta-ˈdzis 'wood-cutter' < Turk. *balta-cı* < *balta* 'axe'; *aba-ˈdzis* 'robe-maker' < Turk. *aba-cı* < *aba* 'cloth, cloak'; *bostan-ˈdzis* 'gardener' < Turk. *bostancı* < *bostan* 'vegetable garden'. Later the suffix spreads to Greek stems, e.g., *ˈsuvla* 'roasting spit' → *suvla-ˈdzis* 'souvlaki seller', *fortiˈɣo* 'truck' → *fortiɣa-ˈdzis* 'truck driver', *ˈaspros* 'white' → *aspri-ˈdzis* 'whitewasher'). Finally, it also acquires a more general sense not necessarily connected with professions, e.g., *AEK* 'a Greek football team' → *aek-ˈdzis* 'supporter of the team AEK', *xoraˈto* 'joke' → *xorata-ˈdzis* 'joker', *fasaˈria* 'trouble, noise' → *fasar-ˈdzis* 'troublemaker' (Ralli 2005).

In some cases, a native suffix merges with a borrowed suffix, creating a new range of functions. For example, the AG masc. nominal suffix *-to:r* creates agent nouns (*rʰɛ̂:-ma* 'word, speech' → *rʰɛ́:to:r* 'orator', *prak-jo:* > *prátto:* 'to act, do' → *prák-to:r* 'doer', *gennáo:* 'to give birth' → *gennɛ:ˊ-tor* 'parent'). In Hellenistic and MedG this suffix (its inflectional form changed to *-toras*) merged with the cognate Latin suffix *-tor*, allowing the importation of many Latin loanwords, e.g., *viˈɣlatoras* 'watcher', *roˈɣatoras* 'mercenary', *ðiˈktatoras* 'dictator', *ˈpretoras* 'praetor'. This type of words, most of them from the Italian verbs in *-are* (e.g., *vigilare*, *rogare*), together with the frequent derivatives of the AG verb *kratéo:* 'to rule, prevail' (MedG *afto-ˈkrator* 'emperor', *panto-ˈkrator* '(of God) ruler of all', *kliðo-ˈkrator* 'key-master', *kosmo-ˈkrator* 'ruler of the world', *θalaso-ˈkrator* 'ruler of the seas') led to an extended form of the suffix in *-ˈatoras,* which attaches to both verbal and nominal stems: MedG *simvuˈl-evo* 'to advise' → *simvuˈl-atoras* 'advisor', *kiniˈɣ-o* 'to hunt' → *kiniˈɣ-atoras* 'hunter', *ðoˈksari* 'bow' → *ðoksaˈr-atoras* 'archer', MG *maɣaˈzi* 'store' → *maɣaˈz-atoras* 'store-keeper'.

e) Creation of new suffixes through reanalysis: A considerable number of new suffixes were created during the history of Greek through the mechanism of reanalysis and shift of morpheme boundaries. A characteristic case is the AG masculine suffix *-mos*, which combines with aorist (perfective) verbal stems to create action nouns (cf. Bader 1974; Rico 2002) (14a). When attached to the extremely frequent verbs bearing the derivational suffixes *-ídz-o:* and *-ádz-o:*, reanalysis took place, in the context of the sigmatic forms of the aorist (+perfective, +past), which led to the creation of the new suffix *-ismos* or *-asmos* (14b).

(14) a. *odýr-omai* 'to wail'   → *odyr-mós* 'wailing'
            katʰár-jo: > *katʰaíro:* 'to purify'   → *katʰar-mós* 'purification'

       b. *kʰo:r-ídz-o:* 'to separate'   → *kho:r-is-mós* 'separation'
            syllabɛ́: 'syllable' → *syllab-ídzo:*   → *syllab-is-mós* 'spelling'
            'to spell'
            kalp-ádzo: 'to gallop'   → *kalp-as-mós* 'gallop n.'
            en-thu:si-ádzo: 'to be inspired by a god' → *enthu:si-as-mós* 'enthusiasm'

This suffix, apart from a new (extended) form, acquired a new function, attachment to nominal bases in order to form abstract nouns, e.g., *xristiaˈnos* 'Christian' → *xristian-iˈsmos* 'Christianity', *ˈðoɣma* → *ðoɣmatiˈsmos* 'dogmatism' (both first attested in the Hellenistic period). The new suffix was subsequently borrowed into Latin (as *-ismus*), with a greatly increased productivity in the Neolatin of the Renaissance, whence it passed on the major European languages (a characteristic case of neoclassical word-formation).

In this new guise, it came back into Greek during the Enlightenment period, following three paths: a) via words formed in a foreign language on the basis of Greek elements, subsequently borrowed into Greek. E.g., *mixaˈni* 'machine' → *mixaniˈsmos* 'mechanism', attested since 1761, from French *mécanisme* attested since 1701; b) via calques, e.g., *ɣiˈmnos* 'nude' → *ɣimn-iˈsmos* 'nudism' on the basis of English *nudism*; c) via phonetically adapted foreign terms, e.g., *feminiˈsmos, sinðikaliˈsmos* from French *féminisme, syndicalisme*. A similar evolution applies to the reanalyzed morpheme *-isˈtis* (English *-ist*) from the AG *-tɛːs*, through verbs in *-idzo* (cf. Haspelmath 1995: 5).

Another characteristic case of affix creation through reanalysis is the extremely productive diminutive suffix *-ˈaki* (Jannaris 1897: 292−293). Its origin lies in the AG diminutive *-ion*, e.g., AG *bíbl-os* 'book' → *bibl-ion* 'small book', *sphŷːr-a* 'hammer' → *sphyːr-ion* 'small hammer', whose diminutive meaning was subsequently bleached (in MG *viˈvlio* and *sfiˈri* mean simply 'book' and 'hammer', respectively, without any diminutive meaning, while the original words have disappeared). When the suffix *-ion* was attached to nominal bases in /k/, the diminutive item ended in *-akion*, which through phonological erosion became *-ˈaki*, e.g., AG *rýak-s* 'brook' → *rýak-ion* 'small brook' > MG *riˈaki* 'brook'. The final phonemes of the stem were reanalyzed as part of the suffix (*ryˈak-ion > ry-ˈakion*) and the new suffix spread to new nominal bases, e.g., *sfiˈri* 'hammer' → *sfiˈr-aki* 'small hammer', *moˈro* 'baby' → *moˈr-aki* 'small baby'.

3.1.2. Prefixation

Prefixation in AG involves a very small number of prefixes which attach to nominal bases (e.g., AG *sophós* 'wise' → *á-sophos* 'unwise'), and the very productive mechanism of prefixing verbs by preverbs, which originate from prepositions with adverbial locative meaning (e.g., *katá* 'towards, with downward motion' + *grápho:* 'I write' → *kata-grápho:* 'I write down, list', *antí* 'opposite' + *grápho:* → *antigrápho:* 'I write back, copy', *hypó* 'under' + *grápho:* → *hypográpho:* 'I sign, subscribe'). Traditional accounts (e.g., Debrunner 1917) treat the attachment of preverbs under composition, where compound verbs are considered to contain a preposition and a full verb. However, recent accounts demand a distinction between prepositions and preverbs, i.e., prepositions prefixed to verbs (see Bortone 2010: 119−121), mainly because the meanings of preverbs are not always the same as the meanings of the prepositions from which they derive. Even if in AG a grouping together of prepositions and preverbs is possible, since for every preverb there exists a homonymous preposition with a similar meaning, it ceases to be so in later Greek, since many AG prepositions are lost and survive only as preverbs. Moreover, preverbs have different morphological and semantic properties from the surviving free-form prepositions (see Ralli 2004). For example, the AG preposition and preverb *diá* 'through, for' survives in MG as a preverb *ðiˈa* (e.g., *ðiˈa* + *ˈɣrafo* 'I write' → *ðiaˈɣrafo* 'I delete', *ðiˈa* + *ˈkrino* 'I judge' → *ðiaˈkrino* 'I distinguish') but the corresponding preposition has changed through phonological evolution to *ja* 'for' and its relation to the preverb is no longer obvious.

Apart from this major change in the domain of prefixation, the following changes can be observed in the diachrony of Greek:

a) Preservation of morphologically-intact prefixes: The most characteristic case is the very productive privative prefix *a-* (before consonant) and *an-* before

vowel, etymologically a cognate of the Latin *in-* (English *un-*). This prefix attaches to nouns, adjectives and adverbs, and has remained stable throughout the history of Greek. E.g., AG *sopʰós* 'wise' → *á-sopʰos* 'unwise', *stʰénos* 'strength' → *a-sthenέ:s* 'weak' (> MG *asθeˈnis* 'ill'), *ónoma* 'name' → *anó:nymos* 'anonymous', MG *xaˈra* 'joy' → *ˈa-xar-os* 'joyless', *arˈmoðios* 'responsible, in charge' → *an-arˈmoðios* 'not in charge'. Another case of prefix preservation can be seen in the also productive qualitative adverbial prefixes *dys-* 'un-, mis-, bad' and its opposite *eu-* 'well, good', continued in MG as *ðis-* and *ef-* with the same meaning and function. E.g., AG *eu-tykʰέ:s ~ dys-tykʰe:ˈs*, MG *ef-tixiˈsmenos ~ ðis-tixiˈsmenos* 'happy, lucky'~ 'unhappy, unlucky', AG *eu-kʰáristos ~ dys-árestos*, MG *ef-ˈxaristos ~ ðiˈs-arestos* 'pleasant/ unpleasant'. Most words formed from these suffixes are directly inherited from AG, but new words are also formed in a higher register, e.g., *ðis-liturˈɣia* 'malfunction', *ðis-leˈksia* 'dyslexia' (neoclassical loan), *ðis-ˈprofer-tos* 'hard to pronounce'.

b) Preservation of prefixes with major phonological and morphological changes: The IE root **sem-* 'one' gives, in the lengthened grade, the prefix *hɛ:mi-* (cf. Latin *semi-*) 'half-', e.g., *hέ:mi-sys* 'half' (adj.), *hɛ:mi-tʰanέ:s* 'half-dead', *hɛ:mí-tʰeos* 'demi-god', *hɛ:mí-pʰo:non* 'semi-vowel'. The prefix continues in the high register vocabulary of MG as *iˈmi-* (e.g., *imi-θaˈnis, iˈmi-θeos, iˈmi-fono*), while popular language elements contain instead the cognate nominal *mis(o)-* as first member of compounds (*-o-* is the linking vowel whose presence is compulsory in compounds, see Ralli 2008). *miso-* derives from the adjective *miˈsos* < AG *hέ:mi-sys* 'half', first appearing in the Medieval period, e.g., *miˈs-o-trelos* 'half-mad', *mis-o-faɣoˈmenos* 'half-eaten', *miˈs-o-loɣa* 'minced words'. "Learned" and "popular" variants may co-exist with the same meaning, e.g., *imiθaˈnis* and *miso-peθa-ˈmenos* 'half-dead', *imi-teˈlis* and *miso-telio-ˈmenos* 'half-finished', *iˈmi-ɣimnos* and *miˈso-ɣimnos* 'half-naked', while in MG many new high register *imi-*derivatives, non-existent in AG, are created, e.g., *imi-aˈftonomos* 'semi-autonomous', *imi-ðiatroˈfi* 'half-board', *imi-poˈlitimos* 'semi-precious'.

c) Loss of prefixes: A number of AG nominal prefixes disappeared, mostly during the Koine period. The lost prefixes were mainly those whose meaning and etymology were no longer transparent, and thus were not very productive even in AG. An example is the negative prefix *nɛ:-* of the same IE etymology as *a-* (both < **ņ*), attached to stems beginning with a vowel, e.g., *épos* 'word' → *nέ:pios* 'not speaking > stupid', *ánemos* 'wind' → *nɛ:nemía* 'calm'. The prefix *nɛ:-* did not survive after AG, but still exists as a fossil in a number of MG words such as *ˈnipio* 'infant' (from AG *nέ:pios* 'stupid').

d) Borrowing of prefixes: The borrowing of prefixes is not attested in any phase of the history of Greek. A possible exception might be the MG colloquial intensive prefix *kara-* 'very', from the Turkish adjective *kara* 'black': *iˈliθios* 'silly' → *kara-iˈliθios* 'very silly', *tsek-ˈaro* 'I check' → *kara-tseˈkaro* 'I check very thoroughly'. The use as an intensive prefix probably started from the borrowing of Turkish words where *kara* was a component with an intensifying function, e.g., Turkish *sevda* 'love, passion' → *kara-sevda-lı* 'deeply in love (adjective) > MG *karasevdaˈlis* 'id.'

e) Creation of new prefixes or prefixoids through reanalysis: One may distinguish two cases: i) creation of prefixes from grammatical/functional elements and ii) creation of prefixoids from lexical elements. The first case involves the prefix *kse-*, which derives from the combination of the AG preverb *ek* 'of, from'

and the augment *e-* which marked the past tense of AG verbs and was prefixed on the left side (15a) of the verbal stem. In later Greek, the augment lost its status as an inflectional element when unaccented, through a general phonetic process deleting unaccented initial vowels from the Medieval period onwards (15b). In certain cases where a verb is prefixed by a preverb, the augment is attached internally (15c):

(15)   a.   *gráph-o:* 'I write' → *é-graph-on* 'I wrote (imperfective, past)', *é-grap-s-a* 'I wrote (perfective, past)'

       b.   *'e-γrap-s-a* 1st sg. vs. *e-'γrap-s-amen* → *'γrapsame* 1st plur.

       c.   *anti-grápho:* → *ant-é-grap-s-a*, *kata-grápho:* → *kat-é-grap-s-a*

Crucially, in the case of verbs formed with the preverb *ek-* 'out, off' (*eks-* before vowel), the past tenses show the surface form *ekse-*, as in *ek + kathar-ízo:* 'to clean' → *ekkatha-rízo:* 'to clean out, clean completely' → *eks-e-kathár-iz-on* and *eks-e-kathár-is-a*. Phonetic erosion of the unaccented initial /e/ of *eks-,* together with the destabilization of the augment through the same phenomenon, led to past forms like *ksekatharisa* which were reanalyzed not as *ks-e-katharisa* but as *kse-katharisa*. Thence, a new prefix *kse-* appeared in the medieval period, which was able to attach to verbs (*kse-'γrafo* 'to write off', *kse-'pleno* 'to wash off') and adjectives (*kse-'katharos* 'utterly clear'), with the limitation that the stems which accept it belong to the vernacular and not to the learned register.

It is important to note that a similar evolution occurred in the case of the MG adverb *ksana* 'again', which derives from the sequence of two AG preverbs, *ek* (its allomorph *eks*) and *ana-*, with phonetic erosion of the initial unstressed vowel, e.g., *eks-ana-'γrafo* > *ksana-'γrafo*. However, contrary to *kse-* which is a clear-cut bound morpheme (prefix), *ksana* has become a free word, i.e. an adverb meaning 'again' (see Ralli 2004 for the compound nature of combination involving *ksana* and a verb). Thus, the further development of *ksana* from a prefix to the status of a free word suggests the occurrence of a degrammaticalization process (cf. Méndez Dosuna 1997).

The second process of prefixoid creation involves the prefixization of full lexical items which were originally first members of compounds, and subsequently underwent generalization and bleaching of their meaning. A case in point is *θeo-* (Anastasiadi-Symeonidi 2008), from the noun *θe'os* 'God', which initially participated in compounds such as *θe'o-ðotos* 'God-given', *θeo-'filak-tos* 'guarded by God', but now behaves like a prefix with an intensifying function, attached to adjectives: *xon'dros* 'fat' → *θe'o-xondros* 'very very fat', *γim'nos* 'naked' → *θε'o-γimnos* 'utterly naked'.

3.2. Ablaut

Nominal derivation in AG is also connected with the phenomenon of ablaut, i.e. the change of the root vowel. Ablaut is a residual effect of IE word-formation, where it was connected with the accent (accented roots remained stable, unaccented roots underwent change). In other words, it was originally a phonologically-driven alternation. However, from a synchronic point of view within AG, it should be considered as a purely morphological phenomenon (16):

(16) *phér-o:* 'to bear, bring' → *phór-os* 'tribute', *phor-á:* 'carrying, tendency', *phor-eús* 'carrier'

trép-o: 'to turn' → *tróp-os* 'direction, manner', *trop-ḗ:* 'turn, turning', *trop-eús* 'door-hinge'

ném-o: 'to dispense, distribute' → *nóm-os* 'dispensation, law', *nom-ḗ:* 'distribution', *nom-eús* 'distributor'

It is doubtful whether ablaut was a productive mechanism in AG, i.e. whether new nouns could be formed using it or whether all the word families participating in the pattern were of IE inheritance. Of course, there can be no question of ablaut as a productive mechanism after AG. However, most of the relevant word families survived diachronically until MG in unchanged form (disregarding changes in pronunciation), and, therefore, the pattern is almost as obvious as it was in AG.

3.3. Backformation

Sometimes, simplex words (inflection disregarded) can be created from derived words through the analogical process of backformation, which may produce the following categories:

a) nouns from verbs, e.g., *hɛ:ttô:mai* 'to be defeated' → *hê:tta* 'defeat', *gennô:* 'to give birth' → *génna* 'birth', *ereunô:* 'to investigate' → *éreuna* 'investigation' (on the analogy of regular denominal formations like *dípsa* 'thirst' → *dipsô:* 'to be thirsty', *peína* 'hunger' → *peinô:* 'to be hungry', *lýssa* 'rage, rabies' → *lyssô:* 'to be enraged, rabid'). The process continues in MedG and MG, creating nouns like *ɣnoˈrizo* 'to know' → *ˈɣnora* 'sign of recognition', *anaˈseno* 'to breathe' → *aˈnasa* 'breath', *kaˈvlono* 'to be turned on' → *ˈkavla* 'erection'.

b) Simple adjectives from prefixed words, e.g., *pseûdos* 'lie, falsehood' → *a-pseudḗ:s* 'not false, true' → *pseudḗ:s* 'false' (for the process see Meissner 2005).

c) Derived nouns from compounds, e.g., *polítɛ:s* 'citizen' → *politeía* 'citizenship, constitution' → *iso-politeía* 'equality of civic rights' → *iso-polítɛ:s* 'citizen with equal rights'; *eleútheros* 'free' → *ap-eleuthe*róo:* 'set free' → *apeleútheros* 'freed slave, freeman'. Similar backformations can also be found in MedG and MG, e.g., AG and MG *ˈorkos* 'oath' → *eks-orˈk-izo* 'to exorcise' → MedG *eˈksorkin*, MG *ˈksorki* 'magic spell'.

3.4. Reduplication

Reduplication was originally a non-systematic mechanism to denote emphasis through repetition, a cross-linguistically common phenomenon. In AG (< IE) it had become grammaticalized in verbal inflection where it regularly ~~created~~ the Perfect stem, e.g., *lýo:* → *lé-ly-ka*, *grápho:* → *gé-graph-a* (for the mechanism of reduplication in AG see Steriade 1982; Niepokuj 1997), and in a subset of verbs also the present stem ("present reduplication"), e.g., *bi-bá-dzo:* 'to cause to go', *di-dá-sko:* 'to cause to know > to teach',

pí-pt-o: 'to fall', *gí-gn-omai* 'to become'). Furthermore, emphatic reduplication of the whole word existed as a marginal phenomenon, e.g., *pan* 'all, whole' (neuter adjective) *pámpan* 'completely, wholly', *pró* 'before, in front' (preposition) → *propró* 'on and on, thoroughly', and it also participated, albeit non-systematically, in nominal derivation, often involving onomatopoeia. E.g., *bárbaros* 'barbarian', *bórboros* 'mire, filth', *mórmuros* 'murmur', *kókkuks* 'cuckoo'. Most of these words survive into MG, which still possesses emphatic lexical reduplication as a productive mechanism (e.g., *murmuˈrizo* 'to murmur', *xaxaˈnizo* 'to giggle', *tsitsiˈrizo* 'to sizzle', *ˈkokoras* 'rooster', *psiˈpsina* 'kitty', *ˈdzidzikas* 'cicada'). However, grammatical reduplication is no longer a living process in MG, having become obsolete since Koine times.

A difficult problem from a synchronic morphological point of view is the considerable number of perfect participles still in use in MG, which continue to show reduplication (17):

(17)   *sin-ˈkrino* 'to compare'   →   *sin-ke-kri-ˈmen-os* 'definite'
       perˈno 'to pass, pass through' →   *pe-peraˈs-men-os* 'finite'
       ˈpiθo 'to convince'   →   *pe-piˈs-men-os* 'convinced'
       pros-kaˈlo 'to invite'   →   *pros-ke-kli-ˈmen-os* 'invited, guest'
       viˈazome 'to be in a hurry'   →   *ve-viaˈs-menos* 'hasty, forced'
       siˈmeno 'to signal, denote'   →   *se-simaˈs-men-os* 'marked criminal'

In most cases, it can be argued that the link to the relevant verb has been lost through semantic change, and that it is no longer felt by the speaker, which entails that the stem of such items is a fossil, no longer part of the verbal paradigm. However, the high number of such items in the lexicon, the presence of the synchronically-common adjectival/participial suffix *-ˈmen* and their productive inflectional paradigms in the three gender values, masculine, feminine and neuter, make them subject to an analysis procedure.

4.   Composition

4.1. Form of compounds

In AG, composition was very rich, and this continues throughout the history of the language. With few differences, most compound patterns continue the IE types, and, thus, overviews of IE and Sanskrit composition are also applicable to AG (see Lindner 2011; Lühr 2010). The basic sequence of the constituents of AG compounds is Member1 + linking vowel + Member2 (+derivational suffix) + inflectional suffix.

Regularly, the first member of a compound is a bare stem, deprived of the inflectional suffix, but the appearance of an inflected first member is also possible. The first member may appear in any case-form, depending on its syntactic relationship with the second member (the head). Compounds with full-word first members often serve as relic testimonies of the lost (syncretized) cases, i.e. the locative and the instrumental, but these are rather rare, whereas the genitive case is comparatively common (18):

(18)   *Neá-polis* 'new town, Naples' < *néa* 'new, fem.' + *pólis* 'city, fem.'
       Pelopón-nɛ:sos 'the island of Pelops, Peloponnese' < *Pélop-os* 'Pelops, gen.' +
       nê:sos 'island'
       Diós-ku:roi 'sons of Zeus, Dioscuri' < *Di-ós* 'Zeus, gen.' + *kû:roi* 'sons'
       pasí-philos 'beloved by all' < *pa-sí* 'all, dat. plur.' + *phílos* 'beloved'
       nu:n-ekh-ɛ́:s 'sensible, wise' < *nû:n* 'mind, acc. sg.' + *ékʰo:* 'to have'
       earí-drep-tos 'harvested in spring' < *éar-i* 'spring, locative' + *drépo:* 'to pluck'
       pyrí-kaus-tos 'burnt by fire' < *pyr-í* 'fire, instrumental' + *kaío:* 'to burn'

With the demise of the locative and instrumental cases, most of these compounds were
already fossilized in AG, and appear mostly in poetic texts. In later Greek such forma-
tions disappear, and in MG a number of words survive in the learned vocabulary and in
place names, but they can no longer be considered as the result of a morphological
process (Ralli 2012).

   Of course, when the first member of a compound is an uninflected word (numeral,
preposition, adverb) its entire form appears in composition. E.g., *déka* 'ten' + *heptá*
'seven' → *deka-eptá* 'seventeen', *déka* + *étos* 'year' → *deka-etɛ́:s* 'ten years old', *áno:*
'up' + *gaîa* 'earth' → *anó:-gaion* 'upper floor'. Also, due to right-headedness, when the
adverb is the second member of a compound, the whole compound is uninflected, e.g.,
pró 'before' + *pálai* 'ago' → *pró-palai* 'long ago'.

   The second member of the compound may be a whole word (e.g., *mégas* 'great' +
tʰymós 'soul' → *megá-tʰymos* 'great-souled, generous') or a stem with a derivational
suffix (e.g., *tʰrasýs* 'brave' + *kardía* 'heart' → *tʰrasy-kárd-ios* 'braveheart'). The same
two patterns are available throughout the history of Greek.

   AG compounds have recessive accentuation, i.e. the accent shifts as far as possible
from the final syllable, restricted only by the law of limitation, i.e. the restriction where-
by the accent cannot fall further than three morae from the end of the word (see Allen
1973: 236−240 and references therein), unless the derivational suffix is inherently ac-
cented. Again, recessive accentuation remains a diachronic property of Greek composi-
tion, but in MG, accent has been replaced by stress which can climb up to the antepenul-
timate syllable (with few exceptions in certain MG dialects). As noted by Ralli (2012,
and article 171 on Greek), MG compounds bear antepenultimate stress if their second
member is a stem (compounds of a [stem stem] structural pattern). However, they follow
the stress of their second member if it is a fully inflected word (compounds of a [stem
word] pattern).

   In AG, the order of the compound constituents (see Andriotis 1939) is generally
considered to reflect the syntactic word order: thus, Adjective + Noun compounds dis-
play the order modifier + head (e.g., *tʰrasýs* 'brave' + *kardía* 'heart' → *tʰrasykárd-ios*
'braveheart', *ákros* 'topmost, edgemost' + *pólis* 'city' → *akrópolis* 'fortified city on a
hill'), while Noun + Verb subordinating compounds display the order argument + head
(e.g., *pŷ:r* 'fire' + *phéro:* 'to bear' → *pyrphóros* 'fire-bearing'). The AG compositional
system was generally right-headed (Tribulato 2006; Raftopoulou 2005), due to the fact
that the AG syntax, at least initially, was AN and OV. Of course, there existed a number
of exceptions to the general pattern. For example, a non-productive and archaic subclass,
subsequently lost, had a verb with a thematic vowel /e/ as its first member, followed by
a nominal second member (e.g., *pʰér-o:* 'to bear' + *oîkos* 'house' → *pʰeréoikos* 'house-
bearer', *ékʰo:* 'to have' + *pô:los* 'foal' → *ekʰépo:los* 'having many foals'). In later

Greek, compounds continue to be right-headed, but occasionally, especially in slang or dialectal vocabulary, items with the reverse order appear (19) (Ralli 2012):

(19)   *'asximo* 'ugly' + *pa'pi* 'duck'   →   *asxi'mopapo* 'ugly duckling'
       'xar(os) 'death' + *pa'levo* 'to fight'   →   *'xaropa'levo* 'to fight (with) death'
       vs.
       aɣa'po 'to love' + *'adras* 'man'   →   *aɣapsa'dru* 'woman who loves men'
                                                                                      (Lesbian dialect)

4.2. Juncture between compound members

4.2.1. Linking vowel

IE composition did not have a linking element; instead, the first member stood as a bare stem, deprived of the inflectional suffix. However, a large number of AG first compound constituents were nouns and adjectives belonging to the *-o-* thematic inflection (2nd declension), i.e. having an *-o-* thematic vowel (originally derivational). This led to the reanalysis of [o] as a linking element and its analogical spread to compound first members which etymologically did not belong to the *-o-* inflection, i.e. they either had an [a:] > [ɛ:] thematic vowel (1st declension), e.g., *hýlɛ:* 'forest' + *tém-no* 'to cut' → *hylɛ:-tóm-os* 'wood-cutter' → later *hylotómos*, or were athematic (3rd declension), e.g., *pŷ:r* 'fire' + *phéro:* 'to bear' → *pyrphóros* 'fire-bearing', but later *pŷ:r* 'fire' + *ballo:* 'to throw' → *pyrobólos* 'fire-throwing, firearm', *pŷ:r* 'fire' + *manteía* 'divination' → *pyromanteía* 'divination by fire' (see Anastasiadi-Symeonidi 1983 and Raftopoulou and Ralli 1999). Recent views date the evolution of [o] as far back as the Mycenaean period (see Meissner and Tribulato 2002: 320−323; Lindner 2011: 46−47 and references therein). In fact, [o] has been a regular characteristic of composition throughout the history of Greek, and nowadays, it has assumed the role of a compound marker (Ralli 2008).

   Instead of the regular linking vowel [o], a long vowel [ɛ:] appears in a number of AG compounds, whose first members probably originate from stems ending in [ɛ:]: (*níkɛ:* 'victory' + *phéro:* 'to bear, bring' → *nikɛ:phóros* 'victorious' and analogically *thánatos* 'death' + *phéro:* 'to bear, bring' → *thanatɛ:phóros* 'deadly', *lampás* 'torch' + **drémo:* 'run' → *lampadɛ:drómos* 'runner at a torch-race). This pattern does not go beyond AG, since during the Koine and Medieval period no new compounds with [ɛ:] > [I] as a linking vowel are formed. A number of these words appear in the high registers of MG as archaisms, e.g., *θanat-i'-foros* 'deadly', *θalam-i-polos* 'butler'.

4.2.2. Wackernagel's law

According to Wackernagel's law II (not the well known syntactic 'law' concerning clitic positioning, but a lesser, morphological, generalization by the same scholar), in AG, when the second member of a compound begins with a vowel, it becomes lengthened in contact with the final vowel of the first member or with the linking vowel (20a). The phenomenon (see Collinge 1986: 238−239; Lindner 2011: 53−57) has many exceptions

and analogical extensions, even in cases where the first member of the compound does not end in a vowel (20b).

(20) a. *stratós* 'army' + *ágo:* 'to lead' → *stratoagos > stratɛ:gós* 'general'
          dýo 'two' + *órophos* 'floor → *dioorophos > dió:rophos* 'two-storey'

      b. *kýo:n* 'hound' + *ágo:* 'to lead' → *kynɛ:gós* 'hunter'
          dys- 'bad, ill' + *ónoma* 'name' → *dysó:nymos* 'bearing a name of
                                                                    ill-omen'

Wackernagel's law was phonological in origin (contraction as a hiatus resolving strategy), but already in AG, it had become morphologized as a marker of composition. With the loss of quantity distinctions in the Koine period, the law became meaningless; nevertheless, its results are still obvious in items which have survived as fossils in the MG vocabulary, such as *stratiˈɣos* 'general', *kiniˈɣos* 'hunter'.

4.3. Types of compounds

AG compounds can be classified in two ways: a) formally, according to the grammatical category of each member and of the formation as a whole (noun, adjective, verb, pronoun, etc.) and b) semantically, according to the dependency relationship between the two members (possession, addition, determination, etc.). In addition, one may further distinguish between endocentric and exocentric compounds, depending on whether the designatum is contained or not within the compound. For a list of AG compound types, see Meissner and Tribulato (2002) and Lindner (2011).

As in the case of derivation, one may observe the following evolutions:

a) R e t e n t i o n   o f   a   c o m p o u n d   t y p e : In general, the same compound types are maintained throughout the history of Greek, and Greek remains a language where compounding is an extremely productive process (see Ralli 2012, 2009b; article 171 on Greek).

b) L o s s   o f   a   c o m p o u n d   t y p e : No compound formation was lost during the history of Greek, with the exception of a specific sub-type which was already non-productive and opaque in AG, namely, the nominal V+N pattern (e.g., *pheré-oikos*). The loss of this compound type was in all probability due both to the obscurity of the pattern that created it and to its uncommon left-headed structure.

c) B o r r o w i n g   o f   a   c o m p o u n d   t y p e : Greek is a language with a much richer compounding system than the languages it has come into contact with (e.g., Turkish and Italian). Thus, borrowing of 'proper' compound types did not take place. However, a recent (20th c.) innovation in MG are the so called "phrasal (multiword) compounds" introduced as calques through the influence of French and English (see Ralli to appear, in print). Phrasal compounds may have the form Adj+N (e.g., Engl. *cold war > psiˈxros ˈpolemos*, *atom bomb > atomiˈki ˈvomva*), N+N in the genitive case (e.g., Fr. *agence de voyages > praktoˈrio taksiˈðion*, *safety belt > ˈzoni asfaˈlias*) or N+N in the nominative (e.g., Fr. *voyage-éclair > taˈksiði astraˈpi*, *enfant-prodige > peˈði-ˈθavma*).

d) C r e a t i o n o f a n e w c o m p o u n d t y p e: Two major innovations can be mentioned in the domain of composition, one concerning subordinative and one concerning coordinative compounds.

In the first case, the innovation consists of the creation of verbal compounds. IE and the ancient IE languages had no compound verbs, if one excepts composition with preverbs, as already discussed (Lindner 2011: 36); the same can be said for AG as well (Meissner and Tribulato 2002: 301) and for most, if not all, modern European languages. AG does possess a type of apparently compound verbs which are secondary formations (backformations) from corresponding compound nouns and adjectives (21):

(21)   *pétra* 'stone' + *bállo:* 'to throw' → *petrobólos* 'stone-thrower' → *petrobol-ô:* 'to throw stones'
      tʰálassa 'sea' + *kratô:* 'to rule' → *thalassokráto:r* 'sea-ruler' → *thalassokrat-ô:* 'to rule the seas'
      orpʰanós 'orphan' + *trépʰo* 'to feed, raise' → *orpʰanotrópʰos* 'orphan-raiser' → *orpʰanotroph-ô:* 'to raise orphans'

Their derivative character is obvious from the fact that the second (verbal) member is in most cases not identical to the original verb (e.g., *-troph-ô:* not *tréph-o:*, *-bol-ô:* not *báll-o:*).

Secondary verbal formations are also those which originate from the exocentric V+N nominal compounds, such as the examples given in (22):

(22)   *mémpʰomai* 'to blame, complain' + *moîra* 'fate' → *mempsímoir-os* 'fault-finding' → *mempsimoirô:* 'to rail against fate'
      pʰeúgo: 'to leave, run away' + *mákhɛ:* 'combat' →*pʰygómakhos* 'shunning battle, coward' → *pʰygomakhô:* 'to run from combat'

Verbal compounds continue to exist in the learned registers of Greek, but true verbal subordinative compounds, whose second member does not show the ancient verbal ending *-éo* > *-ô:* are a Medieval evolution. E.g., ˈema 'blood' + poˈtizo 'to water' → *emato-poˈtizo* 'to drench with blood', karˈðia 'heart' + floˈɣizo 'to burn' → *karðiofloˈɣizo* 'to burn the heart', ˈalisos 'chain' + ˈðeno 'to tie' → *alisoˈðeno* 'to tie with chains' (all from the dictionary of Kriaras 1967−).

A medieval innovation is the creation of exocentric compound adjectives with an *-is* derivational suffix, e.g., ˈkokinos 'red' + leˈmos 'neck' → *kokinoˈlem-is* 'redneck (the bird robin)', aniˈxtos 'open' + ˈxeri 'hand' → *anixtoˈxer-is* 'open-handed, generous', maˈkris 'long' + maˈli 'hair' → *makriˈmalis* 'long-haired'. AG and Koine Greek did not possess this compound formation, and, more generally, ~~they~~ did not possess *a*-stem ("first declension") adjectives at all (NB *-a:s* > Attic *-ɛ:s* > MG *-is*).

In the domain of coordinative compounds, Greek shows a particularly important innovation: the creation of V+V compounds, which were non-existent in Ancient and Koine Greek, and first appeared during the Medieval period, after the 13th c. AD (Manolessou and Tsolakidis 2009; Ralli 2009b). E.g., aneˈveno 'to go up' + kateˈveno 'to go down' → *anevokateˈveno* 'to go up and down', ˈpezo 'to play' + ɣeˈlo 'to laugh' → *pezoɣeˈlo* 'to play and laugh'.

Nominal coordinative compounds were a regular feature of AG, which had appositive N+N compounds, such as *klausí-gelo:s* 'laughter mingled with tears' and *iatró-mantis* 'healer and diviner', and appositive A+A compounds, such as *glyký-pikros* 'bittersweet' and *leuk-érythros* 'white-and-red'. N+N compounds were very productive and to this category belongs the longest attested word in AG, the name of a dish/food in Aristophanes' *Ecclesiazusae* (1169−1174) taking up four lines and consisting of 26 compound members. A+A compounds, on the contrary, were comparatively rare in AG and Koine Greek, but became much more productive in Medieval and Modern Greek.

Finally, during the Medieval period, a new type of N+N compound appeared (Manolessou and Tsolakidis 2009): the plural number coordinative compound which denotes groups of entities, e.g., *ɣiˈneka* 'woman' + *peˈði* 'child' → *ɣineˈkopeða* 'women and children', *maˈxeri* 'knife' + *piˈruni* 'fork' → *maxeroˈpiruna* 'knives and forks, cutlery'.

5. Conclusion

In this article, we have tried to describe the evolution of Greek word-formation focusing on the period from Koine to Modern Greek, in spite of the fact that studies dealing with specific phenomena and data are rare. We hope to have shown that there is a range of innovations that are worth studying, although Greek is a remarkably conservative language from the morphological point of view, as compared to other European languages. More particularly, we tackled issues referring to prefixation, suffixation and composition, where Greek seems to be affected by both language-internal factors and by borrowing from languages it has been in contact with through its long attested history.

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117. The history of word-formation in Uralic

1. Introduction
2. General characteristics of word-formation in Uralic
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4. Types and functions of suffixal derivation in Uralic
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6. References

Abstract

Since the Uralic language family represents a time depth and internal diversity comparable to Indo-European and for most of its languages there is very little historical documentation, this article only presents a survey of the most important common characteristics of word-formation in Uralic.

As a rule, Uralic languages are fairly agglutinative and display a rich suffixal word-formation morphology, forming both verbs and nouns (as well as adjectives and adverbs) from both verbs and nouns. Some suffixes are transparent grammaticalisations, but many of the derivational suffixes are ancient, although their original functions and especially their original position between word-formation and inflection may be unclear.

Compounding is known across Uralic, and at least the western-most Uralic languages display (mostly marginal or nascent) prefixation.

1.   Introduction

1.1. The Uralic languages

Describing any phenomenon from the viewpoint of "Uralic" as a whole is an almost insurmountable challenge. First of all, the Uralic/Finno-Ugric language family represents