# **Analogy and Sound Change in Ancient Greek**

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#### 0. Introduction

A key observation that has emerged out of the examination of different stages of a language is that no language is static; all aspects of language are subject to change, including the sounds, the forms, the sentence structure, meanings, etc. Indeed, as far as Greek is concerned, the evidence presented in the chapters on syntactic change between Classical and Hellenistic Greek and on movement towards Modern Greek shows that Greek in the post-Classical period was a vital living linguistic system, one that did not stand still but rather underwent changes and evolved.

Moreover, the same is true of earlier stages of Greek, that is from early Greek of the second millennium B.C. up to (and beyond) the Classical period, and for domains of grammar other than the syntax.

Information on change in Greek over this chronological span comes from several sources. First, there is the direct evidence obtained by comparing two stages of the same dialect. Second, different dialects of Greek can be compared with one another, and judged against the comparative evidence of Indo-European languages other than Greek (see the chapter on Indo-European) to see which one is innovative, the assumption being that if two dialects disagree on some feature, at least one of them has undergone an innovative change away from their common starting point. Finally, variation within a single dialect generally indicates that a change has occurred and the new form and the older form are competing with one another.

Since Attic Greek is the usual point of reference for Ancient Greek and especially for Classical Greek, the focus here is examples of change in Attic, so that the dialect comparisons are those which show Attic to be innovative. In some instances, the changes reflect developments that occurred before Attic is attested but which are

restricted within Greek just to Attic, and thus probably occurred in "pre-Attic" early in the first millennium B.C. Others show changes that unfolded within the attested historical record of Attic.

These examples give a sense of the dynamic and constantly evolving nature of Greek, even before the period of the Hellenistic Koine, and at the same time illustrate some general processes of language change. In addition to instances of sound change, examples are provided of morphological change and in particular of the primary mechanisms for morphological change, namely reanalysis, by which speakers give a form an analysis different from its etymological analysis, and analogy, understood in its broadest sense to refer to any change brought on by the influence of one form over another or by the spread of one form at the expense of another.

## 1. Sound Changes

For the most part, the sounds of Classical Attic Greek reflect relatively few changes from earlier stages of Greek. However, the labiovelars of Proto-Greek (\*kw, \*gw, \*kwh), preserved as such in Mycenaean Greek (conventionally transcribed as < q >), show outcomes in Attic as labials (p, b, f), dentals (t, d, q), or velars (k, g, c), depending on the phonetic environment, as also in the other post-Mycenaean dialects; still, the distribution of these outcomes differs somewhat in detail from dialect to dialect, often in lexically unpredictable ways (e.g. Aeolic and Attic both have te 'and' from \*kwe but differ in the outcome of \*penkwe 'five', Aeolic having pevmpe with a labial while Attic has pevnte with a dental) so that one must assume all the dialects in the post-Mycenaean period underwent similar, but not identical, changes involving the labiovelars.

Another change where Attic innovated, but did so earlier than other dialects, involves the outcome of Proto-Greek and Proto-Indo-European (PIE) \*w, which was preserved in many of the dialects (usually as the "wau" or "digamma",  $\langle \hat{U} \rangle$ ) but

generally lost relatively early in Attic. Still, traces of it are found in Attic inscriptions from the early 7th and middle 6th centuries B.C. in the spelling of the diphthong [aw] (usually written < au >) as < a $\hat{U}u$  >, so presumably the sound was known to early Attic speakers, and its absence in later Attic would reflect loss of the sound. Thus where Attic for example has oi\koi 'house', most other dialects have Ûoikoi, and related words such as Latin vícus 'village' show that the presence of initial digamma is a preservation of an archaic feature and its loss is innovative. Changes such as these predated the heart of the Classical period, but their effects were still evident via dialect comparisons that the ancients themselves were undoubtedly aware of, as indicated, for instance, by the testimony of ancient grammarians, by the use of Doric in lyric passages in Attic tragedy, by the linguistic caricatures (e.g. of Spartans) to be found in the plays of Aristophanes, and even by the existence of verbs such as aijolivzw 'speak Aeolic'. Even in the Classical period, however, changes in Attic Greek pronunciation are to be found; in the 5th to 4th century B.C., for instance, ojlivoi occurs often in Attic inscriptions for oilivgor 'few', showing a loss of medial < g > (and/or a change from < g > as a stop [g] to < g > as a glide [j]), and the well-known difference between OldAttic xuvn 'with' (up through the 5th century B.C.) and its later counterpart suvn (occurring as early as 500 B.C. but more prevalent later on) shows a sporadic (and actually quite unexpected) reduction of an initial consonant cluster within attested Attic, perhaps linked to the preposition/preverb occurring in a prosodically weak position in a phrase. Similarly, vowels show occasional evidence of change within historical Attic, as shown by the assimilation evident in the development from early Attic ojbelovi 'spit, nail, coin, measure of weight' to later ojbolovi. And, even accentuation was subject to change, as shown by the innovative form crova (common in Plato) for earlier croiav 'skin', with loss as well of the glide represented by -i-.

## 2. Changes in Noun Morphology

Changes within Classical Greek are evident as well in the morphology, for instance in the system of noun inflection.

An example in which synchronic variation in Attic reflects change in progress is the spread of -t- as a stem-final element throughout the paradigm in various nouns. The spread was complete in neuter nouns in -ma, such as o noma 'name' (note the genitive singular ojnovmato, dative singular ojnovmati, nominative/accusative plural ojnovmata), but fluctuation within the paradigm, indicating on-going spread and competition between innovative and conservative variants, is evident in the Classical period in words like crwvı 'skin, flesh', with a genitive crwtovı, but variation in the dative where both older crw/' and innovative crwtiv occur, or a bit later, as in krevai 'meat', with a genitive krevwı in Classical Attic that gave way to innovative krevatoı in the late Classical period (4th century BC). In this example, a consideration of the etymology of the endings reveals that the genitive is indeed the source of the -t-, for to has a clear source as a unit in Indo-European, while -ti, -ta, etc. do not. The ending -to1 derives from a PIE ablatival adverbial suffix \*-tos , found in forms such as Sanskrit ta-tas 'then, from there' or Latin caeli-tus 'from heaven'; inasmuch as the Greek genitive continues the PIE ablative and genitive, this adverbial ending must have been substituted in these nouns (earliest in the -ma class) for the expected genitive in \*-os or \*-es (cf. Sanskrit námn-as, Latin nomin-is). In this spread as well there would have been an analogically based reanalysis, giving a new morphemic segmentation to the form, from original ojnovma-to1 to innovative ojnovma-t-01; pressure from -oi genitives (e.g. kovrak-oi 'of a raven') surely played a role in the reanalysis, which led further to an identification of -t- as part of the stem, thus ojnomat-, from which the dative, etc. could be formed. In the fluctuating nouns, there would have been analogical spread of the innovative ending from the -ma class, perhaps as a way of resolving the hiatus and contractions that original vowel-final

stems would have occasioned, and ultimately, then, competition would have arisen between an older stem-form such as crw- and an innovative stem-form crwt-.

Another instance in which analogy played a role leading to synchronic variation is in the accusative of the masculine proper name Swkravthı. Originally a masculine stem in \*-es-, with a nominative from \*-és, this noun in its oldest form would have had an accusative Swkravth (as with Dhmosqevnhı, accusative Dhmosqevnh), a form which is attested in Plato; however, somewhat later in Attic (e.g. in Xenophon), the accusative Swkravthı is found, inflected as if Swkravthı were instead a stem in \*-á-(cf. krithvı 'judge', with accusative krithvı, and other names properly of this class, e.g. Qoukudivdhı, with expected accusative Qoukudivdhı). The innovative accusative thus arose by a reanalysis of stem-type for this noun, based on the formal ambiguity of the nominative (formally either from \*-á-s, or from \*-és), and the analogical influence of the \*-á- class.

# 3. Changes in Verb Morphology

Changes can be observed also within the verbal system of Classical Greek, again concentrating on Attic.

An on-going change within Attic that is revealed through variation in the Classical period involves the past tense prefix known as the augment (realized as e- or as vowel lengthening, under different conditions). In the usual case, the augment was manifested on the verb in combinations of a verb with a lexical prefix ("preverb"), such as kata-gravfw 'I write down' vs. kat-ev-grafon 'I was writing down', or kat-evrcomai 'I go down' vs. kat-hrcovmhn 'I was going down'. With some composite verbs, however, especially ones where the individual parts of the compound did not have an independent status or were not obvious due to a high degree of uniting of the preverb with the verb, one finds the augment variably attached as a prefix to the preverb or to the verb; thus, for the imperfect of kavqhmai 'I am seated', both

kaqhvmhn and the innovative ejkaqhvmhn occur in Classical Attic. Analogical pressure from the placement of the augment in simplex verbs and the fusion of the preverb with the verb led to a reanalysis of the originally composite verb as a simplex, thus allowing the augment to appear prefixed to the left of what was originally a preverb, rather than to the verbal head itself.

Reanalysis can also affect syntactic category membership. An example in which the augment is again involved concerns the Classical Greek predicate crhv 'one must/ought', originally a noun meaning 'need' with an understood copular verb. In the corresponding past tense form, the copula appeared, giving crh'n, a contraction of crhv h\n. Beside crh'n, however, an innovative form ejcrh'n is to be found in Attic, the result of the reanalysis of the original noun as (part of) a verb in combination with past tense copula; the placement of the augment is thus both possible because of the reanalysis of crhv as a verbal element and evidence that it has been so reanalyzed.

Two final examples involve innovative verbal endings that either arose within Attic or were exploited largely within Attic. Although Ancient Greek inherited dual number forms from PIE in the verbal system, and although it is likely that PIE had a first person dual category, to judge, for instance, from the evidence of Slavic and Sanskrit, Greek in general does not have special first person dual verbal forms. However, even though no active forms are found, a first person dual middle voice ending -meqon does occur on a very limited basis in Ancient Greek. This form represents an innovation that developed as a blend of the first person plural middle ending -meqa with the second person dual middle ending -sqon; such blends or "contaminations" involve analogy in the sense that two existing morphemes mutually exert pressure on one another, resulting in a new formative emerging. While most of the handful of occurrences of -meqon come from Attic tragedy or later, one is from the *Iliad*, a fact that would mean the innovation was a very early one in Greek, not one found just in Attic; however, the Homeric example has a variant reading with the plural ending

meqa, so it may well be that -meqon entered the Homeric manuscript tradition somewhat late, and thus that the innovative first person dual ending is truly an Attic innovation.

Attic also innovated endings by extending the domain of use of ones that originally occurred in particular paradigms; this innovative spread of endings involves the generalization of one at the expense of another. For instance, Attic inherited from Proto-Greek for athematic verbs (those without ablauting \*e/o as the stem-final element) a third person plural past ending -n, which occurs widely in other dialects. This ending does occur occasionally in Attic, as in e[-sta-n 'they stood' (e.g. in Euripides), but more usually, the ending of the athematic sigmatic aorist, -san is used, as in e[-sth-san. This innovative use of -san is essentially an analogical extension of one out of a set of competing variants, but also involves some reanalysis, since -s- in that ending was originally the morpheme marking aoristic aspect, yet in e[-sth-san it is treated simply as an indivisible part of the ending.

#### 4. Conclusion

The combined evidence of the preceding sections shows clearly that Greek at all stages has been a dynamic evolving system. In a sense, then, the movement evident in the Post-Classical period in the direction of Modern Greek merely continues the ongoing evolution of Greek from early times through the Classical period.