

VELAR FRONTING IN MODERN GREEK DIALECTS*

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The present paper offers a detailed investigation of the phenomenon of velar fronting in Modern Greek dialects, i.e. the change in the place of articulation of the velar consonants \k g x γ\ to more front regions of the oral cavity under the influence of a following front vowel or semivowel, a change which involves several subtypes. First, a definition of the phenomenon is provided, followed by a description of the various front realisations (palatal, palato-alveolar, alveolo-palatal, alveolar). Then the geographical distribution of each variant type is discussed, from west to east. The discussion also includes information on the earliest attestations of the phenomenon in each area.

1 Definition of the phenomenon

The present paper aims to clear the picture concerning a major isogloss in Modern Greek dialectology, namely that of the fronting of velar consonants. The current overviews of the phenomenon (Newton, 1972b: 126-136; Georgacas, 1982: 200-205; Kontosopoulos, 2001: XXIII; Trudgill, 2003: 54-57) do not enter into sufficient detail concerning geographical microvariation, and the linguistic/phonetic descriptions of the phenomenon in each area leave much to be desired.

As a starting point, it must be noted that in the international phonetic bibliography the term palatalisation has been used for a great variety of phenomena, and, conversely, the phenomenon of velar fronting, which includes palatalization, has been described in many different terms. Furthermore, a distinction needs to be made between palatalisation as a synchronic rule of a specific phonological system, creating allophonic variation, and palatalisation as a diachronic

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change which may lead to phoneme split. In Greek, for example, lexical items such as those in (1) have always constituted a major problem for any synchronic phonological analysis:¹

- (1) *χιόνι* [ˈçoni] ‘snow’ vs. *χώνει* [ˈxoni] ‘sticks, stuffs’
γιατί [jaˈti] ‘why’ vs. *γατί* [ɣaˈti] ‘kitten’
κιόλας [ˈcolas] ‘already’ vs. *κόλλας* [ˈkolas] ‘glue.GEN’.

According to the most recent studies (see Keating, 1993; Bateman, 2007, 2011), the term palatalisation should be restricted to the following two phenomena:

- (i) **Full palatalisation:** A consonant changes its main place (and manner) of articulation, by moving towards the palatal section of the oral cavity, under the influence of an adjacent front vowel or semivowel. Example: [x] > [ç], [g] > [ɟ]
- (ii) **Secondary palatalisation:** A consonant retains its main place of articulation but develops a secondary palatal articulation under the influence of an adjacent front vowel or semivowel. Example: [p] > [pʲ]. This second type of palatalisation will not concern us here.

In the case of Modern Greek dialects, the term should ideally include what is traditionally termed “full tsitakism”, i.e. the affrication of [c] > [ts] and [ɟ] > [dz], which is a very widespread development, often in variation with true “palatal” realisations such as [k] > [tʃ]. Furthermore, it would be best to exclude from the present discussion a series of palatal or palatalised realisations triggered by front vowels or semivowels, but affecting non-velar consonants. Therefore, no further details will be adduced to issues such as the fronting of other classes of consonants (dental, liquid, sibilant etc – see (2)), especially in the cases involving synzesis:

- (2) [aˈlati] > [aˈlatsi] ‘salt’, Naxos
 [maˈli] > [maˈli] ‘hair’, Achaia
 [xorˈjo] > [xorˈzo] ‘village’, Crete
 [peˈðja] > [peˈðza] ‘children’, Kalymnos

On the basis of the above, the phenomenon examined here is velar fronting, i.e. the fronting of the consonants [k g x ɣ] followed by a front vowel or semivowel, but no discussion of the phonological status of the fronted consonants will be provided. Palatalisation is only a part of fronting, while “tsitakism” should rather be characterized as affrication, since it involves the development of a secondary sibilant articulation, be it palato-alveolar/alveolo-palatal (in which case palatalisation also takes place) or simply alveolar/dental (in which case no palatalisation but only fronting takes place). The relation between the two phenomena is illustrated in fig. 1:

¹ For overviews of the problem see Householder (1964); Arvaniti (2007: 112-114), Topintzi and Baltazani (forthcoming). For a diachronic phonological approach to glide formation see Manolesou and Koutsoukos (2011).

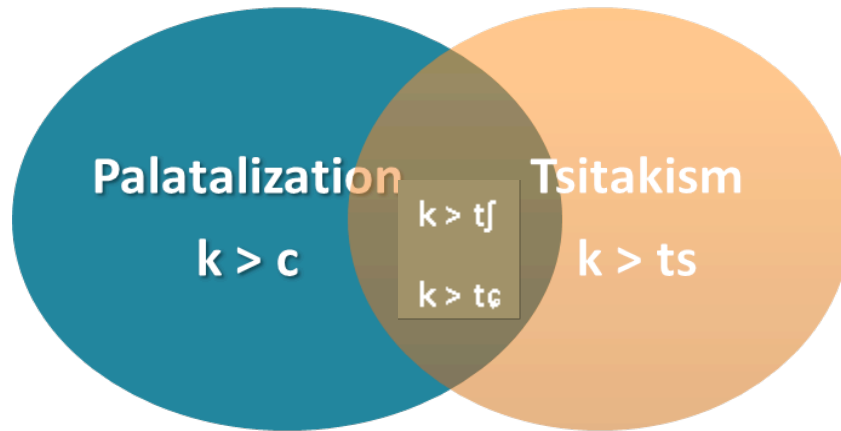


Figure 1. Velar fronting

2 Types of fronting

In more detail, according to the relevant literature, the forms which velar fronting can assume in Modern Greek, are the following. These are set out as different degrees of fronting, ranging from the back of the oral cavity (soft palate) all the way to the front (alveolar ridge), as illustrated in fig. 2 below:

1. $[k \ g \ x \ ɣ] \rightarrow [c \ ɟ \ ɕ \ j]$. Change of velar to palatal. This is a synchronic allophonic rule of Standard Modern Greek and of many dialectal varieties. The phenomenon is absolutely systematic, but some rare cases of dialectal forms in which it does not take place have been recorded. These are the dialect of Karpathos (Michailidis-Nouaros, 1928:13-14; Dawkins, 1903/1904: 87), cf. (3), the dialect of Pharasa in Cappadocia (in the last case under the influence of Turkish), cf. (4) and four sub-varieties of the dialect of Naxos (Zevgolis, 1956). Newton (1972b: 127) had doubted the absence of palatalisation in Karpathos, but the velar realisation is clearly audible in fieldwork recordings. Similar observations concerning absence of palatalisation have been made for parts of Crete, Rhodes and for Thirasia (Dawkins, 1940: 24-25) and the area of Agii Saranda, sometimes as part of the phonological system, in other cases involving only individual lexical items, mainly loanwords (5).²

- (3) a. Standard MG ['exo] 'have.1.sg.' vs. ['eçis] 'have.2.sg.'
 b. Cappadocian ['exo] 'have.1.sg.' vs. ['exus] 'have.2.sg.'

² In the case of Karpathos, the lack of palatalization is regular, and involves [k] in the village of Elymbos and [x] in the villages of Mesochori and Spoa; the rest of the island exhibits affrication of velars before front vowels and semivowels. For Crete, see Anagnostopoulos (1926: 162) and especially Kontosopoulos (1969: 35) who record a velar realization in Turkish loanwords, where the Turkish original has a velar consonant followed by the high back unrounded vowel [u], adapted to Greek as [i]. Velar pronunciation in Turkish loanwords is recorded for Ag. Saranda by Kyriazis and Spyrou (2011: 180), who also note occasional lack of palatalization of [k] in the cluster [sk]. Similarly, velar pronunciation in Turkish loanwords is recorded for Rhodes by Tsopanakis (1940: 111). In the case of Naxos, the velar realization is recorded for the villages of Komiaki, Koronos, Skado and Keramoti.

- (4) a. Standard MG [vuti'raci] 'butter-dim.', ['citrinos] 'yellow'
 b. Elymbos [vuti'raki], ['kitrinos]

- (5) a. Standard MG [ci'mas] 'minced meat', [ba'ciri] 'copper(ware)'
 b. Cretan [ki'mas] < Turk. *kıyma* [kui'ma], [ba'kiri] < Turk. *bakır* [ba'kuur]

2. [k g x ɣ] → [tʃ dʒ ʃ z]. Change of velar to palato-alveolar. This is the traditionally termed “heavy” or “spirant” tsitakism, which has been experimentally verified at least for the Cypriot dialect (Granqvist, 1997: 27-32; Arvaniti, 1999: 175), and is uncontested for several other, mainly peripheral, areas. From a crosslinguistic and typological viewpoint, this is the most common type of velar palatalization (Kümmel, 2007: 207, Bateman, 2011: 595).

3a. [k g x ɣ] → [ç^(h) ʝ ç^(h) ʝ]. This is the so-called “Cretan-type” fronting, which in the traditional dialectological literature is described as a strongly fronted, non-affricate realization, the stops being accompanied in some areas by aspiration. This articulation is occasionally characterized as “pre-palatal”, i.e. more fronted compared to the palatal articulation, mid-way between a palatal and an alveolar realisation. What complicates matters is that in Crete there also occurs a different type of fronting (which will be described immediately below) and which includes affrication, i.e. leads to alveolo-palatal affricates (Trudgill, 2003: 54). It is doubtful, however, whether this two subcategories of fronting (3a and 3b) differ in all four of their members. Most likely, they coincide in the fronted results of the velar fricatives, giving in both cases alveolo-palatal [ç z]. In any case, when the older descriptions of palatalisation from other areas describe the phenomenon as “more pronounced, stronger” or “lighter, weaker” than Cretan-type palatalization, it is unclear to which of the two Cretan realisations they refer to.

3b. [k g x ɣ] → [tʃ dʒ ç z]. Change of velars to alveolo-palatals. This type of fronting is very widespread, but due to the lack of clarity in older descriptions, it is frequently confused with the two previous ones. For an instrumental/experimental analysis of this type see Kontosopoulos (1972: 450-456, Granqvist 1997). The symbols usually adopted for its representation are non-standard modifications of the IPA, namely ç' ʝ' ç' ʝ' (Kontosopoulos, 1969, 1972; Granqvist, 1997). The honour of the discovery of three different degrees of fronting (palato-alveolar/ alveolo-palatal/ alveolar) belongs to Albert Thumb, already in the 19th c. (see e.g. Thumb, 1901: 190).

4. [k g x ɣ] → [ts dz s z]. This last type of fronting, which cannot properly be termed palatalisation, gives rise to alveolar affricates. The simple alveolar sibilants [s z] as results of the fronting of fricatives [x ɣ] are a rare evolution, which is nevertheless attested in some island varieties.

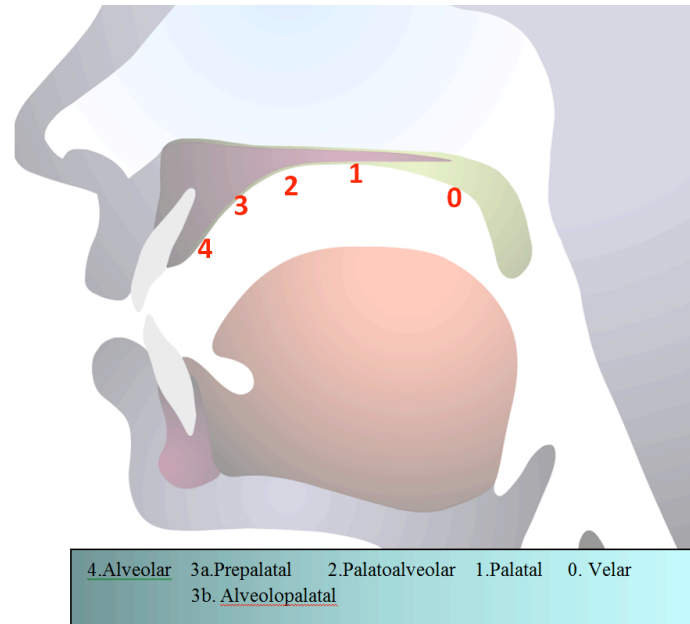


Fig. 2: “Degrees” of velar fronting

It must be emphasised that the classification of the various types of fronting in MG dialects relies on their synchronic articulation, as it would be hazardous to formulate hypotheses concerning the pathway of diachronic evolution in each dialect. It is not possible to prove, for example, that a dialect which presents fronting of type 4 (the traditionally called “full tsitakism”) had in previous periods passed through the previous types, nor that in a dialect which at the present moment displays fronting of type 2 or 3a the phenomenon spread to it at a later point in time than in other dialects which present a more “advanced” fronting.³

However, it is possible to make the empirical observation that type 4 fronting in at least some cases constitutes an indication of dialect obsolescence, a retreat from an earlier “more palatal” realisation. This is perhaps because this type (except of course for type 1) is the only one which does not involve sounds non-existent in the phonological system of Standard Modern Greek. As a result, speakers who are in a process of dialect loss avoid the production of palato-alveolar or alveolo-palatal sounds either consciously for social reasons, or unconsciously due to lack of competence. Concrete written testimonies of such a process will be presented below.

Before moving on to the detailed discussion of the geographical distribution of the various types of fronting, it is necessary to point out a number of factors which constitute obstacles to research. The most important one has already been mentioned: the lack of a precise distinction between the various types of fronting in the older literature, both in primary sources and in metalinguistic descriptions. Difficulties are caused both by the non-standard impressionistic terminology (e.g. “heavy”, “light”, “spirant”, “tsitakism”⁴, confusion between “palatal/palatalised” and “fronted”) and by the use of non-interpretable phonetic symbols (accents, points, haccs, apostrophes etc.)⁵. A second issue concerns the great variation that is

³ Trudgill’s suggestion for example goes against the historical record: The earliest attestations of fronting come from Cyprus (15th c.), which has only type 2.

⁴ For a recent discussion of this term see Pantelidis (2009).

⁵ On these difficulties, as well as on the more common graphematic symbolisms of the phenomenon of fronting, see Manolessou, Beis and Bassea-Bezantakou (2012).

exhibited in the various sub-dialects, sometimes in the speech of the same village or even the same speaker. Another, equally important, impeding factor is the widespread obsolescence of the Modern Greek dialects, which does not allow a more authentic and higher quality recording of the phenomenon through data-collection during fieldwork.

3 Geographical distribution of fronting

In more detail, according to the relevant literature, the forms which velar fronting can assume in Modern Greek, are the following:

A preliminary observation is that fronting need not affect all four velar consonants. As already described by Newton (1972b: 127-128), fronting is defined by an implicational hierarchy $k > g > x > \gamma$. This means that if a dialect does present velar fronting, this will first affect stops and then fricatives, with $[\gamma]$ always being the least frequently affected. Furthermore, when fronting goes beyond type 1, all affected consonants usually belong to the same “type”.

The distribution of type 1 will not concern us here, since it is the simple palatal fronting also characteristic Standard Modern Greek. It should be assumed that if a Greek-speaking area is not mentioned in the following discussion, then it has type 1 fronting. The data concerning the distribution of the other types will be discussed immediately below, from West to East.

The Maniot of Corsica displays palato-alveolar fronting of type 2 (Blanken 1951: 47-49) for all four velar consonants, although the varieties of metropolitan Maniot, as will be shown below, display fronting of type 3a and 4. The adstratal influence of the local Romance dialects is very probable. Similarly, the Greek dialects of South Italy also display palato-alveolar fronting of type 2 (Rohlf, 1977: 32-34; Katsoyannou, 1995: 115-117; Coutsoygera and Katsoyannou, 2011: 63-64), and again Romance influence is possible but not necessary. Only $[k]$ seems to be affected regularly by fronting, while $[g]$ is fronted only in some cases, and $[x \ \gamma]$ never⁶. Velar fronting in S. Italian Greek is not attested before the 19th c. The dialect of Cheimara in Albania has type 2 fronting as well (Kyriazis-Spyrou, 2011: 180), which affects all four velar consonants.

In the Peloponnese, fronting affects only the velar stops. The palato-alveolar realization (type 2) occurs in parts of Corinthia, Arcadia, Argolis, in eastern Achaia (Kloutsinochoria) and in a few areas of Messenia (Alagonia) and Elis (Lambeia).⁷ It is of course possible that either within the same settlement or in different areas the realization might vary between types 2 and 3b (palatoalveolar- alveolopalatal). In several areas of Laconia, the Cretan-type fronting 3a is also recorded. Velar fronting is attested in non-literary documents from the Peloponnese since the 17th century (Pantelidis, 2010: 471).

In the Peloponnese two additional, separate, dialect areas, Tsakonia and Mani, are recognised. The first displays fronting of type 4 (alveolar), affecting only stops, with a variant

⁶ In Calabria, the sound $[\text{dʒ}]$ appears only in Italian loanwords such as *giardino*, *geloso*, *viaggio* and as a voiced realization of $[\text{ʃ}]$ after a nasal, at word boundaries, e.g. /ton 'kipo/ > [ton 'dʒipo]. Fronting of $[\text{x}] > [\text{j}]$ is attested for very few lexical items in the Greek dialect of Puglia (Morosi, 1870: 105; Rohlf, 1977: 52; Karanastasis, 1984-1992: s.vv.), mainly *χειμώνας* [*ʃi' mona*] ‘winter’ and its derivatives.

⁷ For details see Pantelidis (2009). The realisations in Alagonia and Elis are certainly affricate, but the precise degree of fronting is unclear in the sources. For Laconia, there is only the vague testimony of Thumb (1901: 35), but modern recordings reveal rare traces of possibly type 3a or even 3b, as well as cases of hypercorrection of fronting affecting “original” $[\text{ts}]$ (the so-called “anti-tsitakism”), e.g. [*ˈtʃepi*] vs. Standard MG [*ˈtsepɪ*] ‘pocket’ < Turk. *cep* [dʒep].

realization as 3b (alveolo-palatal) in the older speakers of the southern section (Liosis, 2007: 342, 349). The same, type 4, fronting, was characteristic of the Tsakonian varieties of the Propontis.⁸

The dialect of Mani can be subdivided in two broader areas: fronting of type 3a for the velar stops and of type 3b for fricatives appears in east Mani and in the southern section of west Mani, while fronting of type 4 appears in the northern section of west Mani, affecting only stops (Bassea-Bezantakou, 2008: 272). The fronting attested in the island of Cythera is the same as that of southwestern Mani (Kontosopoulos, 1982: 127).

Turning now to the so-called “Old Athenian” dialect group: for the dialect of Megara the older literature (Benardis, 2006: 55-59; Syrkou, 2006: 14) draw attention to the difference between “deep Megarian” showing a palato-alveolar realisation of type 2, only for stops (which, due to the impressionistic quality of older descriptions could also be alveolo-palatal of type 3b) and the more “gentrified”, lighter realization of type 4, again, only for stops. Modern sound recordings (Dimela, 2011: 6-7) show variation between types 2 and 4, with the first been more frequent for voiceless [tʃ] and the second for voiced [dz].

The dialect of Old Athens cannot be investigated on a synchronic basis, as it has become extinct. One of the oldest available testimonies (17th c.), by the French traveller Spon, mentions fronting of type 2, similar to Italian palatalisation: “Ils ont à Athenes, à Thebes & à Negrepoint une prononciation toute particuliere du Ké & du Ki, qu’ ils prononcent comme si nous êcrivions Tché, Tchi, de même que le C. des Italiens” (Spon, 1678: II, 254). The study of the Albanian varieties (Arvanitika) of northeastern Attica also reveals a type 2 realisation, since this is the form in which Greek loanwords from the Old Athenian substrate have been adopted into Arvanitika (Sasse, 1991: 6-7, 25). On the contrary, according to late 19th c. testimonies (Chalkiopoulos, 1872: 357; Foy, 1879: 57), the fronted realisation in Athens and Boeotia was an alveolar affricate [ts] (type 4), which was already receding (‘sehr altmodisch’). Thumb’s study from the end of the 19th c. for the related dialect of Aegina draws attention to a difference between a realization of type 4 for velar fronting before [e, i] and a realization of type 3b for cases when the velar stop occurs before the sequence [ju] arising from ancient <Y> or <OI>, e.g. *κοιλία* > *τσουλία* (Thumb, 1891: 106-108). This information is corroborated by the testimony of Ludwig Ross (1845: 160) who records a similar differentiation for words with original <Y, OI> in Athens. Old Athenian shows fronting only of velar stops.

The area covered by the term “Old Athenian” includes the parts of Attica, Megaris, Boeotia and Southern Euboea not settled by Albanian speakers, as well as the island of Aegina. However, velar fronting extends beyond this area, into the neighbouring northern and semi-northern dialects of Sterea Ellas: Boeotia (Arachova, Ag. Georgios), Lokris (mainly Amphikleia) and Phokis (Desfina, Ag. Euthymia), which all also show fronting of type 4 (Chalkiopoulos, 1872: 357; Kousoulas, 1904: 51; Tsouknidas, 1995: 190-191), affecting only velar stops.

The island of Euboea shows a complex picture with respect to velar fronting (only of velar stops). According to Caratzas (1940: 281-282), the southern tip of the island shows fronting of type 2, the rest of the southern part, which is Arvanitika-speaking with a Greek substrate, shows traces of type 4, while the northern part around Kymi has fronted stops of type 3a or 3b (unclear). The adjacent island of Skyros shows type 4 fronting of velar stops.

Velar fronting also occurs in the northern Aegean islands. In Lesbos, there is variation between type 2 (palato-alveolar) and 4 (alveolar). The variation is geographically determined:

⁸ The symbol <τσ̄> with smooth breathing used by Kostakis (1951: 163) corresponds to simple [ts] (see the correspondence table in Manollessou, Beis and Bassea-Bezantakou 2012: 200-201).

type 2 occurs mainly in the southeastern part of the island (e.g. Vasilika, Agiasos, Eresos, Agia Paraskevi) and was already since Kretschmer's time a marker of low social prestige, while type 4 occurs mainly in the northwest (Pamfila, Molyvos, Petra), although it may appear in other settlements as well (Plomari, Kalloni)⁹. In the areas where refugees from neighbouring Aivali were settled, the fronting is of type 4. The small islands of Moschonisia, adjacent to Aivali, show only fronting of type 1 similar to Standard Modern Greek (Ralli, 2007: 10).

In Lemnos, the fronting recorded is of type 4, but it nowadays occurs only rarely, and in the most aged speakers of the dialect, as it is stigmatised (Kontonatsiou, 1988: 54-55). Kretschmer's much older description (1905: 149) mentions only geographical factors determining the distribution of the phenomenon, which seems to have been restricted to the southeastern part of the island (Skandali, Ag. Sophia, Fysini)¹⁰. In Tenedos, the realisation of fronting is uniformly of type 4 (Kerkineoglou, 2009), whereas the adjacent island of Imbros has only type 1 as in SMG.

In Chios, both older studies (Pernot, 1907: 242-244) and modern fieldwork (Katsouleas, 1996-1997: 28-31) record great variation in realisations. Type 3a is attested in many settlements (e.g. Spartounda, Nenitouria, Agio Galas, Trypes, Katavasi), while a minority present type 4 (Vouno, Elata, Mesta, Pyrgi); the dialect of the capital, Chora, and the nearby village of Vrontados shows only type 1 similar to Standard Modern Greek. The consonants affected are [k g] for the areas with type 4, while the areas with type 3a show mostly [k g x] which in some cases has receded to only [k g]. Velar fronting in Chios is attested in grammatical descriptions of the dialect and in non-literary documents since the 17th c. (Pernot, 1907: 244).

The research concerning the spread of the various types of fronting in the island groups of the Cyclades and the Dodecanese presents particular difficulties, since the phenomenon displays considerable variation both between islands and, frequently, within the same island.

In brief, in the Cyclades type 2 is to be found only in Amorgos and Folegandros, in variation with type 4. This last type, alveolar affricates, is to be found in the following islands: Andros, Syros, Ios, Kythnos, Kea, Tinos, Serifos, Folegandros, Mykonos, Paros, parts of Naxos and Sifnos (Kontosopoulos, 2001: 58). In the village of Apeiranthos in Naxos, in Santorini, Anafi, Serifos, Kimolos, Sikinos and in parts of Milos, Kythnos (village of Syllakas, modern Dryopis)¹¹, Sifnos and Tinos, i.e. in areas which historically had close ties with Crete, fronting of type 3a is also to be found. Of course in most islands fronting appears nowadays only as a relic phenomenon, restricted to the most aged speakers. In the Cyclades, fronting affects in general only [k g] in the areas which show type 4, but areas with type 2 show fronting of [k g x] and areas with type 3a show fronting of all four velars, i.e. [k g x ɣ]¹². Against this generalization, the island of Kea (type 4) showed in earlier periods the rare phenomenon of [ɣ] > [z] fronting without the corresponding change of [k] > [s] (Kollia, 1933: 268-269), and rare traces are also to be found in Sikinos and Folegandros. In view of the fact that many Cycladic and all Dodecanesian varieties exhibit deletion of intervocalic [ɣ], the rarity of [ɣ]-fronting is in any case to be expected in these areas, as the first phenomenon "bleeds" the second.

⁹ Information provided by A. Ralli.

¹⁰ Georgacas (1982: 202) also adds the central village of Livadochori.

¹¹ On the differentiation between Chora (type 4) and Syllakas (type 3a) see Vallindas (1882: 138) and Koukoules (1923: 278, 289-290).

¹² According to Dieterich (1908: 89-90), fronting of [x] > [ʃ] appears in Amorgos, Sifnos and Syros (note that Dieterich does not make a distinction between types 2 and 3 so the fronted velar fricative could be either [ʃ] or [e]). For Syros, Chatzidakis (1893) mentions only place-names displaying fronting of the velar fricative; the recent fieldwork by Katsouleas (1993: 70-72) gives no instances of this phenomenon at all, although he does record regular fronting of [k] > [ts] and [g] > [dz].

In the Dodecanese, the most widespread type of fronting seems to be 3a/3b, which Tsopanakis (1940: 111) describes as fronted, but not as strong as the Cretan one. Type 3b occurs in NW Rhodes, Chalki, part of Nisyros, Leros, Kasos Kos, N. Karpathos, Kalymnos (along with the neighbouring small islands of Pserimos and Telendos) Patmos¹³ and part of Tilos. In some islands, however, type 3 appears in variation with type 4 (alveolar), which is recorded in Karpathos, Kalymnos, Eastern Kos, and Tilos. In some cases (Kos, Tilos), type 4 seems to be a less dialectally marked, more “gentrified” realisation compared to the “heavy” dialectal realisation 3b, while in other islands the variation is geographically determined. The varieties of Kastellorizo and Astypalaia have type 4 exclusively (Karantastasis 1958: 119). Several older studies seem to confuse types 2, 3a and 3b (palato-alveolar/ alveolo-palatal), a fact which leads to imprecise and non-verifiable information due to the low quality of older recordings and the unavailability of modern ones. The Dodecanesian dialects present variation with respect to the velar sounds affected by fronting. In most cases, fronting affects [k g x] but fronting of [ɣ (to [z] or [z̥])] is also attested (e.g. Kalymnos, Nisyros, Patmos). The variety of Astypalaia also presents the remarkable phenomenon of fronting of [ɣ] to [ndz], which also applies to secondary [j] arising from synizesis (Karanastasis, 1958: 124), which is to be attributed not to the process of fronting per se, but to the general tendency of [z], of whatever provenance, to become affricate in this dialect (6):

- (6) [jito'ɲa] SMG vs. [ndzito'ɲa] Astypalaia ‘neighbourhood’
 [av'ji] SMG vs. [a'vndzi] Astypalaia ‘dawn’
 [xor'jo] SMG vs. [xor'dzo] Astypalaia ‘village’
 ['zaxari] SMG vs. ['ndzaxari] Astypalaia ‘sugar’

It is remarkable that the neighbouring dialects of the island of Ikaria (and adjacent Fournoi) and the Asia Minor mainland town of Livissi, only display velar fronting of type 1, although they share many characteristic traits with the South-Eastern dialect group (Dodecanese and Cyprus).

Fronting in Crete has been exhaustively investigated by Kontosopoulos (1969), followed by Granqvist (1997). According to these studies, three fronting zones can be distinguished in Crete: The mountain areas of the prefecture of Chania show only the Standard Modern Greek type 1. The rest of the prefecture of Chania and the prefecture of Rethymnon display fronting of type 3a, affecting all four consonants. The eastern part of the prefecture of Rethymnon, and the prefectures of Herakleion and Lasithi, i.e. roughly speaking the eastern part of Crete, show fronting of type 3b, i.e. alveolo-palatal. Of particular interest is the observation that a gradual change from type 3b to 3a is shown by those who tend to reject the more pronounced phonetic characteristics of their dialect (e.g. Cretans settled in Athens), irrespective of geographical provenance (Kontosopoulos, 1969: 33). It is possible therefore that, diachronically speaking, there might have been an evolution from 3b to 3a, from east to west. As far as the historical sources are concerned, the fronting of the Cretan dialect is known since the 16th c. thanks to an observation preserved in Martinus Crusius’ *Turcograecia* (1584) (7). However, it is not recorded in literary and non-literary sources at least for another century, and of course it is not possible to draw conclusions concerning the precise realisation based on Early Modern graphematic evidence.

¹³ Kontosopoulos (1998: 167-168). The phenomenon of fronting in Patmos, which must have been of type 3b, seems to be extinct nowadays (Papadopoulou 2005: 181-182).

(7) *Ait [...] Graecis etiam aliis, δυνόητον esse Cretensem linguam: sicuti Belgicam, nobis Germanis. Derideri a cultoribus, qui corruptius loquantur. Τζοπέλους (inquit) vocamus eos: qui semper utuntur τζ, sive τζίντα: id est talibus verbis, quae sic incipient, aut desinunt: ut pro πρόβατο, προβατάτζι: άρνί άρνάτζο, seu άρνάτσο.* (Martinus Crusius, *Turcograecia*, Basel 1584, p. 209).

“[Stamatius Donatus] says... that the Cretan language is incomprehensible to the other Greeks, as is the Belgian language to us Germans. The inhabitants laugh at those who speak in a corrupt way. We call them (he says) *τζοπέλους*, since they always use *τζ*, or *τζίντα*, that is, words which begin or end with this sound. For example, instead of *πρόβατο* and *άρνί*, they say *προβατάτζι*, *άρνάτζο* or *άρνάτσο*”.

The Asia Minor dialect of Alikarnassos, now spoken by refugees settled in Crete, presents variation between types 2 (in the country) and 4 (in the city) (Kontosopoulos, 2003: 285).

The Asia Minor Greek-speaking areas also show various types of fronting. Type 2 appears in the Ophitic sub-dialect of Pontic (Oikonomidis, 1958: 90-92) although it seems to have been lost in the speech of refugees settled in mainland Greece (Revythiadou and Spyropoulos, 2009: 39) and to be retained only in the Muslim Greek-speakers who remained in Ophis. The dialect of Marioupolis in Ukraine does not seem to present fronting beyond type 1; sporadic fronting of type 2 is recorded only for specific lexical items, namely the conjunction *και* [tʃe] and the negation *ούκ* > *ουκί* > *τσι* [tʃi] (Symeonidis and Tombaidis, 1999: 30-32)¹⁴. It must be noted that Pontic is one of the rare exceptions to the implicational hierarchy given above, which stipulates that the palatalisation of velar fricatives presupposes the palatalisation of velar stops. Specifically, all varieties of Pontic, and Mariupolitan as well, display fronting of the fricative [x] > [ʃ], but do not display fronting of [k] and [g] beyond type 1 (with the exception of course of Ophitic).

Similarly, in Cappadocia the phenomenon of type 2 fronting of stops appears as a spreading innovation at the time of the investigation of the dialect by Dawkins (1916: 78), only for the area of Misti¹⁵. However, fronting of [x] appears in many more areas, such as Potamia, Sylata, Anakou, Fertakena, again violating the palatalization hierarchy. Wholesale type 2 fronting of stops and fricatives is recorded for the dialect of Farasa (Dawkins, 1916: 70-71, 154.)

The easternmost area presenting velar fronting is Cyprus. According to the relevant recent literature, which includes several phonetic and phonological studies (e.g. Newton, 1972a; Arvaniti, 1999, 2010), velar fronting in Cyprus is of type 2 (palato-alveolar), involving the consonants [k g x]. Older studies (Kontosopoulos, 1969-1970: 100) mention the presence of other types of fronting in the island, although always as a minority variant. Type 2 was always the dominant type, appearing in the capital and in most areas of the island, but type 3a was recorded in the westernmost areas and in isolated settlements, while in areas around the cities of Morfou, Keryneia, Ammochostos and Larnaka an “intermediate” fronting type, probably 3b, was also recorded. Velar fronting in Cyprus is attested at least since the 15th c. As in the case of Crete, the testimony of Martinus Crusius is important: he transcribes the pronunciation of his

¹⁴ Through the book’s index one may locate one further instance of fronting, namely the locative adverb *κει* > *τσι* [tʃi] it is therefore possible that the phenomenon is more extensive than usually described.

¹⁵ Recent fieldwork shows that it has now become regular in the Misti dialect spoken by descendants of refugees in mainland Greece (Petros Karatsareas, personal communication).

Cypriot informant, Stamatis Donatos, with <τσχ>, which seems to point to a type 2 palato-alveolar realization (7).

The overview of velar fronting in the Modern Greek dialects attempted above can be viewed schematically in the following table (table 1):

	2				3a/3b				4			
	ʃ	ɟʒ	f	ʒ	ç/ tɕ	ɟ/dz	ɕ	z	ts	dz	s	z
Corsica	●	●										
S. Italy	●											
N. Epirus	○	○	○	○								
Peloponnese	○	○			○	○	○	○				
Mani					○	○	○	○	○	○		
Tsakonia					○	○			●	●		
Stereia Ellas	○	○			?	?			○	○		
Euboea	○	○			○	○			○	○		
Skyros									●	●		
Lesvos, Aivali	○	○							○	○		
Limnos									○	○		
Tenedos									●	●		
Chios					○	○	○		○	○		
Cyclades	○	○	○		○	○	○	○	○	○		○
Crete					○	○	○					
Dodecanese	○	○			○	○	○	○	○	○	○	○
Alikarnassos	○	○							○	○	○	
Pontos	○		●									
Mariupolitan			●									
Cappadocia	○		○									
Cyprus	●	●	●									

Table 1. Distribution of fronting types

- = the realization occurs throughout the area
- = the realization occurs in parts of the area

4 Conclusions

This overview of velar fronting in all Greek-speaking areas cannot close with definite conclusions, but only with an urgent call for fieldwork, employing state of the art phonetic instrumentality, while the Modern Greek dialects are still “alive”. On the basis of the extant bibliographic data and past recordings it is possible to make some generalizations of a

typological character (frequency or rarity of a type, verification or falsification of universals) or some historical observations (process of spread or attrition, dating of its appearance). It is hoped that it has also been possible to provide a more detailed cartography of the phenomenon than those available up to now. However, to take things a step further, it is necessary to collect primary data of higher quality and greater quantity.

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