

THE MODAL PARTICLE IN GREEK

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Five forms of the modal particle are attested in ancient Greek (ἄν, κε, κεν, κᾶ, and κ'). This paper argues that ἄν is an inherited particle, and that the *k*-forms were the result of reanalysis of prevocalic οὐκ and εἰκ (i.e. εἰκ was reanalysed as εἰ κ'), supported by the vestiges of an old topicalising/conditional force of the I-E particle **k^we* (which appears elsewhere in Greek as connective τε). The attested forms in Greek grew out of **k^we* in contexts where an adjacent *u* caused the labiovelar **k^w > k* (West Greek κᾶ was influenced by indefinite **k^wā*). The form κεν is a creation of epic diction.

The modal particle in the dialects of archaic and classical Greek has five forms, of which one is a phonologically conditioned allomorph. The dialect division of the forms is as follows:

ἄν	Attic, Ionic, and Arcadian; and Homeric epic
κε	Lesbian, Thessalian (<i>Pelasgiotis</i> , <i>Thessaliothis</i>), Cypriot; and Homeric epic
κεν	'eastern Aeolic', i.e. Lesbian and literary Lesbian; and Homeric epic
κᾶ	West Greek dialects, but never in 'high' poetry; Boeotian, Thessalian (<i>Histiaeotis</i>)
κ'	optional prevocalic form of κε and (apparently) κᾶ

In spite of the morphological variety, the function of the particle across the dialects seems more or less identical.¹ The occasional trivial differences in usage which are attested are no greater

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¹ The particles mark the action of a verb as potential, counterfactual, or habitual (iterated). In some cases their presence is predictable (what Bers 1984: 117 has called 'stylistically required concomitants of a mood'); in other cases

than the sort of variation which occurs in modal grammar in other languages, and there are some developments over time. There is more flexibility in the usage of the particles in the language of Homeric epic, which is peculiar in many respects: it is oral formulaic poetry which may have been composed as early as the eighth century BC, and the stock of traditional language which the monumental composer(s) inherited includes features of Greek which reflect periods earlier than the period of composition (in a few rare cases going back as early as the late Bronze Age, the Mycenaean period). In addition to features which reflect different periods and different regions of the Greek world, epic language also contains features (phonological, morphological and lexical) which are 'artificial' in the sense that they were innovated by and within the poetic tradition and were never features of the spoken language.²

There are a number of peculiarities in the form and distribution of the five forms above. On the whole the form of the particle correlates reasonably neatly with the traditional dialect groups: ᾠν in Attic-Ionic, κᾶ in West Greek, and κε in two of the three 'Aeolic' dialects. That Boeotian has κᾶ is not very surprising, though it is traditionally grouped with Lesbian and Thessalian in the Aeolic group: this dialect is heavily overlaid with West Greek features, to the extent that even the classical dialectologists of the early twentieth-century, who relied more heavily on a *Stammbaum* model than modern linguists, regarded it as a 'mixed' dialect.

The three dialect groups are (more or less) inherited from the ancient Greek world, where they were correlated with ethnic subdivisions among the Greeks. A fourth group, Arcado-Cypriot, is a modern (twentieth-century) linguistic grouping; if the Greeks had views on the dialectal affiliations of Arcadian and Cypriot, they have not survived. Of the attested dialects they seem to have the closest affinity to Mycenaean Greek, a form of the language written in the Linear B script on clay tablets from the late Bronze Age, approximately 1400-1200 BC. The putative Bronze Age

the modal interpretation of a verb (and the syntax of the sentence) is determined by the presence of a particle. See in general Horrocks (1996).

² The seminal work in the field is generally taken to be Leumann (1950): the principles had already been set out by Milman Parry (cf. 'The Artificial Element' in Parry 1932). For a clear introduction to the development of epic diction see Janko (1994: 8-19).

ancestors of Arcadian and Cypriot are usually grouped with Mycenaean in a dialect grouping (sometimes labelled 'Achaean') assigned to the late Bronze Age Peloponnese, before the collapse of Mycenaean palatial civilization around the end of the thirteenth century. There are few sentences in the surviving Linear B tablets (which are lists of inventory and economic records from the bureaucracies of the Mycenaean palatial centres), and almost no complex sentences: as a result there are no clearly attested instances of the particle in the tablets.³ Arcadian, Cypriot, and Mycenaean are East Greek dialects: they share the assibilation of *-ti* to *-si* in verbal endings (δίδωτι > δίδωσι) and certain other common features which mark them off from West Greek. Arcadian shares ἄν with Attic-Ionic, the other East Greek dialect grouping, while Cypriot shares κε with the Aeolic dialects Lesbian and Thessalian.

The Aeolic dialects do not fit easily into the East/West classification, since the status of the descriptor 'Aeolic' is unclear and disputed. The three dialects share a rather small number of overlapping features, which do not allow clear conclusions about the historical affiliations of a supposed 'proto-Aeolic' dialect group in the Bronze Age. Some have made this an eastern group, and others a western group;⁴ and since the 1970s a number of scholars have questioned the retrojection of Aeolic to the Bronze Age, arguing that the dialects are (either largely or entirely) a post-Mycenaean development which acquired their distinctive features through contact and areal development.⁵

The difference between the Arcadian and Cypriot forms of the particle is not particularly surprising. Even after the decipherment of Linear B, we have a very limited insight into the varieties of the spoken language in late Bronze-Age Greece. If we suppose that the Greek language was taken to Cyprus by Mycenaean mercantile activity and migration at the end of the Bronze

³ Palmer (1980) and Ruipérez (1987) argued that the modal particle in the form **k^we(n)* can be seen in Mycenaean *e-ke-qe* (in the Pylos Eo, Eb and Ep series). This has not been widely accepted (see Hajnal 2004).

⁴ Risch (1955) grouped Aeolic with Doric in a renamed 'Northern' group (against the Southern dialects Attic-Ionic and Arcado-Cypriot), a classification accepted by Chadwick (1956); Palmer (1980) included Aeolic with Arcado-Cypriot in the (East Greek) 'Achaean' group. For a history of classification before the decipherment of Linear B, see Morpurgo Davies (1992).

⁵ García-Ramón (1975), and Brixhe (2006).

Age,⁶ which would explain the similarities of the Cypriot dialect with Mycenaean and Arcadian, there is nevertheless no reason to assume (and it would be remarkable coincidence) that the variety which prevailed in Cyprus was exactly similar to the one which gave rise to Arcadian. Linear B texts have been discovered across the Peloponnese, and elsewhere. The Peloponnese alone is a large and geographically challenging area; although the language of the Linear B tablets lacks regional variation (its uniformity suggests a chancellery language), it would be surprising if the Mycenaean Greek of Messenia in (say) the mid thirteenth century was identical to that spoken in the Argolid (Mycenae and Tiryns).

More striking is the confinement of $\kappa\epsilon\nu$ to eastern Aeolic, and the conditions under which it alternated with $\kappa\epsilon$, which, in both Thessalian and Cypriot, could be reduced to κ' before a vowel (which makes it clear that $\kappa\epsilon\nu$ is not a simple pre-vocalic form of $\kappa\epsilon$). The particle $\kappa\epsilon\nu$ is found in the poetry of Sappho and Alkaios; it is also found in Homeric epic, where it is regarded as an 'Aeolicism'.⁷ However, even in Sappho and Alkaios $\kappa\epsilon\nu$ looks like a literary form. It co-exists with, and is outnumbered by (in a ratio approximately 2:3) $\kappa\epsilon$ and κ' . It occurs before vowels, where it breaks hiatus and adds a short syllable to the line, and before consonants, where it adds a long syllable to the line.⁸

Non-poetic inscriptions are generally recognised as the best indicators of whether a form or usage is vernacular in a particular dialect. The data for $\kappa\epsilon\nu$ from the Lesbian-speaking area (Lesbos and the adjoining region of Asia Minor) do not support the assumption that $\kappa\epsilon\nu$ was a feature of the spoken language. There are just five instances of $\kappa\epsilon\nu$ in surviving inscriptions, as against over one hundred instances of $\kappa\epsilon$. Of the five instances of $\kappa\epsilon\nu$, only two occur in inscriptions before 300 BC:

⁶ The archaeological record does not give a clear idea of the date or mechanisms of the establishment of Greek on Cyprus: most recently Voskos and Knapp (2008: 679) conclude 'at some point during the 11th century B.C.E., some people of Aegean origin (migrants, not purposive colonists) became established on Cyprus [...] We cannot define this event any more precisely because the social processes involved in it—social exchange, migration, hybridization—had been going on for 200-300 years.'

⁷ See Jones (2012) for a history and critical overview of the 'Aeolic phase' in Homeric diction.

⁸ These data ignore the 2014 Sappho fragment (ed. pr. D. Obbink, *ZPE* 189, 2014, 32-49), which in fact shows an identical distribution: two instances of $\kappa\epsilon$ and one of $\kappa\epsilon\nu$, which occurs line-end, as a heavy syllable, before a vowel-initial word at the start of the next line.

(1) Hodot ΜΥΤ 05 (*ZPE* 63, 1986, 109, Mytilene), line 2

ὥς κεν οἱ πόλιται (but αἰ δέ κε ἄλλον τινά *ibid.* 16)

(2) Hodot ΝΑΣ 01 (*IG XII 2.* 645. 51, Buck 27, Nesos), line 51

τῷ κεν εὐεργέτη τὰμ πόλιν. (but ὅτα κε ἄ πόλις *ibid.* 33)

It is not obvious why κεν was used in these two cases, since both inscriptions also contain numerous instances of κε, including before a vowel. Both the syntactic and phonological contexts can be paralleled in sequences which have κε. If κεν reflects literary Lesbian, its use in a public inscription may have been a marker of local pride and local identity. Both of these texts reflect a crisis in the region provoked by Macedonian expansion in the 330s and 320s. It could be argued that in (1) the particle, which occurs in the preamble giving the reason for the decree (attempt at national reconciliation after a crisis), is in a far more salient clause than the four instances of κε in the text: ‘... in order that the citizens inhabit the city under a democratic government perpetually, being as well-disposed to one another as possible ...’ (tr. Heisserer and Hodot 1986). In (2) κεν appears in the very final clause of the inscription and may throw weight on to the critical last words τῷ κεν εὐεργέτη τὰμ πόλιν ‘of the services he renders to the city’.

The other three instances of κεν occur in two inscriptions which are clearly written in an artificial revival Lesbian. Both are from Kyme:

(3) Hodot ΚΥΜ 014 (*IvK* 5. 13), c. 130 BC, line 18

καθότι κεν Ἀρχίππα προαιρῆται⁹

(4) Hodot ΚΥΜ 016 (*IvK* 5. 19, Buck 28), c. first decade of the common era, lines 30 and 51

ἐν πάντεσσι τοῖς ἀγώνεσσιν, οἷς κεν ἄ πόλις συντελέη (line 30)

καὶ ἐντάφην, ἐν ᾧ κεν ἂν εὖθετον ἔμμεναι φαίνηται τόπω (line 51)¹⁰

If κεν is a feature of poetic language, there are two possibilities: either it is an archaism lost from the spoken language, or it is a creation of the epic tradition. If it is an archaism, loss of the final -n

⁹ ‘Die Dekrete ... sind in äolischem Dialekt geschrieben. Man hat aber damals in Kyme nicht mehr äolisch gesprochen. Die Dialekt-Fassung ist künstlich, man hat die Dekrete in den Dialekt rückübersetzt.’ Engelmann ad loc. (*IvK* 5 p. 27)

¹⁰ Misreported at Buck 28 ἐν ᾧ κ’ ἂν εὖθετον, and Schwyzer *DGE* 647 ἐν ᾧ κε ἂν εὖθετον

in the vernacular form $\kappa\epsilon$ needs to be explained. It might be argued that the $-n$ was reanalysed as a moveable n (*nu ephelkystikon*) and omitted before a following consonant: the form $\kappa\epsilon$ was subsequently generalised. There are two objections to this: firstly, moveable n was a feature of Ionic, but not of vernacular Lesbian, though it was used as a metrical device by Sappho and Alkaios (as by poets in the Doric tradition, including Alkman and Stesichoros). Secondly, it is hard to see why the $-n$ would be generalised away before a following vowel, if the reason for extending it from verbs and nouns in the first place was precisely to avoid hiatus.

As a working hypothesis, therefore, I shall assume that $\kappa\epsilon\nu$ was a creation of a poetic tradition: this was presumably the eastern Aegean epic tradition, which we know as Homer, and which in some form or another must have been in interaction with poetic traditions (epic or monodic) of Lesbos and Eastern Aeolis.¹¹

If $\kappa\epsilon\nu$ is a Greek poetic creation, then the interesting and influential theory of Forbes (1958) cannot be exactly correct in its original form. Forbes sought to give a phonological and morphological history of the dialect forms of the particle, which took them all back to an original form $*k\eta/*ken$ (where $*k\eta$ is the normal zero-grade form of the morpheme, and $*ken$ the e -grade form).¹² Zero-grade $*k\eta$ would give Greek $\kappa\alpha$ and possibly (by the Sievers-Edgerton ‘law’) $\kappa\alpha\nu$ before a vowel.¹³ Early Greek would then, by normal sound-change, have $\kappa\epsilon\nu$, and $\kappa\alpha/\kappa\alpha\nu$; Forbes suggested that the analogy of $\kappa\alpha/\kappa\alpha\nu$ produced $\kappa\epsilon$ (out of $\kappa\epsilon\nu$). It is hard to see how this analogical process could happen outside of poetic diction, however. $\kappa\alpha$ is a feature of West Greek, and there are no grounds for supposing the type of extended, early contact between $\kappa\alpha$ dialects and $\kappa\epsilon(v)$ dialects which might have led to the creation of $\kappa\epsilon$ in Thessalian, Lesbian, and Cypriot.

¹¹ See West (1973: 191)

¹² This is a standard alternation in the Indo-European languages, and is known as ablaut: a third possibility is the o -grade form, which in this case would be $*kon$. This e/o /zero alternation is a morphological process, and has nothing to do with sound change.

¹³ This ‘law’ has been vigorously debated since Forbes wrote – for a critical overview see Collinge (1985: 159-74).

Moreover, *k̄η would give a short vowel in κα: the attested form κᾱ would have to be accounted for separately, and is a weak analogical model for κε.¹⁴

She suggested that Attic, Ionic and Arcadian ᾗν was the result of a resegmentation of the sequence οὐ καν as οὐκ ᾗν. This, in itself, is perfectly plausible. The form *καν is not generally recognised as a form of the potential particle, but Forbes drew attention to a peculiar sequence of particles in three inscriptions from Tegea in Arcadia:

(5) IG V ii, 3 (Buck 18, Dubois 1986: II, 20-34), line 16

EIKAN διελαυνόμενα τύχῃ ‘if they are being driven through’

(6) IG V ii, 6 (Buck 19, Dubois 1986: II, 39-61), line 2

EIKAN τι γίνητοι ‘if anything occurs’

(7) Buck 22 (Dubois 1986: II, 61-77), line 34

EIKAN τι αὐτοῖς ἐ[π]απύλογον ἦι ‘if there is a defence case against them’

There are eight instances in total in these three inscriptions, which date to the late fifth and fourth centuries BC. Forbes (followed by Dubois and others) saw the potential particle καν in this sequence, which she divided εἴ καν. This seems *prima facie* quite unlikely, given that the same inscriptions also present sequences εἶκ ἐπί (one instance) and εἶ δ’ ᾗν (twenty instances), which point to a division εἶκ ᾗν rather than εἴ καν for (5) – (7):

(8) IG V ii, 3 (Buck 18, Dubois 1986: II, 20-34), line 21

εἶκ ἐπὶ δῶμα πῦρ ἐποίσε[.] ‘if one brings fire near the temple’

(9) IG V ii, 3 (Buck 18, Dubois 1986: II, 20-34), line 2

εἶ δ’ ᾗν καταλλάσῃ ‘if one makes any change’

¹⁴ Lee (1967: 52) pointed out the difficulty of coexisting καν and κε(v): ‘I cannot conceive of the same speaker, or singer, being able to continue to say οὐ καν and at the same time say ἔνθακε(v), καί νυκε(v), etc. If he continued to say καν in the one case, why not in the other? That is to say, it is hard to imagine retention of καν only in the cluster οὐκαν.’

It seems clear that Arcadian has merely innovated εἰ/εἶκ on the analogy of οὐ/οὐκ, where the final -κ prevents hiatus before a following vowel.¹⁵

Forbes suggested that the putative Greek form καν was cognate with forms in Hittite and Sanskrit. Specifically, she drew attention to the Homeric collocation νύ κε(ν) in sentences such as *Iliad* 5. 311:

- (10) καί νύ κεν ἐνθ' ἀπόλοιτο ἄναξ ἀνδρῶν Αἰνείας,
εἰ μὴ ἄρ' ὄξυ νόησε Διὸς θυγάτηρ Ἀφροδίτη,
'And there would Aeneas, leader of men, have perished, had not Aphrodite daughter of
Zeus quickly perceived him.'

She compared the Sanskrit sequence *nú kam* and the Hittite *nu-kan*. The Sanskrit particle *kam* is a vague asseverative 'indeed, yes, well' in Vedic sentences such as the following:

- (11) *Rig Veda* 1. 72. 8
vidád gávyam sarámā dṛ̥hám ūrvám yénā nú kam mānuṣī bhójate víṭ
'Saramā found the cattle's firm-built prison whereby *nú kam* the race of man is still
supported'

In Hittite *nu* is a clause connector which stands at the head of a sequence of particles; *kan* stands last in a sequence of particles, so *nu* and *kan* will appear next to each other only if there are no other elements in the sequence. The meaning and function of *kan* are not completely understood, however. It is particularly associated with verbs and adverbs of movement or location; it may also (Hoffner 2006) intensify the telic force of a verb. In (12) the verb *šamen-* 'withdraw, pass by' becomes 'do without, forfeit' with *kan* :¹⁶

- (12) Law 30 (OH/NS): Hoffner *Laws of the Hittites* (Brill 1997), p. 39-40

¹⁵ So Wackernagel *Vorlesungen* (1926) I 223f. Dubois' conclusion (1986: I, 227-31) that Arcadian possessed multiple forms of the particle, viz. κ', δαν, καν, ἄν, is extremely implausible.

¹⁶ See Hoffner and Melchert (2008: 366-74, esp. 371, 373).

takku LÚ-š=a DUMU.MUNUS nauī dāi | n=an=za mimmai | kūšata=ma kuit piddāit |

n=aš=kan šamenzi¹⁷

‘But if a man has not yet taken a girl and refuses her, the bride price which he paid he forfeits.’

n=an=za : *nu-* [connective] + *an* [enclitic pronoun acc. ‘her’] + *za* [morphosyntactic middle marker]

n=aš=kan : *nu-* [connective] + *aš* [enclitic pronoun ‘he’] + *kan*

In spite of the superficial similarity of the collocation with *nu*, a historical connection between Greek $\kappa\epsilon\nu$ and the Sanskrit and Hittite words seems extremely unlikely. A serious linguistic objection to the Hittite parallel is that the marking of an apodosis with *nu* seems to be a feature of later Hittite texts (i.e. it is a development within the history of Hittite).¹⁸

On this scenario, Greek inherited **nu-kṃ* and **nu-kem*; **nu-kem*, ancestor of the Homeric form, became $\nu\acute{\epsilon}\kappa\epsilon$ by analogy while $\kappa\epsilon\nu$ speakers were in contact with $\kappa\alpha\nu/\kappa\alpha$ speakers. This process must presumably have been complete by the start of the late Bronze Age (c. 1500 BC), to allow for the contact-induced innovation $\kappa\epsilon$ not only to spread but to become the dominant variant. But it cannot have been too early, because the sound change **kṃ* > $\kappa\alpha$ must have already happened for the analogy $\kappa\alpha\nu : \kappa\alpha :: \kappa\epsilon\nu : x$ ($x \rightarrow \kappa\epsilon$) to work.¹⁹ It might be argued that the innovation $\kappa\epsilon\nu \rightarrow \kappa\epsilon$ was influenced instead by the ancestor of Attic-Ionic, since the scenario supposes that Attic and Ionic (like West Greek) derive from a **kṃ* dialect. However, early Attic-Ionic speakers would need to be isolated relatively early after the (supposed) change **kṃ* > $\kappa\alpha$, $\kappa\alpha\nu$, or the innovated form $\acute{\alpha}\nu$ from $\omicron\upsilon\kappa\alpha\nu$ would be expected in other **kṃ* dialects (i.e. in West

¹⁷ Words transcribed in capitals indicate that the scribe has inserted a Sumerian logogram rather than spelling out the Hittite word phonetically. The sign = is used to indicate a boundary between a word, or particle, and enclitic(s).

¹⁸ Hoffner (1997: 12), Hoffner and Melchert (2008: 392).

¹⁹ Vocalic **ṃ* **ṣ* cannot have been vocalised in Common Greek, given differences among the dialects in the Greek realisation (e.g. Myc. *spermo* ‘seed’ < **spermṃ*, Attic and West Greek *sperma*). For arguments for the emergence of ‘Greek’ from dialect convergence, rather than the divergence of the dialects from a common proto-Greek, see Garrett (2006).

Greek dialects); and furthermore, the development of ἄν presupposes a dialect which had in fact generalised καν and discarded κα.

Starting with οὐκ, ἄν and the new possibility of εἶκ, I suggest a split development in the dialects along the same lines as Forbes: except that the inherited particle ἄν was retained (on this scenario) by Attic-Ionic and Arcadian; Lesbian, Thessalian and Cypriot ended up with κε/κ' as the result of the re-analysis of εἶκ ἄν and οὐκ ἄν in conjunction with a phonetic variant κε of the particle τε < *k^we. Dunkel and others have suggested that the way to explain the first-millennium diversity is to reconstruct multiple forms *ke, *ken (from *kem), and *an.²⁰ West Greek κᾱ is explained by analogy (e.g. adverbial forms in -ᾱ). This is perfectly possible, though it ignores the interesting coincidence that all forms of the particle either begin or end with an /n/ or a /k/, i.e. precisely those consonants which were used to prevent hiatus in Greek. I shall argue that ἄν was an inherited form (rather than back-formed within Greek from *kḥ), and conversely that the k-forms are the result of a Greek mixture of reanalysis of word-final -k and the vestiges of an old topicalising/conditional force of the I-E particle *k^we (which appears elsewhere as τε).

My starting point is an article by Cowgill in 1960, which set out to demonstrate that the Greek negative οὐ(κ) has its roots in an IE phrase *ne H₂oyu (k^wid) 'never', composed of *ne 'not', an adverbial accusative *H₂oyu 'ever', and an optional indefinite pronoun *k^wid. The form of the negative in Greek is otherwise a puzzle: the well-attested IE *ne is not found in Greek, and Greek οὐ(κ) has no obvious etymology. A third form οὐκί is found in Homer: Cowgill started from the assumption that the prevocalic οὐκ is elided from οὐκί, and that this form contains the neuter indefinite pronoun *k^wid as a reinforcing particle (the root of *H₂óyu 'life, age' appears in αἰών, αἰεί from *αἰί-, i.e. *H₂eyu-).²¹ In Greek, οὐ and οὐκί were reduced to preconsonantal οὐ and

²⁰ Dunkel (1990); Pokorny (1959: 515) gave a lemma *ka *ke *kom 'wohl!'. This account follows Dunkel (1990: 109) in assuming that 'Der Verschiedenheit der Funktionen müßte eigentlich eine Verschiedenheit der Formen entsprechen'; the difference is that κε κεν are not here derived from separate inherited particles.

²¹ The development in Greek can be paralleled in French *ne ... pas*, in which the negative *ne* was strengthened by *pas* 'step' (and a range of other particles in archaic and dialect French). In French, as in Greek, the secondary element *pas* gradually took over the functional load of the negative. See Ashby (1981) for the French data.

prevocalic οὐκ.²² The phonotactic rules of Greek do not generally allow any consonant in word-final position except -v, -p, -ς. For this reason the form οὐκ'/οὐκ is likely to have been marked as a prevocalic variant (originally at least), licensed perhaps by the prevocalic perfect tense variant ἔθηκ', ἔδωκ' etc.²³

An adverbial particle ἄν in early varieties of Greek may have been a potential or indefinite marker which became increasingly restricted to situations which depended on the prior achievement of some condition, and clauses with a verb in the subjunctive mood, including the indefinite relative.²⁴ Greek also inherited a particle *k^we which presents a range of overlapping functions in the IE languages, including conjunction, coordination, and subordination. In addition to its semantic force (and here it differs from a marker of potentiality), it also plays a role in the ordering and presentation of discourse.²⁵ It is familiar in Greek as the connective and 'epic' τε, and (if my argument is right) it was also a formal and functional ingredient in the attested k-forms of the modal particle. In the emergent Greek *Sprachbund* the dialects in contact formed, with some morphological variation, a distinct subordinating conjunction 'if' (εἰ, αἰ and ἦ in the dialects), and a specialised modal particle which developed a similar range of functions as the syntax of conditional and indefinite relative clauses took on a distinctively Greek shape.

It is not possible to reconstruct a word 'if' in Indo-European (the word is innovated in I-E languages which have it). There are, however, some commonalities in conditional syntax across

²² The negative οὐ is attested in Mycenaean, but the prevocalic form is not. A sequence *o-u-ki-te-mi* is found in a Knossos tablet (KN V280), but neither the meaning of *te-mi* nor the general subject matter of the tablet is clear: the interpretation οὐχί (in Ventris-Chadwick 1956) has been mostly abandoned in favour of οὐκίς < *ou k^wis (Attic οὔτις). See Palaima (2000: 13-14, 18-19).

²³ The preposition ἐκ is a different case: it is the result of the simplification of ἐξ before a consonant, and therefore does not appear before a vowel. Some dialects have ἐς before a consonant (e.g. Arcadian), and Cypriot keeps ἐξ in all positions.

²⁴ In early Greek modal particles emphasized what 'may be implied by the sentence without their aid' (Goodwin 1875: 144, fn. 1). Gerö (2000) has argued that the modal particles characterised intensional propositions in Greek: 'In intensional contexts, which are induced by various linguistic items, e.g. modals and so-called verbs of attitude, expressions have reference in alternative worlds ..., in extensional contexts they have reference in the "real" world' (2000: 183).

²⁵ Gonda (1954: 189) notes that in early texts *k^we is almost never in fact a simple connective, but 'seems to have been a means of indicating complementary unity, that is to say: it was a marker pointing to, or emphasizing, the fact that two (or more) words of the same category (substantives, adjectives etc.) were not only considered as belonging together, but constituted a complementary pair (or set).'

the languages. Cross-linguistically, conditional grammar can be effected without additional marking by pragmatic or discourse-structuring devices, of which juxtaposition is a straightforward example:

- (13) πρεσβύτερός τις τῆι θύραι / ὑπακήκο'· εὐθὺς πατέρα καὶ πάππα[ν λέγω].
γραῦς μητέρ'.

'An older man opens the door: right away [I say] "Father" and "Grandad".

An old woman -- "Mother".' (Menander, *Dyskolos* 493-5)

- (14) *Negat quis, nego; ait, aio*

Somebody denies something, I deny it; they affirm it, I affirm it. (Ter. *Eun.* 252)²⁶

Here the first clause sketches the situation or context in which the second clause (main clause or apodosis) will be valid. The similarity between a condition (protasis) and a topic was noted by Haiman during the development of discourse analysis as a specialised field in the 1970s.²⁷ The examples above are asyndetic; in English and other languages a frequent connector between the 'topic' (condition) and the main clause is a word meaning 'and'. Greek (like Latin and English) uses *and* when the protasis has the form of an imperative:²⁸

- (15) αἰτεῖτε καὶ δοθήσεται ὑμῖν

'Ask and it shall be given to you' (Matthew 7: 7)

In this case the 'left-subordinating *and*' has the effect of making the imperative 'ask' the structural equivalent of a subordinate clause.²⁹ Blakemore (1987) argues persuasively that discourse connectives such as *and* are procedural rather than representational words: they point

²⁶ Discussion and further examples in Bertocchi and Maraldi (2011: 94-7).

²⁷ Haiman (1978: 564): 'Conditionals, like topics, are givens which constitute the frame of reference with respect to which the main clause is either true (if a proposition), or felicitous (if not)'.

²⁸ Early modern English used *an[d]* more widely as a conditional: 'I'll tell you when, an you'll tell me wherefore', (Shakespeare, *Comedy of Errors* III 1. 39). Folios hesitate between the spellings *and*, *an* when the word has this function.

²⁹ See Culicover and Jackendoff (1997), who see this as an 'asymmetric conjunction that is coordinate in syntactic structure, just the way it looks, but that corresponds explicitly to subordination at the level of conceptual structure'.

the hearer to the context and indicate the inference (how to take the representational elements).³⁰

In (16) and (17) the connective introduces the subordinate clause in a more straightforward way. In early Latin *apsque* could link a condition to a principal clause:

(16) *nam apsque te esset, hodie numquam ad solem occasum / uiuerem*

‘if it hadn’t been for you, I would never have lived till sunset today’ (Plautus *Men.* 1022-3)

Klein and Condon (1993) have shown that Gothic *nih* from **ne k^we* has a subordinating value on four occasions in the Gospel of John, as in the following example:

(17) *nih wesi* (= εἰ μὴ ἦν) *sa fram guda, ni mahtedi* (= οὐκ ἐδύνατο) *taujan ni waiht*

‘if he were not from God, he would not have been able to do anything’ (John 9: 33)

Latin *neque/nec* does not have this subordinating function, though it adds a negative condition in early Latin:

(18) *Si intestato moritur, cui heres nec escit, adgnatus proximus familiam habeto.*

‘If a man dies intestate, and if he does not have an heir, the nearest agnate kinsman shall have possession of his household.’ (*Twelve Tables*, 5)³¹

Gonda, in his critical review of Ruijgh’s (1971) *Autour de TE épique*, noted that the Sanskrit particle *ca* ‘and’ < I-E **k^we* can in Vedic also mark a conditional clause:³²

(19) *RV 1.40.6 imāṃ ca vācaṃ pratiharyathā naro viśved vāmā vo aśnavat*

‘and if you gladly receive this speech, o noble men [= gods], it will attain all things of yours worth winning’ (tr. Jamison/Brereton 2014)

³⁰ Wilson and Sperber (1993) offer an attractive account of *and* in terms of relevance, following Blakemore: ‘An utterance can ... be expected to encode two basic types of information: representational and computational, or conceptual and procedural -- that is, information about the representations to be manipulated, and information about how to manipulate them’ (Wilson and Sperber 1993: 2). See also Clark (1993).

³¹ Cf. also Cato *De agr.* 141, 4 *Mars pater, siquid tibi in illisce suovitautilibus lactentibus neque satisfactum est, te hisce suovitautilibus piaculo* (‘Father Mars, if something in the offerings of these suckling pigs was not satisfactory to you, I make expiation with the offering of these pigs’).

³² Gonda (1954: 201); also Szemerényi (1985: 384), Klein and Condon (1993: 48), who compare Hittite *takku* ‘if’ < **to-k^we*.

He compared this to *Iliad* 1. 218, ‘where the protasis is virtually conditional and *te* no doubt helps to combine the two parts of the sentence into a whole’:

(20) ὅς κε θεοῖσ' ἐπιπείθεται, μάλα τ' ἔκλυον αὐτοῦ

‘Whoever obeys the gods, readily do they listen to him’

In a recent paper Patri has added data on **k^we* from Slavic to the discussion, and in a wide-ranging analysis of the function of the particle in Indo-European, argues persuasively that the appearances of the particle across the various languages can be understood by supposing an early unitary value: at the head of a phrase it introduces a condition, or topic, and in other places in the phrase it is a connector (more or less ‘and’).³³ A plausible case can (in this context) be made for traces of **k^we* in the conditional grammar of Greek.

Attic and Arcadian

The conjunction εἰ ‘if’ retained a pre-vocalic form εἰκ in Arcadian on the analogy of οὐ/οὐκ, and this appears in the sequence εἰ + ἄν → εἰκ ἄν.³⁴ In Attic and Ionic εἰ + ἄν simply melded into ἐάν, ἄν (Attic) and ἦν (Ionic),³⁵ which explains the different word order in the adversative Attic ἐάν δέ against Arc. εἰ δ' ἄν and West Greek αἰ δέ κα.

West Greek, Boeotian, Thessalian

We now need to explain how the forms κε, κα and κ' arose. After the development of οὐ/οὐκ as the negative particles across all varieties of early Greek, the conjunction εἰ (αἰ) developed a regular variant εἰκ (αἰκ). Consider the following conditional clause at *Odyssey* 2. 76:

(21) εἴ χ' ὑμεῖς γε φάγοιτε, τάχ' ἄν ποτε καὶ τίσις εἴη·

³³ ‘Or si l’on admet que **-k^we* était en indo-européen un indice de topicalisation, c’est à dire, essentiellement, l’expression d’une connexion, il devient alors facile d’admettre que quittant la position de tête, ce relateur ne soit plus interprétable comme l’expression d’une connexion entre ce qui a été dit par rapport à ce qui va être dit, mais devienne, automatiquement, celle d’une relation entre un constituant de l’énoncé et un autre.’ (Patri 2010: 298)

³⁴ For the sporadic appearance of εἰκ/αἰκ elsewhere in (literary) Greek, see Gallavotti (1975)

³⁵ In Attic inscriptions the spelling EIAN is late: see Threatte (1980: 147-52).

‘If you were to devour [my goods], amends would perhaps be made one day.’

This would reflect greater flexibility in the placing of the modal particle than in classical Attic if one follows the normal interpretation of χ' as the modal particle $\kappa(\epsilon)$, and there are plenty of parallels for this. Compare, for example, *Iliad* 6. 49f.

(22) τῶν κέν τοι χαρίσαιτο πατήρ ἀπερείσι' ἄποινα
εἴ κεν ἐμὲ ζῶδὸν πεπύθοιτ' ἐπὶ νηυσὶν Ἀχαιῶν.

‘From this [wealth] my father would bestow upon you ransom past counting,
if he learned that I was alive at the ships of the Achaeans.’

In (21), however, χ' is formally ambiguous: it might be interpreted as the final consonant of the conjunction $\epsilon\iota(\kappa)$, and this would be (of course) perfectly acceptable grammatically. It is worth remarking that a similar use of $\alpha\tilde{\nu}$ with the optative occurs only once, and this instance (unlike the examples of $\kappa\epsilon/\kappa\epsilon\nu$) is embedded in indirect speech (*Iliad* 2. 597f.):

(23) στεῦτο γὰρ εὐχόμενος νικησέμεν εἴ περ ἂν αὐτὰ
Μοῦσαι ἀείδοιεν ...

‘For he boasted that he would be victorious, even if the Muses themselves were to sing’

There are traces elsewhere in Greek both of a prevocalic form $\epsilon\iota\kappa$ and of an earlier period of fluidity in modal grammar.³⁶ At Aristoph. *Lysistrata* 1098f. (Laconian dialect) an Athenian greets the Spartan ambassadors with the words ‘We’ve been having a tough time [sc. without sex]’, to which the Spartan responds ‘A dangerous time, more like, if they [the Herm-clippers] noticed us with erections.’

(24) ᾧ πολυχαρεῖδα, δεινά γ' αὖ πεπόνθαμες,

³⁶ Solmsen (1908: 335) had come to similar conclusions: ‘Dass die Möglichkeit $\kappa\alpha$ beliebig zu setzen oder fortzulassen dann bis zu einem gewissen Grade zur Vermeidung des Hiatus ausgenutzt worden ist, [...] ist nicht verwunderlich. [...] Wir müssen uns für die mundartliche Syntax immer noch mehr von dem frei machen, was uns vom Ionisch-Attischen her als Regel im Blute sitzt. Ob im Arkadischen $\epsilon\iota\kappa'$ oder $\epsilon\iota\kappa$, im Dorischen $\alpha\iota\kappa'$ oder $\alpha\iota\kappa$ gesprochen wurde, können wir nicht wissen.’

αἰκ ἔ(φ)ιδὸν ἀμὲ τῶνδρες ...

‘My friend, it’s a dangerous time we’ve been having
if that gang saw us ...’

This is not an unfulfilled condition (‘if they had seen us’), which would not make sense as a response to the Athenian comment, but a logical condition which merely asserts ‘the inexorable connexion of the two members of the sentence’ (they may or may not have seen us).³⁷ There is no reason to emend γ’ to κ’ in 1098 (with Ahrens): but it is difficult to be certain whether the K of AIK represents an allomorph of αἰ, or what Gow called ‘a freedom in the use of κα or κε which is also found in certain Doric inscriptions.’ Gow is commenting here on Theocritus 11. 73-4:

- (25) αἰκ’ ἐνθῶν ταλάρως τε πλέκοις καὶ θαλλὸν ἀμάσας
ταῖς ἄρνεσσι φέροις, τάχα κα πολὺ μᾶλλον ἔχοις νῶν.
‘If you went and wove some cheese crates, and gathered some greenery
to take to the lambs, you would show a lot more sense.’

A fragment of Epicharmus is similarly disconcerting, but the text (a complete trimeter) is relatively secure:

- (26) πρᾶτον μὲν αἰκ ἔσθοντ’ ἴδοις νιν ἀποθάνοις
‘First of all, if you saw him eating you’d die ...’ (PCG 1, 18)

There are parallels in epigraphic texts from West Greek and Boeotian. The following example is from North-west Greek (western Locris), mid fifth century (IG IX. 1², 717 = Buck 58, SEG 26. 640):

- (27) αἰκ [αἰ κ’ edd.] ἀδίκῳ συλῶι : τέ-|τορες δραχμαί
‘In the case of an unjust seizure, [the penalty is] four drachmae’

³⁷ Gildersleeve (1882: 435). This interpretation follows Sommerstein (1990) rather than Colvin (1999: 227f.) or Dover (1957: 94).

This points to the conclusion that at an early stage the prevocalic variant εἰκ was subject to reanalysis as a modal sequence εἰ κ', which led to the back-formation of κε; partly motivated by parallel sequences εἰ δ(έ), εἷ γ(ε), and εἷ τ(ε), and also by the analogy of οὐκ, which was formally ambiguous:

- a) the prevocalic form of οὐ, or
- b) in a sequence *οὐ κ^wε ἄν > οὐ κ' ἄν (indistinguishable from οὐκ ἄν).³⁸

At *Iliad* 2. 258, for example, the verb κυχῆσομαι is formally ambiguous between an aorist subjunctive and a future indicative, which in turn makes two analyses possible for εἰκ/εἰ κ' :

- (28) εἷ κ' ἔτι σ' ἀφραίνοντα κυχῆσομαι ὥς νύ περ ὤδε
 'If I find you playing the fool again, like you are now ...'

It has long been noticed that there is an overlap in the function of τε and κε in the syntax of indefinite/potential propositions, which are often semantically close to conditional clauses (the proposition may be dependent on a set of circumstances distinctly or indistinctly envisaged).³⁹ At *Odyssey* 7. 311-14 Alkinoos expresses the wish that Odysseus might stay in Phaiakia; he continues as follows (text is the Teubner edition of 1984 by Von der Mühl)

- (29) ... οἶκον δέ κ' ἐγὼ καὶ κτήματα δοίην,
 εἷ κ' ἐθέλων γε μένοις.
 'I would give a house, and possessions, if you wished to remain.' (*Odyssey* 7. 314-5)

³⁸ See below for the dissimilation of κ^w to k in the vicinity of a u vowel. A sequence *νύ κ^wε ἄν would have given *νύκ^wαν, replaced by νύκεν in epic since *κ^wαν was not synchronically analysable, while κεν could be seen as a form of κε (see below).

³⁹ Lillo (1993) argues that κε and 'epic' τε derive from the same original form and syntagm, since they are syntactically interchangeable in a number of passages. His historical account is different from the one offered here, but our accounts coincide in seeing the partial functional overlap between the two particles in Homer as significant, and in connecting κε with inherited *k^we: '... la no aparición de κε con subjuntivo eventual, sino τε, se deba a que no resultaba tan obvio para esos aedos o rapsodos de última época que tales subjuntivos funcionaran como eventuales, ya que los giros y contextos usados en su época que de alguna manera pudieran equipararse a los homéricos utilizaban el modo indicativo. [...] el funcionamiento de τε es negativo, es decir, ha quedado relegado a los giros en que la partícula modal κε resultaba incómoda desde la perspectiva, como ya hemos dicho, de unos estadios lengua alejados de los que se podrían considerar originarios u «homericos».'

Line 314 could stand alone in context, and most of the manuscripts have δέ τ' ἐγὼ (the reading of the 1933 Budé edition by Bérard). In Homeric relative clauses τε marks a general or undefined state of affairs; in *Iliad* 1 Calchas makes a general point about the dangers of annoying a king:

- (30) Εἴ περ γάρ τε χόλον γε καὶ αὐτῆμαρ καταπέψη,
ἀλλά γε καὶ μετόπισθεν ἔχει κότον, ὄφρα τελέσση
'For even if he swallows his anger for the day, nevertheless he maintains his bitterness,
until he accomplishes its object ...' (*Iliad* 1. 81)

The protasis lacks a modal particle, and τε marks the general nature of the condition. Sometimes the distinction is a matter of interpretation, and Monro (1891: 259) gave a list of passages in which he thought that the appearance of κε was due to 'alteration of the original text'. His list includes the famous declaration of Achilles at *Iliad* 9.312-3:

- (31) ἐχθρὸς γάρ μοι κεῖνος ὁμῶς Ἀΐδαο πύλησιν
ὅς χ' ἕτερον μὲν κεύθη ἐνὶ φρεσίν, ἄλλο δὲ εἴπη.
'Hateful to me is he, just as the gates of Hades,
who hides one thing in his mind, and says another.'

In a nuanced discussion Chantraine, though he accepts the complexities in analysing the Homeric passages, rightly rejects emendation in this and almost all other cases.⁴⁰ There is, as he notes, a grey area between a situation envisaged for the future (modal particle with subjunctive) and a general relative (no modal particle):

- (32) ὃ δέ κεν κεχολώσεται ὃν κεν ἴκωμαι.
'He will be angered, the man whom I visit.' (*Iliad* 1. 139)

⁴⁰ Chantraine (1953: 247, 350). He is followed by Ruijgh (1971: 430), who however bases his argument on his assumption of a 'digressif-permanent' sense for τε. The polite reviews of Ruijgh by Morpurgo Davies (1977) and Chantraine (1973) both contain objections fatal -- in my view -- to his thesis. See also Lillo (1993: 210-12).

The back-formation of modal $\kappa\epsilon$ from $\epsilon\iota\kappa$ is hard to imagine without additional motivation: a connection (historical and phonetic) between $\kappa\epsilon$ and $\tau\epsilon$ could be the source. The connective particle $\tau\epsilon$ is derived from earlier $*k^we$, which gives Latin *-que*, Sanskrit *-ca* ‘and’. It appears in the form *-qe* in Mycenaean, where the labiovelar $*k^w$ has not yet disappeared: by the time of alphabetic Greek, this sound had become τ (before the front vowels e, i), and π (before the back vowels o, a). In Greek the sound $*k^w$ underwent dissimilation to κ before or after the sound u , and this has already happened in Mycenaean. It is the same process that produced Latin *secundus, cum* (conjunction) from earlier $*sek^w-$, $*k^wom$ (in Latin dissimilation is also triggered by an adjacent o). The dissimilation can be seen in the Myc. word *qo-u-ko-ro* [$g^woukoloi$], later $\betaουκόλοι$ ‘cow-herds’, where the second element *-kolos* < $*-k^wolos$ following u .

To recapitulate, the connective $*k^we$ became $\kappa\epsilon$ by dissimilation after a u vowel (and $\tau\epsilon$ elsewhere by regular sound change); two obvious sequences which would have triggered the dissimilation are $o\check{\upsilon} \kappa\epsilon$ and $\nu\acute{\upsilon} \kappa\epsilon$.⁴¹ On this account the Greek modal particle $\kappa\epsilon/\kappa'$ has a dual origin: the allomorphs $\epsilon\iota\kappa$ $o\check{\upsilon}\kappa$ in conditional sentences, combined with the phonetically-conditioned variant $\kappa\epsilon$ < $*k^we$. We can see traces in Homer of the development of the syntax of the classical conditional, and of indefinite relative clauses, and this process must have been mirrored by a growth in the role and distribution of the particle. In the following example the particle occurs with an optative (rather than the indicative) in a past counterfactual apodosis ($o\check{\upsilon} \kappa\epsilon$... $\acute{\alpha}\kappa\alpha\chi\acute{o}\iota\mu\eta\nu$):

(33) ... ἐπεὶ οὐ κέ θανόντι περ ᾧδ' ἀκαχοίμην

εἰ μετὰ οἷς ἐτάροισι δάμη Τρώων ἐνὶ δήμῳ

‘since I would not have grieved thus for his death [*participle for protasis*], if he had fallen at Troy with his comrades ...’ (*Odyssey* 1. 236-40)

⁴¹ Ruipérez (1987: 331 and fn. 29) argued for a different history of $\kappa\epsilon\nu$, but suggested a similar mechanism: ‘It is no doubt sound to postulate a stage where sandhi gave birth to two variants depending on the final vowel of the preceding word, *ken* (or *kem*) and *k^wen* (or *k^wem*)’. See the discussion of Lillo (1993, esp. 217-19). Palmer (1980: 51, 67-8) derives the modal particle $\kappa\epsilon$ (Myc. *qe*) from $*k^wen$, and (following Forbes) derives $\acute{\alpha}\nu$ from resegmentation. But his account depends on two dubious claims: a) that a modal particle *qe* can be identified in Mycenaean texts (with injunctive force), and b) this particle is entirely distinct from the connective/gnomic particle $*k^we > \tau\epsilon$ (Myc. *-qe*).

This is exceptional: the spread of the modal indicative, marked with a modal particle, in place of the optative, is mostly complete in Homer (Goodwin 1875: 161-2).

To this derivation of κε Ruijgh (2011) and others have objected that the dissimilation $k^w > k$ next to u is already evident in Mycenaean (as in *qo-u-ko-ro* [g^w oukoloji] above); we would, therefore, expect the writing *ke* in Mycenaean rather than *qe* in the attested word *o-u-qe* [ouk^we], which became οὔτε in later Greek. This, however, simply pushes the question back to: why is οὔτε not *οὔκε? The answer is analogy. Thessalian κίς (Attic τίς) is usually explained as the result of a dissimilation of *ou-k^wis which was then generalised, whereas in other dialects the free-standing form τίς supplanted the expected form -κίς in the negative compound. Sound-changes happen with regularity, but can be undone by analogy: *ou-k^wis, like *ou-k^we, is a perfectly transparent form, and the restitution of *k^w in Myc. *o-u-qe* is unremarkable. In the case of Latin, *equus* and *sequuntur* should, on purely phonological grounds, be *ecus and *secuntur: this change must have been similarly inhibited or reversed by the analogical pressure of the paradigm (e.g. gen. *equi* and 3 sing. *sequitur*).

The particle κεν is artificial in the sense that it was a creation of epic poetry. The tradition now had ἄν, κε, and κ' at its disposal: all that was needed (for the greatest flexibility in composition) was a syllabic particle in the shape CeC. The obvious solution was κεν, an enlargement of κε on the analogy of ἄν.⁴²

West Greek κᾱ

The West Greek particle presents an unexpected alternation κᾱ ~ κ'. In metrical texts, where the vowel length can be confirmed, it is always long: this is a phonological problem, since one would not expect a long vowel to be elided in Greek (crasis would be the normal outcome). In high (lyric/choral) poetry the form κᾱ is entirely absent: poets use the forms κεν, κε, κ' (this is

⁴² Cf. R. Janko on *Iliad* 13. 289 [οὐκ ἄν MSS and Aristarchus, οὔ κεν papyrus], 'οὔ κεν avoids the sequence ἄν ἄν-, and οὐκ ἄν never precedes α-. Here οὐκ ἄν avoids κεν ἐν.' The doublet νυ/νυν (νῦν) may also have been a model.

formally ambiguous), and ἄν. This avoidance must be a literary/ stylistic choice, since κα is found in comedy (Epicharmus, and the dialect sections of Aristophanes), Sophron, and epigraphic prose.⁴³ In epigraphic (prose) texts κ' is found before a vowel, κα before a consonant (sometimes the 'plene' form κα is written before a vowel).

Forbes suggested that the long vowel in κα might be metrical licence (i.e. the colloquial language had κᾶ, which explains the elided form κ'): this will strike anyone familiar with Greek literary language as extremely unlikely. Poets, especially comic poets, did not simply lengthen vowels as convenient (and even if they had, we would expect at least *some* instances of κᾶ). Equally implausible is the suggestion (Lee 1967: 47) that the vowel of κα was lengthened to distinguish it from the ending of the temporal ὅκα 'when' (it would be difficult to think of a linguistic parallel for this).

It was suggested above that the form κε has its origin in εἰκ, a back-formation assisted by the by-form *κε < *k^we. The most economical explanation for κᾶ/κ' would be a similar back-formation from αἰκ: in this case we need to understand what gave rise to the long ᾶ.

A long vowel -ᾶ is found in Greek among the fossilised I-E endings which characterise adverbs in dialects other than Attic-Ionic: thus ἀμᾶ 'at the same time', κρυφᾶ 'in secret' (in Attic-Ionic the normal sound change gave -η, e.g. in Attic ἀμηγέπη 'somehow or other'). An instrumental ending, it is mostly indistinguishable in sense from the old dative/locative ending -ᾶι/-ηι, with which it became confused (manuscripts usually give the familiar dative-style ending with *iota*). It appears in the opening lines (two hexameters) of the famous Damonon inscription from Sparta (Schwyzer 12, Buck 71):

(34) νικάῃας ταυτᾶ ἡᾶτ' οὐδεὶς πῆποκα τῶν νῦν

'having been victorious in such a way as none of the men of today'⁴⁴

⁴³ See Molinos Tejada (1992) for references and discussion, and Colvin (1999: 241-2).

⁴⁴ The πη in πῆποκα is also an old instrumental (with a long e), equivalent to the πω in Attic πώποτε.

West Greek has a particle with the form $\pi\tilde{\alpha}/\pi\tilde{\alpha}i$, with the force ‘how?/anyhow’ and ‘where/anywhere’. It is the instrumental of the I-E indefinite and interrogative stem $*k^w\text{o-}$ which supplied pronouns and adverbs. At Ar. *Lysistrata* 170-1 a Spartan ambassador asks

- (35) τὸν τῶν Ἀσαναίων γὰ μὲν ῥυάχετον
 $\pi\tilde{\alpha}$ κά τις ἀμπείσειεν αὐτὸν μὴ πλαδδιῆν;
 ‘How will anyone persuade the Athenian rabble not to act crazy?’

And at Ar. *Acharnians* 732 the Megarian merchant says to his daughters

- (36) ἄμβρατε ποττὰν μᾶδδαν, αἴ χ’ εὕρητέ πα.
 ‘Run forward for some food, if you can find it anywhere.’

The particle $\pi\tilde{\alpha} < *k^w\tilde{a}$ by normal development of the labiovelar before a back vowel. A doublet $\pi\tilde{\alpha}/*k\tilde{\alpha}$ could be explained in the same way as its Attic-Ionic equivalent $\text{ποῦ}/\text{κοῦ}$ (where the Ionic κ -form reflects dissimilation), or $\text{τε}/*κε < *k^we$ above, where the form $*κε$ was explained by invoking dissimilation in collations with οὔ (and vu). A negative sequence $*\text{ou-}k^w\tilde{a}$ would give οὔ $k\tilde{\alpha}$, or $\text{οὔ}\pi\tilde{\alpha}$ (Laconian at Ar. *Lys.* 1157) by analogical extension of the π to labial contexts (proximity to u). In Homer around three-quarters of the instances of indefinite $\pi\eta$ occur after a negative (οὔ , οὔτε , or οὔδέ). The phonetic variant $k\tilde{\alpha}$ replaced reflexes of $*k^we$ in indefinite contexts, and then (with the pressure of prevocalic $\alpha\iota\kappa$) became specialised as the modal particle. The form κ' (from $\alpha\iota\kappa$ and $*k^we$) was naturally maintained as the prevocalic variant, just as modern spoken English preserves the unstressed or allegro form *'em* from Old English *hem*, in spite of the replacement of *hem* by *them* (Old Norse) for functional reasons in the Middle English period.

The particle $\check{\alpha}v$ has an accent, which is unsurprising if it was inherited as an adverbial particle from the parent language. The k -forms $\kappa\epsilon$, $\kappa\epsilon\nu$ and $\kappa\alpha$, on the other hand, are all atonic (enclitic). This becomes a little easier to explain if the above account is right: the Greek forms are to some extent *disiecta membra*, of which the most important ingredient was the IE enclitic particle $*k^we$, and an indefinite $*k^w\tilde{a}$.

Summary

Connecting the *k*-forms of the Greek modal particle to PIE **k^we* permits a comparison with the conditional grammar of other IE languages. It avoids the need for unattested **κᾰν* in Greek, and the weakly-attested *κεν* is removed from the heart of the system to the periphery. It connects the *κ*-forms *κε*, *κεν* and *κα* (rather than supposing them to have been separate entities inherited by Greek). It also offers an explanation of the ambiguous syntax and semantics of *εἰκ*(*'*)/*αἰκ*(*'*) in a small but significant number of texts.

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