

Quantification and Intonation in Modern Greek

Anna Maria Margariti

University of Patras
margaritianna@yahoo.com

Abstract

The present paper discusses data and problems concerning the distribution and licensing conditions of two subtly different yet distinct readings for *kathe* ('every') Determiner Phrases (DPs) in Modern Greek. The determiner *kathe* seems to be a single lexical item. Nonetheless, *kathe* DPs give rise to two different interpretations. The two readings, a presuppositional distributive universal quantifier and a non-presuppositional free choice existential-like one are phonologically differentiated by means of prosodic emphasis. The former appears as phonologically stressed, the latter without phonological marking. Sentential operators seem to regulate the appearance of the latter. The presence or absence of presupposition in the sentence is considered to be responsible for this distinction.

Keywords: determiners, emphasis, focus, quantification, ambiguity

1. Introduction

Negative quantifiers such as 'nothing', 'nobody', 'nowhere' and elements related to negation, interrogative and modal contexts such as 'anything', 'anyone', 'anywhere' have been the subject of exhaustive research (Ladusaw 1980; Haegeman & Zanuttini 1991, among many others). Greek exemplifies a morphologically uniform category (already discussed by Veloudis 1982) that encapsulates both uses: *kanenas* ('anyone'/'no one'), *tipota* ('anything'/'nothing'), *pote* ('ever'/'never'), *pouthena* ('anywhere'/'nowhere'). The different items are phonologically differentiated by the feature of emphasis. Emphatic, strong, universal, negation-licensed determiners and their non-emphatic, indefinite (in the sense of Heim 1982) counterparts have been characterized as Negative Polarity Items and Existential Polarity Items (Tsimpli & Roussou 1996), Negative Quantifiers and Negative Polarity Items (Klidi 1998) or Negative Polarity Items and Non-Veridical Items (Giannakidou 1997) respectively.

- (1) irthe *KANENAS / kanenas?
came._{3S} anyone?
'Did anyone come?'
- (2) KANENAS / *kanenas den irthe.
nobody not came._{3S}
'Nobody came.'

Based on different assumptions, Tsimpli & Roussou (1996) and Giannakidou (1997) conclude that real negative quantifiers are only the negative focused forms and that the existential-like polarity items owe their appearance in the sentence to the presence of a sentential operator relating to a wider notion comprising modality and intensionality, identified as lack of presupposition and truth value indeterminacy (Tsimpli & Roussou

1996) or as non-veridicality (Giannakidou 1997). The aim of the present paper is to discuss a different, yet parallel semantic differentiation for *kathe* (every / any) DPs in Greek, which seem to be subject to similar contextual and phonological conditions.

1.1 'Every' vs 'any' readings

Modern Greek exemplifies one determiner paradigm allegedly representing the class of distributive key universal quantifier, equivalent to English 'every': *o/ i/ to kathe*. The pronominal forms are *o 'kathenas, i kathemia, to kathena* for masculine, feminine and neuter gender respectively (Holton et al. 1997). This paper focuses on the ambivalent quantificational properties of the determiner.

Etymologically, the item can be decomposed into the distributive preposition *kata* and the numeral *heis* ('one', *kata hena*, lit. 'one by one', cf. Haspelmath 1995). By an extension of this use 'kath-' was given universal distributivity markedness and its use was generalized. Cross-linguistically the 'every' paradigm is observed to obtain from (free choice) indefinite determiners (Haspelmath 1997).

According to Strawson (1950), the existence inference of universal statements is a presupposition. In this paper I claim that the emphatically pronounced determiner renders a presuppositional, purely universal reading for the DP. The whole sentence conveys a presuppositional reading. When the Verb Phrase (VP) allows for a modal interpretation or a kind interpretation, on the other hand, the sentence is attributed a non-presuppositional flavour and a free choice (FC) *kathe* DP reading emerges. In the latter case the determiner appears with no phonological stress. The examples that follow bear witness to the above proposal. The DP in question is examined in affirmative, subject position first. Capital letters denote prosodic stress:

- (3) (KATHE anagogos) erhete (KATHE anagogos) ke me diakopti.
(every impolite) comes (every impolite) and me interrupts
'Every impolite person pops around and interrupts me.'

Both a preverbal and a postverbal construction are possible. With regard to the meaning of the sentences, both the preverbal and the postverbal constructions seem to be assertions of a fact assumed to be true. The DP expresses universal quantification and seems to refer to or allude to already known individuals in the domain of discourse.

However, a reading that is not the universal proper quantificational one observed in (3) is attained in the following:

- (4) (Kathe anagogos) erhete (kathe anagogos) ke me diakopti!
(any impolite) comes (any impolite) and me interrupt._{3S}
'Just any impolite person may pop around and interrupt me!'
'Impolite people pop around and interrupt me!'

In (4) the meaning of the DP is not a universal proper one. It rather exhibits a free choice interpretation, roughly equivalent to the English free choice determiner 'any'. Here again both preverbal and postverbal constructions are available. Interestingly, the sentence is liable to both a generic kind (indefinite) reading and a more straightforwardly modal, discriminative free choice (again indefinite cf. Dayal 1998; Giannakidou 2001; Horn 2005) interpretation. The two structures are identical in denotation. The DP receives an existential interpretation. The sentence in both cases describes an opinion or a possibility, an arbitrary generalisation over a situation rather

than a definite description of a state of affairs-as one would expect from a universal DP utterance. The truth of the proposition is not taken for granted. Thus, there is a lack of presupposition or a non-veridicality condition in the sentence, a condition that is reminiscent of the licensing conditions for Existential Polarity items (Tsimpli & Roussou 1996; Giannakidou 1997). Similarly to the interpretation of negative polarity or affective items, context determines which reading will be each time preferred.

2. Indiscriminative use and free choice determiners

Another indication that we have a free choice interpretation here is the indiscriminative use observed. Indiscriminacy is, according to Horn (2005), a distinctive feature for free choice ‘any’. This reading is better demonstrated in the following:

- (5) Erhete *kathe* / ??KATHE *Babis kai me diakopti!*
 comes any *Babis* and me interrupts
Lit.: ‘Just any *Babis* may pop around and interrupts me!’
 or: ‘Just any person (no matter how insignificant s/he might be) may pop around and interrupt me!’

Only the free choice indiscriminative reading (as defined by Horn 2005) is compatible with a proper name (5). The derogatory/depreciative reading is more apparent with depreciative idiomatic NPs (cf. (6)) and diminutive nouns (cf. (7)):

- (6) Erhete *kathe* / *KATHE *kutsi Maria ke me diakopti!*
 comes any limping *Mary* and me interrupts
 ‘Just any person (no matter how insignificant s/he might be) may pop around and interrupt me!’
- (7) Erhete *kathe* /?? KATHE *giatrudakos ke me diakopti!*
 comes any little-doctor and me interrupts
 ‘Just any small time doctor may pop around and interrupt me!’

Greek exemplifies a distinct free choice items paradigm, admitted in non-episodic, alternatives-providing contexts (Giannakidou 1997): *opjosdipote*, *opjadipote*, *opjodipote*, *otidipote* (‘whichever’, ‘whoever’: masc., fem., neut.), *opotedipote* (‘whenever’), *opudipote* (‘wherever’). The fact that the unstressed *kathe* DP sentences are equivalent to purely free choice determiner paraphrases invigorates our intuition about the free choice use of the former:

- (8) Erhete *opjosdipote anagogos ke me diakopti!*
 comes whichever impolite and me interrupts
 ‘Whichever spoiled brat may pop around and interrupt me!’

However, free choice *kathe* DPs and *opjosdipote* phrases are not identical (cf. section 5). Continuing with equivalent paraphrases that underline the free choice reading for the unstressed *kathe* DP, note that another possible paraphrase for a sentence hosting this item is again free choice (*o protos tiheos*, roughly interpretable as ‘any random’):

- (9) Erhete *o protos tiheos ke me diakopti.*
 comes the first random and me interrupts
 ‘Just any random person pops around and interrupts me.’

Another diagnostic for teasing apart the two proposed readings involves ‘almost – absolutely’ modification:

- (10) *erhete shedon ??kathe / KATHE anagogos ke me diakopti!*
 comes almost ??any / every impolite and me interrupts
 ‘Almost every spoiled brat pops around and interrupts me!’

Note that the sentence is better when the restrictor of the universal quantifier is richer in content as in “every spoiled brat in the neighbourhood”. The unstressed form of the determiner, which would give rise to the meaning “people who are almost impolite pop round and interrupt me”, is problematic with ‘almost’ modification. The determiner in this case appears to be semantically void. This is a welcome result, as ‘almost’ modification constitutes a test for absolute values, such as cardinal numbers and universal quantifiers (Horn 2005), though not for end of scale values or universal quantifiers alone, as it was claimed earlier on (Horn 1972). This complies with the claim put forward in this paper that the non-emphatic DP has a free choice, existential- like interpretation.

3. Context conditions-modification

Let us now examine the DP in question in subject position but in transitive verb contexts, where the sense of distribution, inherent to the paradigm in question, is put to use:

- (11) *Perni vravio KATHE/*kathe fititis.*
 takes trophy every student
 ‘Every student is awarded a trophy.’
- (12) *Perni vravio KATHE/kathe protoetis fititis.*
 takes trophy every / any first year student
 ‘Every/any first year student is awarded a trophy.’
- (13) *Perni vravio KATHE/kathe fititis pu ine protoetis.*
 take trophy every/any student that is first-year
 ‘Every/any student who is in his first year is awarded a trophy.’
- (14) **Kathe/KATHE fititis perni vravio.*
 *any/every student takes trophy
 ‘Every student who is in his first year is awarded a trophy.’

The distribution of the two readings is identical to the one we observed in (3) - (7) and (10); no proverbial/postverbal contrast applies. In the lack of modification, the free choice reading is not available ((11), (14)). It becomes available as soon as we add modification to the DP, in the form of either an adjective (12) or a relative clause (13). The free choice *kathe* DP seems again to be devoid of universal quantification.

In Greek, focus can be designated by phonological means alone. Multiple foci are not an option for Greek (Tsimpli 1998). The fact that modification voids the ungrammaticality for the unstressed DP may be due to prosodic and semantic-pragmatic reasons. From a prosodic point of view, modification adds heaviness so that the sentence is metrically suitable for the Nuclear Stress Rule or focus application (Cinque 1993; Zubizarretta 1998). According to the facts observed previously, nominalised adjectives (4), proper names (5), or diminutive nouns (7), are not metrically ‘heavy’ DPs (they still express a comment on the noun) but they surprisingly permit the free

choice reading. However, this may only mean that heaviness does not necessarily have to be on the DP, since there is heaviness on the utterance (in the form of a second matrix clause in conjunction). Space limitations do not permit further elaboration on this issue here. From a semantic point of view, contrastive focus can be responsible for the meaning differentiation attested, by creating each time different focus context sets, according to the DP constituent that bears the focus. Contrastive focus makes a statement about the correctness of the assertion introduced by its context statement. Depending on which constituent it is assigned to, contrastive focus negates certain aspects of the assertion introduced by its context statement (Zubizarretta 1998). Therefore the unavailability of (pragmatically sufficient) contrasting focus sets when further refinement, i.e. modification, is absent can be regarded as responsible for (11) and (14). The noun object alone does not convey enough information an alluded rival context group could object to. This is why a contrastive focus stress cannot be assigned to it. Therefore, modification makes contrastive sets and contrastive focus a grammatical option for unstressed *kathe* DPs.

What is interesting for our discussion here is that contrastive focus on either the determiner or on its modification part designates different context contrasts. When the adjective is focused –as it can be in (12): ‘*kathe protoetis fititis*’– the DP implies a contrast between group *a*, ‘first year students’ and group *b*, ‘students in their 2nd, 3rd, 4th year’. The part of the negated context assertion concerns the ‘kind of’ students who are entitled to an award. The contrast this sentence puts through could be expressed as a negation on the adjective: “not just any students, but only *first*-year students are entitled to an award”. When the determiner bears focus (“KATHE *protoetis foititis*”), the contrast that is alluded to is one between *a* (“all freshers”) and *b* (“one, some, three, fifty three freshers”). The context assertion that is negated concerns the number of first year students entitled to an award. A more explicit paraphrase should have the form: “Not some (as you might think), but absolutely *all* freshers without exceptions are entitled to an award”.

Concluding the discussion on the distribution of the DP in question in subject position, we observe that there are no word order constraints: the two readings are available in preverbal and postverbal positions. Modification, modality and the presence of negative implicature play a role in the emergence of the free choice reading. The same constraints and conditions apply for *kathe* DPs in object position:

- (15) Diohno KATHE /* *kathe zitiano*.
 chase._{1S} every beggar
 ‘I chase away every beggar.’
- (16) Diohno KATHE / *kathe zitiano pu sinanto*.
 chase._{1S} every beggar that meet._{1S}
 ‘I chase away every/any beggar I meet.’

In this section we observed that there are not any subject-object asymmetries. The free choice reading resembles an existential free choice discriminative reading or an indefinite kind interpretation. In any case, it is obtainable only in some modal and intensional contexts. Modification in the clause renders the free choice reading grammatical.

4. Context conditions-modality

In the previous section we saw that modification is a necessary condition for the emergence of the unfocused *kathe* reading. There are, however, more contextual conditions that regulate its emergence. A modal interpretation for the VP is always possible for both its sub-readings, the ‘kind’ and the indiscriminative use one. As we saw earlier, according to Tsimpli & Roussou (1996) all Modern Greek verb formations are susceptible to a modal interpretation except for the [+past, +perfective]. Let us see whether the free choice reading is admitted in such an environment:

- (17) Irthe *kathe/KATHE anagogos ke me diekopse.
 came.PFV.3S every impolite and me interrupted.PFV.3S
 ‘Every impolite person popped around and interrupted me.’
- (18) Erhotan kathe/KATHE anagogos ke me diekopte!
 came.IMPF.3S any/every impolite and me interrupted.IMPF.3S
 ‘Any/every impolite individual was popping around to interrupt me!’

We observe that the free choice reading is not available in (17). It is nonetheless perfectly grammatical in (18), together with the universal reading, where the verb is marked for imperfective aspect. It seems that for some reasons [+past +perfective] or episodic contexts disallow the emergence of the non-emphatic, free choice interpretation (17). The universal proper *KATHE* DP, on the other hand, is compatible with episodicity, therefore perfectly grammatical and felicitous in this context. On the other hand, both DPs are acceptable in a [+past –perfective] context (18).

- (19) Tha erhete KATHE/kathe anagogos kai tha me diakopti!
 will come.IMPF.3S every/any impolite and will me interrupt IMPF.3S.
 ‘Every impolite person will be popping around and interrupting me!’ (*universal reading*)
 ‘Impolite people will be popping around and interrupting me!’ (*kind reading*)
 ‘I will be interrupted by just any random spoiled brat!’ (*indiscriminative reading*)

Absence of modality (or presence of episodicity) results in ungrammaticality for the unstressed DP. Future tense, a stereotypical modal verb formation, is again perfectly compatible with the free choice modal-sensitive reading (19). The pure universal quantifier option is also available. The situation is a bit more complicated in (20):

- (20) Na erhete kai na me diakopti kathe/KATHE anagogos?
 SUBJV come IMPF.3S and SUBJV me annoy IMPF.3S any/every impolite person
 ‘I do not tolerate impolite people coming and interrupting me’ (*rhetorical question*)
 ‘Should every impolite person come round and annoy me?’ (*yes-no question*)

Here again we observe that with interrogative sentences both readings are available. Sentence (20) can be interpreted both as a rhetorical question and as a yes-no question. The free choice indefinite DP reading is felicitous when the sentence is interpreted as a rhetorical question. Rhetorical questions always encapsulate a negative implicature (Tsimpli & Roussou 1996), which seems to be necessary for the emergence of the free choice *kathe* DP reading. On the other hand, the universal DP reading emerges when the sentence is interpreted as a yes-no question. In a true yes-no question no such implicature arises. The indefinite reading is not permitted in this case. In other words,

we observe that in questions, the non-presuppositional non-focused indefinite-like *kathe* DP reading requires a negative implicature as an extra parameter in order to appear. The question has to be interpreted as a rhetorical question in order for the indefinite-like reading to be obtainable.

Other modal environments are subjunctive and imperative mood sentences. Subjunctive is used for both matrix and embedded sentences in Greek, always introduced by the subjunctive mood particle *na* (Veloudis 1982; Philippaki-Warbuton 1985; Tsimpli 1990). With imperatives, the DP can only be considered in an object position, since third person imperative is not an option.

- (21) Dose prosklisi se kathe/KATHE palio simathiti pu tha dis.
give-IMP.2S invitation to any/every old schoolmate that will see.2S
'Give an invitation to any/every old schoolmate you come across.'
- (22) Dose prosklisi se kathe/*KATHE palio simathiti pou vlepis sto dromo ke tha dis!
give-2IMP.2S invitation to any old schoolmate that see.2S in-the street and will see.2S
'Give invitations to just any old schoolmate you come across in the street and you will suffer the consequences'

Only the unstressed *kathe* DP is compatible with an implicit conditional imperative containing a negative implicature (the whole phrase constitutes a warning), where the indiscriminative FC reading comes across really strong. The focused *KATHE* DP reading is not available in a 'warning' sentence (22).

Let us now turn to explicit modal contexts:

- (23) Prepi na erthi KATHE/kathe palios simathitis sto parti.
must.3S SUBJV come IMPF.3S every/any old schoolmate to-the party
'Every/any old schoolmate should come to the party'
'Old schoolmates (alone and not, say, new ones) should come to the party'

We observe that the set contrast alluded to in the 'KATHE' DP in (23) reading is: "all – and not just some old – schoolmates should come to the party". In opposition, the contrast alluded to in the non-emphatic *kathe* DP reading concerns the kind of schoolmates: "only the old ones are to be accepted at the party". The distinction between the two readings is better illustrated in negative modal sentences:

- (24) Den prepi na erthi KATHE/kathe palios simathitis sto parti.
not must.3S SUBJV come PFV.3S every/any old schoolmate to-the party
'Not every old schoolmate should come to the party'
'Any old schoolmates should not come to the party'

The fact that negation with the *KATHE* DP produces a "not every old schoolmate" reading is indicative of the universal quantification contributed by the DP. The existential negation that emerges with the *kathe* DP, on the other hand, results in an "old schoolmates should not come to the party" reading, which reinforces the proposal that the unstressed '*kathe*' DP is subject to an existential interpretation.

5. Free choice *opjosdipote* vs *kathe*

As observed in section 2.1, free choice *kathe* DPs and free choice *opjosdipote* DPs exemplify a meaning affinity. In this section the focus is on the differences:

- (25) Dine tous fakelous se opjondipote praktora (pu) kseri to sinthima.
give._{IMP.2S} the files to whichever agent (that) knows the password
'Give the files to whichever secret agent knows the password.'
- (26) Dine tous fakelous se kathe praktora pu kseri to sinthima.
give._{IMP.2S} the files to whichever agent that knows the password
'Give the files to any secret agent who knows the password.'

First we observe that modification has a 'subtriggering' effect on the acceptability of both items (Horn 2005). This is a contextual grammaticality condition the two items have in common. Note, however, that *kathe* DPs carry a plurality presupposition, probably caused by the notion of distributivity they convey rather than any quantificational force that they lack. In (25) we expect that all the files will be given to one, whichever, secret agent, while in (26) the files are to be distributed among the secret agents who know the password. *Kathe* certainly lacks plural morphology while *opjosdipote* does not (*opjidipote*._{PL}). The latter can convey a distributive reading when in plural, but that is not the issue here. It seems that a distributive reading among situations, as in generic sentences, or possibilities, as in modal contexts, should be attainable in order for the unstressed *kathe* DP to appear.

To conclude, free choice (FC) *kathe* seems to be close to FC 'any', which is a non-specific scalar indefinite and whose semantics is attributive, non-episodic and indiscriminate but also, on top of these features, distributive. It is the latter feature that mainly differentiates it from the 'whichever' free choice variety.

6. Concluding remarks

In this paper, two distinct readings for the Modern Greek *kathe* DP were presented. It was claimed that when the determiner bears phonological emphasis, a proper universal, presuppositional reading emerges. On the contrary, when the determiner is not uttered emphatically the DP acquires a non-presuppositional, free choice existential-like reading. There are no word order or subject-object asymmetries. The contextual condition of presupposition is indicated as responsible for this distinction. Presuppositional contexts give rise to the appearance of the *KATHE* DP, whereas modal, intensional contexts give rise to the non-presuppositional *kathe* reading. Given that this condition has been recognized as a key licensing condition for Negative Polarity items and Existential Polarity items, the generalization that can be put forward is that in Greek contextual conditions, such as presupposition together with prosodic emphasis, play a crucial role in the interpretation of quantificationally ambiguous DP readings.

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