Irregular \[u\] in Greek

One of the minor sound changes found in Ancient Greek involves the irregular appearance of an \[u\] in certain contexts, in forms in which a different vowel might be expected. This change is of interest because the result of the change and the context for the change recur in a similar sporadic change that took place much later on in the history of Greek, between Medieval and Modern Greek.

The relevant forms which show the Ancient Greek change include the following (cf. Schwzyer (1954: 296, 351–2), Thumb (1909)):

\[
\begin{align*}
\upsilon\varsigma & \quad \text{‘night’} \\
\delta\nu\varsigma & \quad \text{‘nail’} \\
\mu\alpha\lambda & \quad \text{‘mill’} \\
\phi\alpha\lambda\nu & \quad \text{‘leaf’} \\
\gamma\upsilon\mu\iota\varsigma & \quad \text{‘gathering’} \\
\kappa\omicron\zeta\alpha\lambda\varsigma & \quad \text{‘wheel’}
\end{align*}
\]

and others. The exact source of the \[u\] in these forms is often unclear, but the range of possibilities is fairly restricted. In the case of \(\upsilon\varsigma\) and \(\delta\nu\varsigma\), the pre-form for Greek almost certainly had an *o, i.e. *\(n\alpha\kappa\upsilon\varsigma\) (cf. Lat. nox) and *\(h\upsilon\alpha\kappa\gamma\beta\) (cf. OHG \(h\alpha\kappa\gamma\beta\)), respectively. In the case of \(\mu\alpha\lambda\), \(\phi\alpha\lambda\nu\), and \(\gamma\upsilon\mu\iota\varsigma\), the \(v\) plus sonorant could represent an older *e plus sonorant group or it could be the result of an older syllabic sonorant, i.e. a zero-grade formation. Similarly, the \(v\) in \(\kappa\omicron\zeta\alpha\lambda\varsigma\) may represent an older *e, i.e. *\(\lambda\upsilon\varepsilon\cdot k\alpha\rho\alpha\cdot\) (cf. Skt. \(\varepsilon k\alpha\rho\alpha\cdot\)), though this *e is not certain.

The source-vowel in this sound change, then, is not always clear. However, the context for the change is quite clear - in each of the examples above and the others like them, the irregular \[u\] appears is the context \(C-C\), where one of the consonants is a labial or a velar, and the other consonant is a sonorant (\(r, l, m, n\)), or both are labial or velar.

As noted above, irregular \[u\]'s also occur in the passage from Medieval to Modern Greek. In this case, they arise from earlier \(i\). Medieval Greek \(i\) had several sources, including earlier Greek \(i\), \(\varepsilon\), and \(\gamma\). All of these fell

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1 Ancient Greek \(u\) and \(o\) also end up as \(i\) in Standard Modern Greek, and like the \(i\)'s noted here, have gone to \(u\) in some forms and in some dialects. Newton (1972: 19–25) however, in discussing this development in some detail, concludes that these \[u\]'s are best treated as being from an earlier front rounded vowel \(\dot{u}\); that is, \(\upsilon\nu\o\) did not merge with \(\gamma\nu\) first and then go to \(u\) in certain contexts, but rather they developed to \(u\) and then simply were backed to \(u\). Also, it is not clear that this development involved the environment under dis-
together by the 9th century (possibly earlier) as [i], and in a few words and
in some Modern dialectal forms, [u] is to be found from this earlier [i], for
the most part in exactly the same context as the Ancient Greek irregular [u]'s,
namely between velar or labial consonants and a sonorant or between
velars or labials. Some of the better examples include:

\[ \begin{align*}
\zeta\mu\gamma > \zeta\mu\nu\nu & \quad \text{‘I was’} \\
\chi\zeta\beta\iota\rho\zeta > \chi\zeta\beta\omicron\sigma\rho\zeta & \quad \text{‘crab’} \\
\mu\epsilon\sigma\tau\iota\omicron \sigma > \mu\omicron\upsilon\sigma\tau\iota\omicron \sigma & \quad \text{‘median’ (with \( \sigma \) in first syllable by assimilation)} \\
\kappa\iota\nu\delta > \kappa\nu\nu\delta & \quad \text{‘move’} \\
\lambda\epsilon\iota\mu\zeta \bar{x} > \text{‘meadow, garden’} & \sim \lambda\epsilon\iota\mu\zeta \lambda \text{‘young sprout, tall young man’}
\end{align*} \]

\[ \begin{align*}
& \gamma\nu\iota\mu\zeta \sigma > \gamma\nu\iota\mu\zeta \omega & \quad \text{‘praise’} \\
& \pi\rho\tau\alpha \text{ (= \( \pi\rho\alpha \)) > \*\pi\rho\tau\alpha > \mu\nu\tau\alpha} & \quad \text{‘before’ (Chios, cf. Pernot (1931))}
\end{align*} \]

All of the above examples show this sound change in the velar/labial plus
sonorant environment that was crucial for the Ancient Greek change noted
above.

There are a few partial exceptions to this environment, in which there is
only a velar/labial consonant or only a sonorant:

\[ \begin{align*}
\gamma\rho\alpha\lambda\omega > \gamma\rho\alpha\lambda\omega & \quad \text{‘be jealous’} \\
\sigma\gamma\tau\alpha > \sigma\omega\tau\alpha & \quad \text{‘sepia, cuttle-fish’}
\end{align*} \]

There are in addition a few complete exceptions, in which neither a velar/
labial consonant nor a sonorant is involved, for example:

\[ \begin{align*}
& \sigma\gamma\tau\alpha \mu\nu \sigma > \sigma\omega\alpha \mu\nu \sigma & \quad \text{‘sesame’}
\end{align*} \]

This, however, is not surprising, since these do represent irregular and
sporadic treatments of [i]; besides, there are a few exceptions to the Ancient
Greek context also.

This Medieval to Modern Greek sound change may have involved the
direct rounding and backing of [i] to [u]. On the other hand, since there are
dialects of Modern Greek (especially in the North) in which unstressed [i] is
regularly deleted (cf. \( \mu\omicron\nu\zeta \) ‘nose’ for Standard Modern Greek \( \mu\omicron\nu\gamma \)), it is
possible that the change in question was actually \( i \rightarrow o \), with the \( u \) arising

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Note: The reference to "Newton (1972: 21)" indicates a commentary or discussion by Newton (1972) regarding the Old Athenian dialect of Modern Greek, stating that "there seems to be no obvious way of stating the conditions under which ancient \( \eta \) and \( \omicron \) went to [u]."
from an epenthetic vowel, in just those contexts noted above. A piece of evidence in favor of this latter interpretation is the Cretan ἄγκριστο "thank you" (cf. Thumb 1964: 9) for Standard Modern Greek ἄγκριστο ([[o]f]karisto]), where the u is from an epenthetic vowel which breaks up the initial labial-plus-velar cluster.

It should be noted that [u] also has arisen in Modern Greek from an earlier [o], and interestingly enough, the velar/labial context figured in this change as well, for example (cf. Thumb 1964: 8, Newton 1972: 24):

κατάν > κάτι 'car'
πολό > πουλό 'sell'

However, this change in fact a regular development and not a sporadic one like the [i] to [u] change. Furthermore, there are dialects in which all unstressed [o]'s end up as [u], regardless of their surrounding environment, as, for example, in Northern Greek γόρχτω for Standard Modern Greek γόρχτο 'horn'.

Therefore, it seems that the [i] to [u] change more closely parallels the Ancient Greek development of irregular [u]'s. Both the Ancient Greek and the Modern Greek changes had the same result, namely [u], both were of the same sporadic nature, and both occurred in the same environment—they differ only in the vowels they affected. Thus the nature of the Ancient Greek irregular [u]'s is duplicated in almost every respect by the irregular [u]'s of Modern Greek.

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Hatziakos (1892: 109) and others following him give this as the likely explanation of the actual mechanics of this sound change.