GRAPHEMIC REPRESENTATION OF TEXT-MESSAGING: ALPHABET-CHOICE AND CODE-SWITCHES IN GREEK SMS

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Abstract

The aim of this study is to investigate the choice of alphabetical encoding in Greek text-messaging (or Short Message Service, SMS). The analysis will be based on a corpus of 447 text-messages exchanged among participants who belong to the age group of 'youth' (15-25 years old) and live in Athens (Greece). The data analysis will show that the standard practice of writing with Greek characters represents the norm in Greek SMS. The script norm will be discussed in relation to the medium's technological affordances and the participants' stance towards new media. The analysis will then focus on non-standard graphemic choices, such as the use of both, Greek and Roman, alphabets in the encoding of single messages. It will be demonstrated that such marked choices are employed as a means of indexing the participants' affiliation with global popular cultures and enhancing expressivity in a medium of reduced paralinguistic cues.

Keywords: Text-messaging; Computer-mediated communication research; Graphemic practices; Writing norms; Global-local.

1. Introduction

Mobile phones have secured a place among the global cultural commodities of our era. The variety of languages available in the menu of a common mobile handset is indicative of the wide array of cultures which have received this global device. The omnipresence of mobile telephony worldwide is also evident in Katz and Aakhus' (2002) collective volume of studies on mobile phone use in a number of countries, including Finland, Korea, United States, Bulgaria, Israel, etc. However, the reception and adoption of a global commodity has often been a cause for scepticism among local cultures. In other words, the interplay between global and local has been at times assumed to bring along cultural homogeneity and at times considered to enhance cultural and linguistic diversity (cf. Giddens 2002).

The representation of linguistic diversity on the Internet has mainly preoccupied the strand of Computer-Mediated Communication (henceforth, CMC) research pertaining to globalization theory (cf. Androutsopoulos 2006: 428-430). In fact, current research on CMC (e.g. Danet and Herring 2007, 2003; Hawisher and Selfe 2000) has shown that the English-saturated Internet landscape of the 1990s gradually evolves into a more linguistically diverse space. Furthermore, the status of English as a lingua franca has also been the focus of sociolinguistic inquiry outside the purview of CMC studies.

For instance, Androutsopoulos (2004) and Pennycook (2003) have explored the use of English in other local environments, such as German printed music fanzines and Japanese hip-hop lyrics and sleeve notes, respectively. Such research suggests that English, the supposedly 'world language', has by no means a single or fixed, dominant, position in situations of language contact. In line with a "globalization-sensitive" sociolinguistics, English is argued to be "globally contextualized in very different ways" (Coupland 2003: 469).

The discussion of linguistic diversity in computer-mediated environments has also foregrounded the use of graphemic resources, such as alphabetical characters, for the encoding of non-Roman scripts. The basic ASCII code,[2] employed for the composition and communication of digital texts online (cf. Danet 2001: 195-196), precludes the use of non-Roman alphabetical characters. This technological constraint resulted in the digital practice of transliterating native scripts into Roman. Online Romanization (Danet and Herring 2007: 10) has been documented in a variety of languages, including Punjabi (Paolillo 1996), Greek (Androutsopoulos 2000; Tseliga 2007) and Arabic (Palfreyman and al Khalil 2003). As evidenced in the studies above, the absence of established transliteration norms has left ample scope for ad-hoc improvisations by participants in computer-mediated interaction. However, the script in which a language is encoded is not only related to the technological affordances of written/digital media but also "often bears political baggage" (Baron 2000: 3). Such ideological stances towards writing and transliteration have been manifest in popular debates over the online use of Romanized script, which has often been portrayed as a form of "typographic imperialism" from the West (Danet & Herring 2007: 9).

The aim of this study is to investigate the choice of alphabetical encoding in Greek text-messaging (or Short Message Service, henceforth SMS). In terms of the medium's technological affordances, alphabet-choice can happen at two levels: First, Roman or Greek characters are selected as the default option of encoding text and, then, users can choose to shift between alphabets in the process of keying in a message. The data analysis will show that the standard practice of writing with Greek characters represents the norm in Greek SMS. I will argue that this script norm is facilitated by the technological medium, which was soon accommodated to the needs of the local market. The discussion will then focus on non-standard graphemic choices which override the need for brevity and speed in text-messaging. My findings will reveal that such marked graphemic choices are employed as a means of indexing the participants' affiliation with global popular cultures and enhancing expressivity in a medium of reduced paralinguistic cues.

2. The alphabet in context

The study of script in Greek text-messaging invokes both technological and socio-ideological issues. In other words, the choice of alphabet in mediated interaction is related to the various alphabetical options provided by the technological system and the ideological load that these options may have for the members of the specific culture. As for the relationship between language and technology, this paper assumes that language

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[2]   ASCII (or American Standard Code for Information Interchange) refers to the set of basic codes for encoding and communicating computer keyboard characters.

choices in technologically-mediated environments are made "in the context of what the technology does and does not make possible, or 'afford'" (Hutchby and Barnett 2005: 148). The notion of "technological affordance" (Hutchby 2001: 26-33) implies that language use and social interaction in technologically-mediated communication is not determined by the characteristics of the medium. However, Hutchby's position does not strip away the material aspect of technology, since the users' observable appropriations of the medium are 'afforded' by the specific technological characteristics. Therefore, the medium's specificities involved in the composition of a text-message need to be considered. More specifically, users of text-messaging type the messages on their mobiles by pressing keys on the phone's keypad. With regard to the history of mobile telephony in Greece, while the first mobile handsets, launched in the Greek market, did not enable the use of Greek fonts, the choice of Greek menus and characters is a common fixture among today's phones. In particular, each key represents a set of Greek and Roman characters whose sequence depends on the default language pre-selected on the phone's menu. Thus, the technological system affords the use of both alphabets as resources for writing text-messages.

However, the choice of script cannot be examined in isolation of the cultural and socio-ideological context in which the specific text-messages are exchanged. Bloomfield's (1933: 21) view of writing as "merely a way of recording language by means of visible mark" has been highly contested by more socio-culturally oriented approaches to literacy. In particular, the "opposition view" (Baron 2000: 21), which presupposed a dichotomy between speech/orality and writing/literacy, has been severely criticized by sociolinguists, like Tannen (1982) and Biber (1988), and social anthropologists, such as Street (1984) and Besnier (1993). Although the alphabet provides us with a writing system for representing the sounds of speech, it is something beyond a mere transcription system. As Kress (2003: 30) points out, socio-cultural meanings attach to this "transcription system" and the alphabet may acquire a symbolic status for specific nations and cultures.

In the context of Greece, the symbolic value of the alphabet as a writing system has been even more accentuated and ideologically loaded.[3] The Greek alphabet is estimated to have been in use since the eighth century BC. However, Greek came to be established as a national language no sooner than the mid-nineteenth century AD, when the modern Greek state was officially recognised (1832). At the time, one of the main arguments against those who were challenging the existence and surviving of the newly-formed state was Greek language itself. Although there were long and heated debates regarding the establishment of either "*Katharevousa*", closer to ancient Greek and used in administration and education, or "*Demotic*", closer to the everyday language spoken by the majority of the population, the Greek writing system had not undergone significant changes since ancient times. Therefore, although inseparable from the Greek language, the Greek alphabet better served as a national symbol. As mentioned by Sebba (2003: 152), writing aspects of a national language create "an ideal site for ideological struggle", given their highly visible nature and their association with the physical image of language.

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[3] Cf. "Greek language and alphabet as ideological signs" in Koutsogiannis and Mitsikopoulou (2003: 4-5).

3. Greeklish and text-messaging

The term "*Greeklish*" has been employed to denote the written representation of Greek with Roman characters in computer-mediated environments. It first appeared as an alternative script of Greek in electronic media, where the basic ASCII code afforded the encoding of Roman characters only (cf. Danet 2001: 196). Its main feature is spelling variation regarding the transliteration of Greek characters with Roman equivalents; a "phonetic system" of transliterating orients to the acoustic/sound quality of the original Greek letters, e.g. use of 'o' for both Greek *o* and *ω*, whereas an "orthographic" one focuses on the visual representation of Greek characters with Roman equivalents, e.g. use of 'w' for the Greek *ω* (cf. Androutsopoulos 2000: 75-76; Koutsogiannis and Mitsikopoulou 2003: 3).

The rather troubled history of Greece, manifest in the conflict between *Katharevousa* and *Demotic* Greek, has resulted in a "prolonged press routine" of publishing professional and lay people's comments on language matters (Moschonas 2001). It is, thus, not in the least surprising that the choice of script in text-messaging among young people has been a recurrent theme among popular discourses in Greece. According to newspaper representations, it is popularly assumed that users of text-messaging prefer Roman to Greek characters in their writing (cf. Spilioti 2004). The use of Greeklish is attributed to properties of the technological medium itself which facilitate the use of the Roman alphabet. Subscribing to the dominant school-based, definition of literacy (Barton 1994: 4), the relevant publications juxtapose Roman-alphabeted Greek with the standard writing of Greek with Greek characters. At the same time, they associate this phenomenon with the dominant status of English in technological environments. The adoption of global cultural commodities, such as mobile phones or Internet, from local cultures, like Greece, is regarded in the most pessimistic publications as a dangerous process. More specifically, the surviving of local, national, languages is claimed to be threatened by the dominant status of English as a lingua franca. Within this context, the infiltration of Roman characters, along with English words and expressions, into Greek is one among an array of negative effects of this 'alarming' process.

In addition to popular claims on the use of Greeklish, a hypothesis that would predict a preference for Roman-alphabeted Greek in text-messaging among young people can be formulated on the basis of academic studies on Greeklish. Androutsopoulos (2000: 85) concludes that, despite technological advances affording the use of Greek characters, email users in Greece and abroad continue to write their messages in the Roman alphabet. In fact, 51% of the Greeks living in Greece and participating in Androutsopoulos' (ibid. 80) study claim that they employ Greeklish in most or all of their emails. Furthermore, in the context of computer-mediated environments, Greeklish "tends to become a script register among young people" (Koutsogiannis and Mitsikopoulou, 2003: 3). Although text-messaging is not a computer medium per se, the increasing merge of mobile and computer technologies has blurred the boundaries between new forms of mediated communication.[4] As a result, SMS has been repeatedly studied and positioned within the context of CMC (cf.

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[4] As Georgakopoulou (2006: 550) points out, the time is ripe for "a broader framework of technologically-mediated communication research", which focuses on different media and their cross-fertilisations.

Anis 2007; Thurlow 2006). In line with this strand of research, this paper will explore the use of Roman- (and/or Greek-) alphabeted script in Greek text-messaging.

4. Description of study

My study involves two phases of data collection: a) a questionnaire survey, and b) three case-studies, focusing on the interaction between the members of specific groups. The questionnaire survey, carried out at the initial stage of my research (September 2003), resembles the method employed by Thurlow (2003) in one of the first sociolinguistic studies of English text-messaging. In particular, the questionnaires, distributed to young people from fifteen to twenty-five years old in Athens, have gathered information about the participants' patterns of mobile phone use and resulted in a sample of 159 text-messages, selected and transcribed by the informants themselves. Although this data-set offers valuable insights into the type of script which my participants report or select to present as their preferred choice, the questionnaire survey leaves out other contextual information relevant to the exploration of how and why this graphemic choice may vary in their actual everyday exchanges of text-messages.

On the other hand, such contextual information can be gathered from my case-studies which concern a systematic record of the text-messages exchanged between the members of three groups of friends in different time periods; from late August to mid October 2003 and from mid January to mid March 2004. At the same time, my data collection has involved observing and interviewing each participant, along with recording their text-exchanges. In particular, a sample of 288 messages has been gathered by means of a technique which takes advantage of the technological affordances of mobile technology. In other words, the establishment of infrared connectivity between the participants' phones and a portable computer allowed me to transfer directly the messages to the computer's hard disk and, thus, retain the digital form of the original texts minimizing the possibility of error during transcription. As for the distribution of this data set across the three groups participating in the study, it should be noted that the text-exchanges between the five female friends – eighteen to twenty years old – of the first group represent the main sample (200 text-messages). The messages collected from the other two case-studies have been employed as supplementary data; I have gathered 45 messages exchanged between two, seventeen year old, female friends and 43 texts exchanged between three, twenty year old, male friends. However, the relationship between the members of each group is rather close and intimate, enhanced by a long and dense interactional history which moves across different mediated and face-to-face encounters. As a result, we should bear in mind that the messages under consideration belong to the realm of personal and private communication.[5]

5. Analysis

5.1. *Greek*

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[5] In order to protect the anonymity and privacy of the participants, the real names have been submitted by pseudonyms.

In terms of technological specificities, mobile phones in Greece afford the use of both, Greek and Roman, characters for the encoding of text-messages. As a result, we can suspect that each individual text-message can be written in one of the following options: (i) with Greek characters exclusively, (ii) with Roman characters exclusively, and (iii) with mixed characters, the latter created from shifting between alphabets. The question, then, arises as to which of the above options is chosen by users of text-messaging in Greece. The quantitative analysis of the total sample suggests that the Greek alphabet is the preferred choice for the encoding of Greek text-messaging.[6] More specifically, as shown in figure 1, the Greek alphabet is used exclusively in 80.3% (n: 359) of the total messages, in contrast to 11% (n: 49) involving text-messages written with Roman characters only and a rest 8.7% (n: 39) where both alphabets are used within single messages.
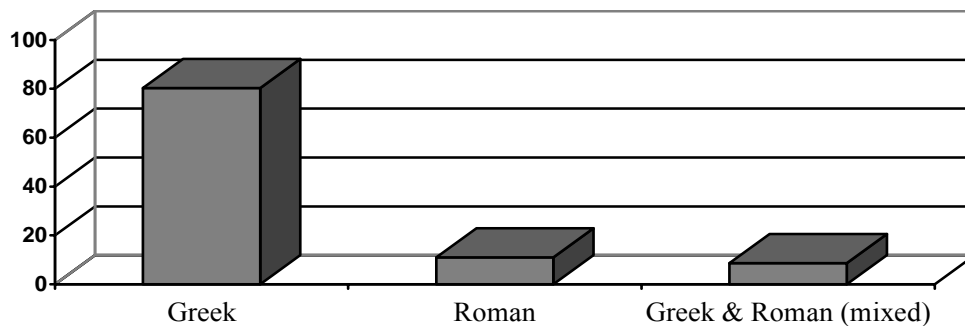

Figure 1. Distribution of text-messages according to the choice of alphabet

Although figure 1 indicates that the Greek alphabet prevails in the encoding of individual text-messages, it cannot shed light on whether the preference for Greek and/or Roman is consistent for individual users. However, table 1 provides a more detailed map of how my findings are distributed between the two data-sets and, most importantly, among the members of each case-study. As evidenced in the sample of sustained text(ing)-interactions among the members of the three groups, the use of the one or the other alphabet is a consistent choice for each participant. In particular, eight[7] out of the ten participants in my case-studies consistently use the Greek alphabet as the default option in the encoding of their messages.

SAMPLES			GREEK	ROMAN	MIXED	Total
Questionnaires			119	15	25	159
Case-Studies	Case-study I	Fay	81	0	2	83
		Nana	54	0	3	57
		Melina	0	5	0	5
		Anna	0	29	0	29

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[6] Other studies on Greek text-messaging, e.g. Lambrinidi and Depasta (2004), Vrouzi and Panzari (2002), have also noticed the prevalence of Greek characters in Greek text-messaging. However, their findings are reported as a mere observation and do not appear grounded on a detailed, quantitative and/or qualitative, analysis of alphabetical encoding in their data.

[7] Namely, Fay, Nana, Dimitra, Elisavet, Maria, Nikos, Manos, and Kostas.

		Dimitra	24	0	2	26
	Case-study II	Elisavet	20	0	1	21
		Maria	23	0	1	24
	Case-study III	Kostas	19	0	2	21
		Nikos	11	0	1	12
		Manos	8	0	2	10
Total number of messages			359	49	39	447

Table 1: Distribution of text-messages according to the choice of alphabet

The wide use of Greek characters in text-messaging is, of course, related to the rapid technological advances of the medium itself. At the time of data collection, most mobile handsets allowed users to pre-select Greek as the default language of the phone's menu. As suggested in CMC literature (cf. Androutsopoulos 2006: 428), the availability of localized software and fonts is related to the market volume of national cultures. As a result, the fact that mobile telephone operator companies rushed into equipping mobile handsets with Greek fonts is indicative of the popularity of mobile phones among the Greeks. At the same time, it is an attempt to transform a globally diffused medium into a more user-friendly device that appeals to the 'locals'. A prerequisite to market the product as a 'local' communication device would be to afford users keying in their messages in the standard Greek script. This technological affordance – not available at the first steps of mobile telephony in Greece – appears to be picked up by a significant majority of users.

5.2. *Greeklish*

Despite the prevalence of Greek-alphabeted text-messages, the use of Roman characters is not altogether absent in my data. As shown in table 1, two participants in my case-studies prefer Greeklish[8] as the default script of their messages. This section attempts to explore the reasons for which the specific participants make this graphemic choice. Drawing on fieldwork observation and interview data, the following discussion reveals that the same, marked, graphemic choice may index different contextual parameters and/or interpersonal needs for each participant.

More specifically, the technological system and its affordances play an important role in Anna's exclusive use of Greeklish over the period of data collection. Her old technology mobile phone did not facilitate the encoding with Greek characters. In other words, it was time-consuming to key in messages in Greek, since the Greek characters appeared on the screen after the Roman ones. According to my fieldnotes, when she upgraded to a phone supporting Greek as the default language, she immediately stopped using Greeklish. At the same time, she turned to the Greek version

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[8] The term "Greeklish" for the Romanised Greek script is widely used in Greece. It has also been repeatedly employed by my participants both in the interviews and other instances of in-group interaction. Therefore, it represents an emic category, which is relevant to my participants' understandings of writing in technologically-mediated environments.

of predictive text (T9) input, because "it saved her time". [9] Evidently, time and speed in texting appeared extremely important for Anna. The above changes in the participant's use of text-messaging, which coincide with developments in mobile technology, indicate that both users of text-messaging and designers of mobile telephony orient to speed in typing (cf. Thurlow 2003: 13).

However, the choice of alphabet does not depend solely on whether the technological system facilitates the use of the one or the other alphabet. Evidence from another member of the same group indicates that graphemic choices in text-messaging may be attributed to other, non-technological, parameters. For instance, Melina continued to use Greeklish, even after having upgraded her phone and, thus, been able to text with Greek characters. In her interview, she claims that her use of Greeklish allows the other members of the group to readily identify her as the sender of a message, even before checking the system's display of caller ID. [10] In other words, the specific graphemic choice has been found to operate as a cue – or a "visual signature" (cf. Jaffe 2000: 509) – for self-identification within the peer group. Therefore, as Thurlow (2003: 20) tentatively argues, users of text-messaging employ the graphemic representation of a text as a resource for self-presentation and identification.

Furthermore, the choice of Greeklish as the default script has been found in my data to relate with the participants' use of and stance towards other digital technologies. For example, Melina associated her writing in text-messaging with the way she composed a text on a computer. In particular, the use of Roman characters was presented in her interview (see extract 1) as one among a series of practices that had been transposed from computer-writing to text-messaging.

Extract 1 (Melina, interview, September 2003)

Γράφω όπως γράφω στους υπολογιστές. Πέρα που χρησιμοποιώ αγγλικά γράμματα για να γράψω ελληνικό κείμενο, αφήνω πάντα κενό μετά το θαυμαστικό ή το κόμμα ή σημεία στίξης, όπως θα' κανα στο κομπιούτερ.

'I text like I type on a computer. In addition to using English fonts to write a Greek text, I always leave a space after an exclamation mark or a comma or punctuation marks, like I would on a computer.'

As mentioned above, the claim that Greeklish, originating in text-based CMC, has infiltrated youth's text-messaging has been very popular in newspaper and media articles. However, Melina who does not employ the standard Greek script and draws a parallel between texting and computers represents the participant sending the least messages in the specific group (cf. table 1). On the other hand, my findings suggest that the unmarked, Greek, script is employed not only by the majority of my participants but also among those who represent the most keen users of text-messaging (i.e. Fay and Nana). Therefore, despite the technological affiliation of text-messaging to digital writing, picked up in the practices of computer literate texters, the unmarked choice of script in the new medium does not follow the norms of writing in computer-mediated environments. However, the documented use of either Greek or Roman characters in encoding Greek text-messages indicates that the norms in the new medium are not yet established. As Danet (2001: 363) argues, "in a period of normative ambiguity, people

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[9] This is a translated extract from her interview.

[10] Mobile phones are equipped with a system that identifies by default the phone number of incoming calls or messages and, in turn, displays it on the phone's screen.

drew on their experiences" in order to juggle the constraints of norms in pre-existing related genres and the challenges put forward in the new mediated context. Indeed, the above analysis has revealed that the choice of script in Greek text-messaging is linked with the participants' previous experience of writing in digital media.

5.3. *Greek and Roman*

The focus of analysis in this section shifts from the use of either Greek or Roman as the default alphabet in text-messaging to the co-occurrence of both alphabets within individual messages. As mentioned earlier, the technological system of SMS affords the typing of both Greek and Roman characters. However, keying in Roman characters while Greek language has been pre-selected, or vice versa, requires more keystrokes and, thus, more time. Considering that users of text-messaging orient to speed in typing, as suggested in the section above, we would expect participants to avoid shifting between alphabets. Indeed, only 39 text-messages – that is, 8.7% – of the total sample have been found encoded with mixed, Greek and Roman, characters (cf. table 1). With regard to the pattern of alphabet-alternation in my data, my analysis suggests that the Greek alphabet represents the main, script, frame within which switches to Roman characters take place. As evident in table 1, the text-messages encoded with mixed characters are sent only by the participants in my case-studies who have chosen the Greek alphabet as default. At the same time, message (1), originating in my questionnaire sample, illustrates that switches to Roman operate at the level of individual words (e.g. *U.F.O*) or phrases which occur in otherwise Greek-encoded messages. Therefore, the Greek alphabet is still employed as the default script even among the messages encoded with both Greek and Roman alphabets.

(1)   *Αν δεις σήμερα το βράδυ να μπαίνει απ' το παράθυρό σου μια λαμπερή ακτίδα του φεγγαριού, μην την διώξεις....... U.F.O είναι, ήρθαν να σε πάρουν πίσω στην πατρίδα. ΧΙ!ΧΙ!!!*

> 'If you see a ray of bright moonlight coming through your window tonight, don't send it away……. It's a U.F.O, they've come to take you back home. HE!HE!!!'

Questionnaire sample, female, 15-yr-old

Despite the relatively small number of such messages in my data, it is interesting to look more closely at these switches to Roman, which override the participants' concerns about speed in typing. In other words, why do my participants make a graphemic choice which is not facilitated by the technological system and is, thus, effort- and time-consuming? Before addressing this issue, table 2 presents the categories of Roman-alphabeted words/phrases found in the sample of Greek default text-messages, along with their frequency of occurrence.

Categories of Roman-alphabeted words in Greek default texts	Instances of occurrence (n: 34)	
	n	%
Names e.g. *Alex, Davidoff, Playstation, Manchester, Passagio, Banjie* [sic] *Jumping, Chimera, Mac* (for	9	26.5

'McDonalds')		
Cultural borrowings e.g. *studio, make up, U.F.O., SOS, SMS, PIN,* (web) *site*	8	23.5
Conversational routines e.g. *hello, hi, bye, cu, adios, sorry, pleeeese* [sic], *thanks, man, chief, ok*	13	38.2
Intertextual references e.g. lyrics, punch lines from advertisements, web addresses	4	11.8

Table 2. Types and frequency of Roman-alphabeted words in Greek default texts

As shown in table 2, switches to the Roman alphabet have been found to occur in the encoding of proper nouns borrowed from a foreign language, such as names of persons (*Alex*), computer games (*Playstation*), cities (*Manchester*), coffee shops (*Passagio*), etc. In addition, common nouns borrowed from English are also encoded with Roman characters. This category includes mainly cultural borrowings, i.e. nouns denoting new objects and concepts, which have been integrated into Greek at different historical periods, such as *studio*, *SMS*, (web) *site*, etc. The third category of Roman-alphabeted items within Greek-default messages concerns English conversational routines. According to Coulmas' (1981: 67-69 in Androutsopoulos 2004: 6-8) use of the term, the descriptive category of "verbal routines" refers to fixed linguistic forms which are repeatedly employed in a particular context. In other words, these items develop through repetition a rather fixed relationship between form and context and are gradually considered as the most appropriate to use in specific situations by the members of a community or culture. Such conversational routines, mainly borrowed from English, concern (i) opening and closing greetings, such as 'hello', 'hi', 'bye', 'cu', (ii) expressive speech acts, like 'sorry', 'please', 'thanks', 'miss you', (iii) terms of address, e.g. 'man', 'chief', and (iv) the discourse marker 'ok'. Finally, the Roman alphabet is employed for the encoding of intertextual references, originating from a language and/or culture other than Greek. These references include English quotations, such as lyrics from popular songs, punch lines from advertisements, and web addresses.

5.3.1. Alphabet-switch and code-insertion phenomena

The categories of Roman-alphabeted words and phrases outlined above can be placed along a continuum which ranges from rather conventional borrowings to more locally salient code-switching. The distinction between code-switching and borrowings has been a largely controversial issue in studies of spoken bilingual interaction. For instance, Reyes (1976: 184) proposes the term "borrowing" in order to distinguish the use of single-lexeme items of another language from phrases or larger constituents, which instantiate cases of code-switching. In other studies (e.g. Haugen 1973: 521), the criterion for separating code-switching and borrowing has been the degree of assimilation into the recipient language. According to this criterion, code-switching includes both single, "unassimilated", words and larger discourse units, whereas borrowings refer to words that have been integrated into the phonological, morphological or syntactic system of the recipient language (cf. Poplack 1981). However, recent studies (e.g. Myers-Scotton 1993; Auer 1998) have shown that the

degree of assimilation or the syntactic structure (i.e. single-lexeme or larger constituent) of a borrowed item are not adequate criteria for distinguishing between the two phenomena. In fact, clear-cut boundaries between borrowings and code-switching are not easy to be drawn.

Furthermore, Auer (1998: 13) points out that what counts as a 'linguistic code' is not easily defined, especially if we wish to take into account the participants' and not the linguists' definition of the term. Theoretically speaking, the co-occurrence of two distinct languages, from the linguist's point of view, does not represent a priori a case of juxtaposition between the two codes. According to Auer (ibid. 16), language contact situations span along a continuum from code-switching to a mixed code. On the one end of the continuum, code-switching, in its strong sense, refers to language contact cases where a preference for one language-of-interaction is locally challenged and the ultimate switch to another code foregrounds contextual aspects, such as a change in the participants' stance, their ongoing activities, etc. At the opposite end of the spectrum, code-mixing is conceptualised more like "a language variety or style" (Androutsopoulos 2004: 3) which involves the frequent use of borrowings or other language materials from another linguistic code, excluding even the equivalent forms in the language frame of interaction. At the same time, research on bilingual code-switching has brought about another distinction between alternation and insertion. The phenomenon of code-alternation refers to the use of two codes in interaction where both languages equally alternate one another. On the other hand, insertion presupposes the use of a "matrix language" (Myers-Scotton 1995) providing a frame in which linguistic items from another language can be embedded.

The above list of Roman-encoded words and phrases in my data reveals that the Roman alphabet is preferred for writing linguistic items borrowed from another language, primarily English, and embedded into the matrix/frame language of Greek. Therefore, I argue that the graphemic switch indexes the insertion of foreign language material into Greek text-messaging. Similar insertion phenomena have been documented in other monolingual mediated discourse, such as German music magazines and online guest-books (cf. Androutsopoulos 2004). The process of insertion in Androutsopoulos' data does not co-occur with alphabet switches of the type described above, since the Roman script can be employed for the standard writing of English and German alike. However, the examples quoted in the specific article (ibid.) suggest that other devices, such as capitalization, are employed as a means of graphemically marking and emphasizing English phrases embedded in the German texts. On the other hand, evidence for the co-occurrence of alphabet switches to Roman with insertion of English words is provided by studies of written interaction in languages with non-Roman standard script. For example, Kataoka (1997: 117) has identified a similar phenomenon ("importation") in letter-writing among young Japanese females. The following section will attempt to discuss the graphemic switch to Roman in relation to the co-occurring insertion phenomena and argue why this practice appears in mediated interaction among young people in local cultures, such as Greece.

5.3.2. *From borrowings to code-switching*

As suggested above, the Roman-encoded items, embedded into Greek default text-messages, span along a continuum between established borrowings and intertextual

code-switching. Starting from the one end of the continuum, conventional borrowings refer to (more or less) standard loans which are widely established and accepted within a particular community. The incorporation of borrowed items in the dictionaries of a national language is indicative of a higher degree of standardization. In other words, these borrowings are not only widely accepted but also legitimized by the 'educated' community of the specific culture. Their high degree of integration is also manifest in the fact that they are syntactically incorporated into the sentence structure and, at times, written in the standard Greek script. For example, the same participant (i.e. Manos from the third case-study) interchangeably uses Roman or Greek for the encoding of the same loan, 'studio'; cf. messages (2) and (3).

(2)   *ΡΕ ΣΥ ΦΙΛΑΡΑΚΙ ΘΑ ΡΘΕΙΣ ΣΗΜΕΡΑ STUDIO?ΜΠΟΡΕΙΣ ΝΑ ΡΘΕΙΣ ΜΕ 218?*
      'Hey you mate will you pop by the studio today? You can take the 218 [bus][11]?'
      Case-study III, participants: Manos and Kostas, day: 22/09/03 – texter: Manos, time: 10.47

(3)   *ΕΛΑ ΡΕ..Ο ΜΑΝΟΣ ΕΙΜΑΙ.ΜΠΟΡΕΙΣ ΤΟ ΣΑΒΒΑΤΟ ΝΑ ΕΡΘΕΙΣ ΝΑ ΠΑΜΕ ΣΤΟΥΝΤΙΟ;*
      'Hey.. This is Manos. Can you come on Saturday to go [to the] studio?'
      Case-study III, participants: Manos and Kostas, day: 15/09/03 – texter: Manos, time: 11.57

The data analysis suggests that the graphemic assimilation (or transliteration) of a loan correlates with the point of their integration into Greek. In particular, borrowed items, which denote objects or concepts introduced to the Greek culture in the past, are encoded in the standard Greek script, e.g. *ράδιο* 'radio' , *σινεμά* 'cinema', *βαλς* 'waltz', etc.[12] On the other hand, the Roman alphabet is the preferred choice for the encoding of cultural borrowings, such as (web) *site* (e.g. message 4), which have been recently integrated into Greek together with the adoption of mobile phones and internet. This observation suggests that the variant Greek script of Roman-alphabeted *borrowings* emerges as they gradually become more conventionalized in the receiving community. At the same time, we should bear in mind that although the use of Roman fonts requires an extra keystroke for the alphabet switch, the insertion of these English words saves the participants both time and effort. In other words, the specific borrowings are considerably shorter than their Greek counterparts, such as *μήνυμα* (cf. *SMS*), *ιστοσελίδα* (cf. *site*), *κωδικός* (cf. *PIN*). Therefore, the insertion of these cultural borrowings orients to issues of brevity and speed in typing, which have been found relevant in the composition of text-messages.

(4)   *ΣΟΥ ΣΤΕΛΝΩ ΤΟ site ΤΟΥ ΒΑΤΙΚΑΝΟΥ ΓΙΑ ΤΗΝ ΚΑΠΕΛΑΣΙΞΤΙΝΑ: (http:/mv.vatican.va/3~EN/pages/MV-visite.html).ΦΙΛΙΑ ΠΟΛΛΑ*

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[11] Words in square brackets are not included in the original text.

[12] The remaining instances of long-established borrowings in my sample are: *μπάσκετ* 'basket ball', *τουίντ* 'tweed', *ντράμερ* 'drummer', *στάνταρ* 'standard', *κέικ* 'cake', *ροζ* (from French *rose*, meaning 'pink'), *ρεπό* (from French *repos*, meaning 'time off'), *πάσο* (from Italian *passo*, meaning 'pass').

'I   send   you   the   Vatican's   site   for   Capella   Sixtina:
(http:/mv.vatican.va/3~EN/pages/MV-visite.html). Many kisses'
Questionnaire sample, female, 22-yr-old

The category of names, borrowed from a foreign language and written with
Roman characters in my data, is also placed towards the "borrowing" end of the
continuum. As evident in the list of names, quoted in table 2, Roman characters are
primarily employed for the encoding of English names denoting commodities and
corporations that have been recently integrated in the Greek culture, such as *MAC* for
'McDonalds' in message (5). On the other hand, the Greek alphabet is preferred for
writing non-English names, such as the football player *ΧΑΤΖΙΜΕΧΜΕΤΟΒΙΤΣ* (e.g.
message 6), or the name of a trendy coffee shop at the centre of Athens, *ΝΤΑΚΑΠΟ*,
borrowed from the Italian musical term 'Da Capo'.

(5)   *ΜΕΛΙΝΑΚΙ ΝΑ ΠΟΥΜΕ ΚΑΛΥΤΕΡΑ 10.30 ΣΤΟ ΣΥΝΤΑΓΜΑ ΕΞΩ ΑΠΟ ΤΑ MAC*
        ΓΙΑΤΙ ΕΧΩ ΚΑΤΙ ΔΟΥΛΕΙΕΣ ΠΡΩΙ?Ε?ΑΝ ΝΑΙ ΚΑΝΕ ΑΝΑΠ!
            '[little] Melina let's say better 10.30 outside MAC[sic] in Syntagma [square]
            cause I got some errands to do in the morning? Eh? If it's ok missed call [me]!'
        Case-study I, participants: Melina and Dimitra, day: 26/09/03 – texter: Dimitra, time:
        20.07

(6)   *ΠΕΣ ΚΑΝΕΝΑΝ ΠΑΙΚΤΗ ΣΤΟ cm4?Ο ΧΑΤΖΙΜΕΧΜΕΤΟΒΙΤΣ ΠΩΣ ΓΡΑΦΕΤΑΙ?*
            'Name a player in cm4? How is Chatzimechmetovits spelled?'
        Questionnaire sample, male, 14-yr-old

The above finding suggests that my participants are more familiar with writing
English in the original Roman script rather than names originating in other languages.
For example, message (6), incorporating a foreign name in the Greek script illustrates
this point. The texter's ignorance of the spelling of a non-English name of a foreign
football player is actually the purpose of sending this text. This preference for encoding
English names with Roman characters is related to the prevalence of English, as a
lingua franca, in a globalized world. In other words, young people today are more
exposed to English written texts which circulate around the world through global media
and corporations. Therefore, I argue that names borrowed from English are more likely
to retain their graphemic form in their adoption by local languages. At the same time,
the participants can index their affiliation with global (popular) culture by employing
the original Roman script.
    The third category of Roman-encoded words, i.e. conversational routines,
includes linguistic items which span along the continuum from borrowings to code-
switching. As Androutsopoulos (2004: 7-8) points out, such borrowed routines illustrate
more clearly "the transition from switching to borrowing, i.e. the process in which
salient items gradually become routinized". The salience of borrowed items which are
placed towards the code-switching end of the continuum is manifest in their position
within the specific texts. As shown in message (7), punctuation is employed by my
participants in order to separate such routines, like the greetings *hi* and *bye*, from the
rest of the text. At the same time, such routines have been found at the beginning and/or
the end of a text. Thus, in terms of their position, these borrowed items frame the
messages under consideration (cf. code-switching as framing in Androutsopoulos 2004:
5).

(7) *Hi! ΤΙ ΚΑΝΕΙΣ; ΧΑΘΗΚΑΜΕ!!! ΠΑΡΕ ΤΗΛ. ΝΑ ΚΑΝΟΝΙΣΟΥΜΕ. ΦΙΛΑΚΙΑ! ΒΥΕ!!!*
      'Hi! How are you? Long time no see!!! Give [me] a ring to arrange. [little]
      Kisses! Bye!!!'
Questionnaire sample, male, 17-yr-old

The transition from switching to *borrowing* is evident in the use of 'sorry',
which has been found to be written either with Roman (n: 1), e.g. *Sorry*, or with Greek
(n:3), e.g. *ΣΟΡΙ* (see 8) / *ΣΟΡΥ* characters. We observe that 'sorry' is the only word
among the borrowings of this category that appears transliterated in the messages of
different participants. As mentioned above, standard loan words, such as 'studio', etc.
have undergone the same assimilation. Therefore, although 'sorry' has not yet been
codified as a loan in the dictionaries of standard Modern Greek, its use in terms of
graphemic encoding is similar to the ways in which loan words are written. This
observation, along with the increasingly wider use of the word in media publications
and everyday language, implies that 'sorry' is in the process of becoming a standard
loan word in Greek.

(8) *ΟΜΟΡΦΟΥΚΑ ΜΟΥ ΝΑ ΠΑΡΩ Η ΚΟΙΜΑΣΑΙ?ΣΟΡΙ ΠΟΥ ΑΡΓΗΣΑ ΑΛΛΑ
ΕΜΠΛΕΞΑ!*
      'My [little] beauty can I call [you] or are you asleep? Sorry for being late but
      I've been caught up!'
Case-study I, participants: Fay and Nana, day: 29/02/04 – texter: Fay, time: 00.01

Moreover, the discourse marker 'OK', among the conversational routines quoted
in table 2, occupies the "borrowing" end of the continuum. The specific marker is
codified in the dictionaries of standard Modern Greek and can be found in the data
either with Roman or Greek characters. Its transliterated form *Οκ* is manifest in message
(9), where both upper- and lower-case letters are used. This graphemic assimilation
coincides with the loan's phonological adaptation into Modern Greek: 'OK' is uttered
either as /ocei/ following the rules for palatalisation of velars in Modern Greek or as
/ok/.[13] As noted by Sankoff (2002: 647), "the influence of native phonological patterns
on foreign lexical items borrowed into a language" has been widely documented in
research on lexical borrowing. The above suggest that graphemic and phonological
assimilation can be inter-related and that their simultaneous appearance is indicative of
the loan's greater integration into the receiving language.

(9) *Οκ, κάτω από το φροντί. Φιλιά μαρία*
      'OK, [let's meet] outside school. Kisses maria'
Case-study II, participants: Elisavet and Maria, day: 31/01/04 – texter: Matia, time:
00.16

I have argued so far that the conversational routines are encoded only in the
Roman alphabet, except for the more established borrowings 'ok' and 'sorry'. In
particular, the Greek encoding of these loans has been attributed to their level of

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[13] The latter /ok/ represents a more Greek-oriented pronunciation, which distances from the
original English /okei/. At the same time, it is more closely associated with the reading of its transliterated
form *οκ* in Modern Greek.

integration into the receiving language. But are there less conventional borrowings from English which are also written with Greek characters? And, what might their function be in the given context, provided that we cannot account for their transliteration in terms of standard borrowing processes? Although this phenomenon is very rare, it is not altogether absent from the data. In fact, evidence for the existence of the opposite to Greeklish phenomenon, i.e. Greek-alphabeted English, which is largely overlooked by popular and academic discourse, is important.

The case of Greek-alphabeted English occurs in the text-messages collected from my case-studies. More specifically, I find such instances in the messages exchanged between Fay and Nana. These two female participants in case-study I are very good friends, but they do not have the chance to see each other very often, since they live in different cities (Athens and Patras), because of their studies. As a result, we find bursts of emotion in the messages exchanged while they are away from each other. In particular, the expression 'miss you' is found in 28 of their messages. In most cases (22 in total), the Greek form for miss you, i.e. *ΜΟΥ ΛΕΙΠΕΙΣ*, is employed towards the closing of the message. However, Fay coins the expression *ΜΙΘ ΓΙΟΥ* /miθ ju/ in message (10) for the first time in my sample of their text-exchanges (08/10/03). The specific expression, which represents the English 'miss you', appears graphemically assimilated into Greek. However, this graphemic assimilation differs from the similar case of 'sorry'/*ΣΟΡΥ*. First of all, *ΜΙΘ ΓΙΟΥ* is used by only one participant Fay (n: 5) and once by her friend, Nana, whereas *ΣΟΡΥ/ ΣΟΡΙ* is employed by more participants in different data sets. Moreover, the transliterated form *ΜΙΘ ΓΙΟΥ* triggers a reading, which would be utterly like /miθ ju/, deviating from the original English expression 'miss you' /mis ju/.

(10)   *ΚΟΛΛΗΤΟΥΚΑ ΜΟΥ ΤΙ ΚΑΝΕΙΣ?ΑΣΕ Η ΦΙΛΕΝΑΔΑ ΣΟΥ ΕΙΝΑΙ ΣΙΝΑΧΟΜΕΝΗ ΧΑΛΙΑ!ΕΠΙΣΗΣ ΡΙΧΝΕΙ ΚΑΡΕΚΛΕΣ!ΤΙΙ ΚΑΝΕΙΘ?ΜΙΘ ΓΙΟΥ :-)*
         My [little] best friend How are you! Well your friend[14] has a bloody cold! It's raining cats and dogs as well! Hoow are you? Miss you :-)
   Case-study I, participants: Fay and Nana, day: 08/10/03 – texter: Fay, time: 16.37

As shown above (see message 10), the expression under investigation is locally situated between a smiley :-) and a 'how-are-you' expression *ΤΙΙ ΚΑΝΕΙΘ*. The expressive, emotional, tone of the message is graphemically enacted by the repetition of the letter 'I'in *ΤΙΙ*, signalling an elongation of the sound /i/, and the use of an emoticon (smiling face). At the same time, we note that the 'how-are-you' expression *τι κάνεις* appears modified: The final sibilant /s/ has been substituted by the fricative /θ/. Ferguson (1964: 105) has argued that phonological modification of consonants (sibilants in particular) is a common feature of 'baby talk'[15] in different languages. In the same vein, the transliterated form *ΜΙΘ ΓΙΟΥ* follows the same pattern of substituting the final sibilant with a fricative, i.e. /θ/. The graphemic assimilation of the English expression 'miss you' indexes phonological patterns of Greek baby talk. In the specific context, baby talk is employed as a resource for self-presentation; invoking, thus, the informal and affective context of care-giving and reinforcing the participants'

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[14] Here, Fay refers to herself as *Η ΦΙΛΕΝΑΔΑ ΣΟΥ* 'your friend'.
[15] According to Ferguson (1964: 103) 'baby talk' concerns "any special form of language which is regarded by a speech community as being primarily appropriate for talking to young children and which is generally regarded as not the normal adult use of language".

intimate relationship. The alliteration created by the co-occurrence of the two expressions (/ti kaniθ/ and /miθ ju/) enhances the expressivity of the message. In sum, we have argued that the English expression 'miss you' appears appropriated within the context of a Greek default message. This process of appropriation of the original English expression involves its graphemic assimilation into the Greek alphabet, which, at the same time, indexes Greek 'baby talk' phonological patterns for expressive reasons.

The final category of quotations, brought into the specific messages from another language or culture, is placed towards the '*code-switching*' end of the continuum. This type of "intertextual switching" (Androutsopoulos 2004: 5) indexes the incorporation of other words into the specific messages. We should point out that these references are separated from the rest of the message by graphemic symbols (punctuation marks), such as quotation marks (e.g. in 11), colons (11), and suspension points. I argue that, in addition to the above graphemic symbols, the use of Roman characters functions as an additional graphemic cue, indexing the non-Greek origin of the specific phrases and foregrounding their content. Furthermore, the (con)text in which these phrases originate is meta-linguistically specified within the message itself; note *τραγούδι*, i.e. 'song' (see message 11).

(11)   "You are my girl,my supergirl" λεει το καταθλιπτικο αυτο τραγουδι που ακουω τωρα που εχω ξενερωσει και συνεχιζει: "And supergirls don't cry". Να το θυμασαι αυτο!
    'The depressing song I'm listening to now that I'm sober says "You are my girl,my supergirl" and goes on: "And supergirls don't cry". [You should] remember this!'
    Questionnaire sample, male 20-yr-old

6. Concluding discussion

This paper has explored the extent to which the practice of alphabetical encoding in Greek text-messaging conforms to or deviates from writing norms. In the light of the above, the analysis of the data suggests that the standard use of writing Greek in the Greek alphabet is the unmarked choice among the users of text-messaging. Text-messages encoded with Greek characters by default have been found to outnumber those written in the Roman alphabet. Such empirical evidence does not support the popular stereotype according to which young users of text-messaging in Greece prefer the use of Roman characters for writing their messages.

However, the digital, non-standard, practice of Roman-alphabeted Greek (cf. Androutsopoulos 2000; Koutsogiannis & Mitsikopoulou 2003) is not altogether absent from my data. Evidence from my case-studies has revealed that specific participants employ Greeklish, i.e. Roman-alphabeted Greek, in their messages. However, the reasons that might encourage the use of this non-standard practice differ from participant to participant. The data analysis has shown that these reasons span from the technological limitations of the medium per se to the participants' stance towards new technologies, in general. Regarding the position of text-messaging among computer media, the analysis of the data implies that it is not clearly conceived as a computer medium by my participants. The more keen users of text-messaging are not well acquainted with other new media and refuse to employ the popular script in computer-

mediated environments, i.e. Greeklish. On the other hand, the participants who appear more technologically adept and prefer Greeklish are the ones who rarely send text-messages.

Considering that the technological affordances make both alphabets available, text-messages can also be written with mixed, Greek and Roman, characters. The analysis of the specific sample has shown that Greek constitutes the main language and alphabet frame in which switches to the Roman alphabet - and, to some extent, to English – occur. More specifically, it has been demonstrated that users of text-messaging employ this graphemic switch in order to index code-insertional phenomena, such as the incorporation of non-Greek names, cultural borrowings, English conversational routines, and intertextual references within Greek default messages. The encoding of such material in my data co-varies with the point of their integration into Greek, frequency of use and the culture in which these phrases originate. For example, cultural borrowings which have been recently integrated into Greek from (Anglo-)American popular culture have been found encoded with Roman characters. As a result, the graphemic mode is employed as a resource for indexing the participants' affiliation with current global popular cultures (cf. Androutsopoulos 2004). In other words, the incorporation of foreign language material with Roman characters in Greek text-messaging brings along the symbolic meaning of cultural affiliation to global youth cultures.

Nevertheless, the graphemic assimilation of foreign language material in Greek default texts is also documented in my data. It has been shown that Greek characters are employed for the encoding of standardized cultural borrowings and English conversational routines which are common in everyday spoken interaction (e.g. 'sorry' and 'ok'). At the same time, the phenomenon of 'Greek-alphabeted English' is also manifest in my participants' creative appropriations of other borrowings. In such cases, the graphemic assimilation co-occurs with phonological manipulations of the original English word and serves as a means of accentuating expressivity in a medium of reduced paralinguistic cues. In line with previous literature on text-based CMC (e.g. Georgakopoulou 2001), my findings reveal that such cues are embedded in the text by means of marked, code-centred, choices which depart from the generic norms and, thus, function as foregrounding mechanisms.

As argued in previous studies (e.g. Street 1993; Baynham 2004), literacy is not an "autonomous variable" (Street 1993: 5) independent of the specific purposes for which it is employed in particular contexts of use. In fact, the above discussion suggests that writing in text-messaging, along with personal letters, private diaries, email, and e-chat, falls under the "partly regulated orthographic regimes" (cf. Sebba 2003: 154-158), where norms of "school literacies" co-occur with non-standard practices. Although CMC research has resurged the interest in the study of typography in online social interaction (cf. Danet 2001), there is still ample scope for research on the use of non-verbal, graphemic, choices as resources in written interaction. The present study of alphabetical encoding in Greek SMS is intended as a contribution to the advancing of our understanding of graphemic representation in technologically-mediated environments.

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