# THE SIGNIFICANCE OF ENGLISH GRAPHOPHONEMIC RELATIONSHIPS FOR ENGLISH LOANWORD INTEGRATION INTO MODERN GREEK\*

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In this work we propose to investigate the extent and the ways in which the graphemic systems of Modern Greek (MG) and English may affect the phonological integration of English loanwords into MG. Our assumption, which we will seek to validate and document through our data, is that the graphemic systems of both MG and English may prove of particular importance in loanward integration processes. In order to be in a position to appreciate the relevance of the graphic substance, as opposed to the sound aspect, of the above mentioned languages to the phenomenon of loanword integration, we propose to start our investigation by looking into the systematic make up of the graphemic systems and the graphophonemic correspondences of MG, as the recipient language, and English, as the donor language. Our investigation will be conducted on a synchronic as well as on a diachronic level. This will have to be done in such areas of the graphophonemic systems under examination where the rate of sound change seems to be different from that of the written symbol, an element especially characteristic of English.

A language is primarily realised through a system of sounds. These sounds, peculiar to each language, are signs that have especially been devised for this purpose. The sound signs or symbols are in turn visually realised through graphic representations which constitute the written part of a language. Between the concepts of a language and their auditory materialisation there exists no logical relationship; nor does there exist any relationship of the kind between the auditory expression of a language and its written counterpart. Thus, the 'signifié' and the 'signifiant' that is used to express it, have been connected in a way that cannot be logically explained and for this reason the signs that make language accessible to the senses have been called 'arbitrary'<sup>1</sup> or 'conventional'<sup>2</sup>. Whether we view them as 'arbitrary' or as 'conventional'<sup>3</sup> the fact remains that these signs constitute the material expression of language. In this sense, while in MG  $<\sigma\kappa i \lambda \circ \varsigma$ , /skilos/ is used to denote man's best friend, in English we find <dog>, /dvg/, in German <Hund>, /hund/, in French <chien>, /jiẽ/, in Italian

<sup>\*</sup> I wish to aknowledge here my debt to Professor D. Theophanopoulou-Kontou for her constructive comments.

<sup>1.</sup> F. De Saussure 1964: 65-70.

<sup>2.</sup> G. Babiniotis 1980: 104-8.

<sup>3.</sup> See B. Motsiou 1982, Salonica 1985: 299.

<cane>, /kane/, and so on. Of course, one could argue that the signs of language are not altogether arbitrary: we can see this in cases of onomatopoeia where the sign of the sound is an imitation of natural sounds, i.e. the sound of the waves, the cry of a rooster, and so on, or interjections. However, not all languages use the same sounds to express the respective onomatopoeic or exclamatory words<sup>4</sup>.

The graphic representation of a language is an important element in the language. though research seems to be rather limited in this field<sup>5</sup>. It is not surprising that language in its written form is usually considered as a more significant mode of expression compared to the spoken form. Saussure<sup>6</sup> ascribes this to the following reasons: 1) «...the graphic form of words strikes us as being something permanent and stable to account for the unity of language throughout time». 2) Visual impressions tend to be more «sharp» and «lasting» than aural ones. 3) The literary production and its prestige have added to the impression of the supremacy of the written form of language over the aural one. 4) The disagreements «between language and orthography» always seem to end with a victory of the latter over the former. Of the above reasons 1) and 3) seem to be the strongest in the argument. We would only add that a great deal of the importance attached to the written expression of language comes from the fact that all our transactions with the state and the authorities are valid only if they are in writing. In this case «written» has come to be thought of as synonymous to «valid». In which case it is not surprising that «scripta» not only «manent» but also «permanent» in the popular belief<sup>7</sup>. Arguing about the matter, however, is beyond the scope of the present work. Suffice it only to say that both the sound system as well as the written system of a language are complementary to each other.

In the case of MG and English we have two typical systems of aural and visual representations. Both languages possess a number of graphemes which correspond to a set of phonemes. What is of particular interest for our study is the fact that a 1:1 correspondence between phonemes and graphemes is rather rare. The asymmetry that is noted is in favour of the graphemes and both languages display an interesting variety especially in the case of vowels. The reasons why this should be so are various. They may be ascribed either to the origins of the particular language, or its evolution or both.

The Greek language, the written documents of which go back to 1400 B. C., has a rich history and a long tradition. Actually, it was the Greeks who developed the alphabet by adapting the phoenician one to their needs and by borrowing written symbols for their vowels from other graphic systems. Until that time the vowels were part of a composite graphic representation analysable into consonants and vowels<sup>8</sup>. The graphic representation of Greek has not suffered considerable changes since the beginning of the fourth century B.C. after the Ionic alphabet was adopted during the archonship of Eucleides<sup>9</sup>. MG, as a term, is used «to locate the language temporally» in contrast to

9. See W. S. Allen 1987: 8-11.

<sup>4.</sup> See also Babiniotis 1980: 113-4.

<sup>5.</sup> G. Babiniotis 1972: 287.

<sup>6.</sup> F. De Saussure 1964: 25.

<sup>7.</sup> However, though the 'written' word seems to prevail in this kind of transactions, societies largely abide by the so-called 'unwritten laws' a term that refers to self-evident and eternal truths pertaining to mores and customs.

<sup>8.</sup> E. Alarchos Llorach 1968: 544.

Ancient Greek. It is usually meant to refer to the period «that has begun after the 16th

or 17th century, though the language of the Medieval period is in many ways indistinguishable from MG proper»<sup>10</sup>.

Quite recently a few modifications, in the direction of simplification, have been proposed. A reduction of the accent marks from two to one<sup>11</sup> and an abolition of the breathings<sup>12</sup> have been effected while identical double consonants have become subject to replacement by single ones. However, there is still a great deal of fluctuation; this simplification of identical consonants, for instance, seems to have caused some deliberation concerning those clusters which are actually a product of morphophonemic operations such as compounding. Thus, in cases such as  $<\mu\mu>$ ,  $<\nu\nu>$ ,  $<\lambda\lambda>$ , and the like, as in /emonos/,  $\langle \hat{\epsilon} \mu \mu 0 v 0 c \rangle$ , /enomos/,  $\langle \hat{\epsilon} v v 0 \mu 0 c \rangle$ , /siloyos/,  $\langle \sigma \hat{\nu} \lambda 0 \gamma 0 c \rangle$ , etc. we note the use of the old graphic pattern rather than the proposed one \*<\u00e9\u00e9, \* $\langle \epsilon v \circ \mu \circ \zeta \rangle$ , \* $\langle \sigma \upsilon \lambda \circ \gamma \circ \zeta \rangle$ . Another change that seems to have been easier to apply is that concerning the grapheme  $\langle v \rangle$  in the combinations  $\langle \varepsilon v \rangle$ ,  $/ef/ \sim /ev/$  and  $<\alpha v$ >, /af/ ~ /av/, relics of the diphthongs /au/, /eu/,  $<\alpha v$ >,  $<\epsilon v$ > of classical Greek<sup>13</sup>. Here  $\langle v \rangle$  has been substituted by the relevant consonant  $\langle \phi \rangle$  or  $\langle \beta \rangle$  in accordance with the phonetic environment in certain lexemes. Thus, we may come across  $\langle \alpha\beta\gamma\delta \rangle$ ,  $\langle avgo \rangle$  rather than  $\langle \alpha \upsilon\gamma\delta \rangle$  but not \* $\langle \alpha\phi\tau\delta\zeta \rangle$ , \* $\langle \alpha\phi\tau\eta \rangle$ , \* $\langle \alpha$ φτό> for <auτός>, <auτή>, <auτό>, \*<εφτυχής>, \*<έβλογος>, \*<έφκολος>, \* $\langle \epsilon\beta\rho\omega\sigma\tauoc \rangle$  etc. for  $\langle \epsilon\upsilon\tau\upsilon\chi\eta c \rangle$ ,  $\langle \epsilon\upsilon\lambda\upsilon\gamma\upsilon c \rangle$ ,  $\langle \epsilon\upsilon\kappa\upsilon\lambda\upsilon c \rangle$ ,  $\langle \epsilon\upsilon\rho\omega\sigma\tau\upsilon c \rangle$ , etc. This shows that reform may not be so easy in practice as it seems to be in theory.

The equivalences of phonemes and graphemes in English are perhaps more interesting than those of MG from the point of view of variety in graphic representation of the phonemes. Indeed, if one feels overcome by MG orthography and a lack of balance in the equivalences<sup>14</sup>, one may wish to get an idea of what these equivalences are like in English. The great variety of graphic symbols and their combinations are due to the origins of the language as well as to its evolution.

The origins of English go back to the time before the Roman conquest when the native Celts, farming peoples, used an 'undeveloped vernacular'. The Roman invasion displaced this language and Latin became the official language. In the 5th century A.D. the Germanic invasion took place and the Anglo-Saxons imposed their own vernacular which was later to develop into English. The north was occupied by the Scandinavians who continued the Germanic expansion well into the eighth century. The vernacular the Scandinavians spoke was similar to that of the Anglo-Saxons. After the Norman Conquest in 1066 the French was to be «a living force in England». Further cultural contacts with the French of Paris raised the French language to a new prestige. Present day

<sup>10.</sup> B. D. Joseph - I. Philippaki-Warburton 1987: 1-2.

Originally the accents were three, the acute accent ('), the grave accent ('), and the circumflex accent ('). The grave accent however, before being dropped altogether from the graphic system had been restricted to printed texts. F. Householder - K. Kazazis - A. Koutsoudas 1964: 17.

<sup>12.</sup> The «rough» (') and «smooth» (') breathings had stopped carrying any functional load a long time before they were disposed of.

<sup>13.</sup> See W. S. Allen 1987: 79-80.

<sup>14.</sup> Concern with this or that 'problematic' aspect of MG spelling seems to have become almost an obsession with some people who, time and again, cry out for reform.

English is a standard that emerged as a national language as late as the fourteenth century  $A.D.^{15}$ 

All these elements contribute to the idiosyncratic graphemic system of English together with the various changes that have taken place since the 14th century, such as the Great Vowel Shift that was completed by the 16th century, mergers and splits, and coalescences. More recent changes are the so-called «prestige innovations» such as dropping or/and insertion of /r/, etc.<sup>16</sup>. The written language, as we know it today, was largely fixed by Dr. Johnson's Dictionary in 1755. It is, indeed, very interesting that, though reforms have been proposed such as would bring about a better correspondence between sound and spelling, no changes have been effected in this direction and the spelling of English remains notoriously complex.

The relationship between phonemes and graphemes can be of various types. According to Alarchos Llorach<sup>17</sup>, whose categorisation is one of the few that exist in the field<sup>18</sup>, we may have a monovalent, a polyvalent or a polygraphic relationship. These relationships may be realised through the following variations:

#### 1. Monovalent relationship:

- a. A phoneme corresponds to a grapheme consisting of one written symbol.
- b. A phoneme corresponds to a grapheme consisting of one or more written symbols, identical or not, that may be of a continuous or a non-continuous form.
- c. A phonemic cluster of two corresponds to a grapheme of one written symbol.
- d. A phonemic cluster of two or more phonemes corresponds to a grapheme consisting of two or more written symbols in continuous or non-continuous form.

#### 2. Polyvalent relationship:

a. A grapheme corresponds to one or more phonemes.

#### 3. Polygraphic relationship:

a. A phoneme corresponds to one or more graphemes.

The above relationships can be illustrated with instances from both MG and English (E) as follows:

Monovalent relationship										
a.	MG	/a/	<a></a>	/kala/	<καλά>					
	E This relationship is not realised in E.									
b.	(i) MG	/m/	$<\mu>$	/lima/	<λήμμα>					
	.,	/i/	<01>	/mira/	<μοίρα>					
	Ε	/i:/	<ee></ee>	/si:/	<see></see>					
		/i:/	<ea></ea>	/si:/	<sea></sea>					

<sup>15.</sup> D. Leith 1983: 7.

17. E. Alarchos Llorach 1968: 513-568.

 See also D. Bolinger 1946: 333-340; Pulgram E. 1951: 15-20; Pulgram E. 1965: 208-224; Uldall H. 1944: 11-16; Vachek J. 1944-49: 86-93; Vachek J. 1959: 7-38.

<sup>16.</sup> An comprehensive account of the above phenomena may be found in J. C. Wells, 1985: 184-238.

(ii) MG This relationship is not realised in MG.

	E	/i:/	<ea+e></ea+e>	> /li:v/	<leave></leave>
c.	MG	/ks/	<٤>	/ksilo/	<ξύλο>
				/foks/	
	$\sim$ NC				at realized in

- d. (i) MG This relationship is not realised in MG. E /hw/ <wh> /hwait/ <white>
  - (ii) This relationship is not realised in either language.

### Polyvalent relationship

a.	MG	/i/	<v></v>	/miti/	<μύτη>
		/f/	<v></v>	/afti/	<αυτή>
		/v/	<β>	/avyi/	<αυγή>
	Ε	/i:/	<e></e>	/bi:/	<bee></bee>
		/i/	<e></e>	/priti/	<pretty></pretty>
		/e/	<e></e>	/bet/	<bet></bet>

#### Polygraphic relationship

	1				
a.	MG	/i/	$<\iota>$	/lipos/	<λίπος>
		/i/	<η>	/kipos/	<κήπος>
		/i/	<u></u>	/tipos/	<τύπος>
		/i/	<ει>	/ekinos/	<εκείνος>
	Ε	/n/	< n >	/net/	<net></net>
		/n/	<nn $>$	/mæn∂/	<manner></manner>
		/n/	<pn></pn>	/nju:məʊnɪə/	<pneumonia></pneumonia>
		/n/	<kn></kn>	/nait/	<knight></knight>

The introduction of a loanword into a language may by effected via the written or the oral channel. In both cases its rendition in the new language system, that is, the approximation or fidelity to the model, is dependent upon two basic factors. As a first, and foremost, we may say, factor must be considered the phonological system of the language that receives the loan; the possibilities this system may provide and the 'stretchability' it may be disposed to go into in accommodating the loan, are of paramount importance in the process of integration. A second factor is the bilingual person that first introduces the loan: the better his knowledge of the language of origin the closer to the source will the rendering of the loanword be. These two factors are in constant interplay, usually in compliance with one another<sup>19</sup>. This is true of any language contact situation.

The loanwords of MG from English have come and continue to come into MG through the above mentioned channels: either through texts of various kinds, i.e. the press, texts that accompany certain imported items - mostly descriptions and directions for use and the like - or through the oral mass media and the occasional personal

<sup>19.</sup> Sometimes we may note conflict between the native phonological system and the feeling of the bilingual person that a loan has to approximate the model as much as possible. In such cases we note the introduction of foreign phonemes into the native phonemic inventory as when loans such as /sokolata/, /zaketa/, etc. are rendered as /Jokolata/, /zaketa/, etc. This may also be due to social reasons.

contact. Where the contact is through the oral channel a marked similarity with the word model in the source language is to be noted<sup>20</sup>. Where, however, the loan has come into MG through the written channel, the visual representation, that is, the graphic substance of the word model, functions as a strong influence in the integration processes as can be seen in the integrated loan itself. Especially in cases where the degree of bilingualism of the person involved in the introduction process is particularly low, this influence is decisive, as the graphemic values are taken for phonemic ones. Thus, the integration of such loans is effected through an interpretation of the graphemes of the language donor that is not consistent with the parallel phonemic system; rather, it is an interpretation based on personal impressions dependent upon the degree of knowledge of the source language. We may refer to this interpretation in contrast to the interpretation effected within the language donor, which may be referred to as 'primary graphemic interpretation'<sup>21</sup>.

In order to understand the mechanism of integration operant in graphemic reinterpretation it would be advisable to investigate the situation in the language of origin of the loans, i.e. English. As we have already mentioned in the formulation of our assumption, we may view the English language, its phonological system in particular, under two perspectives: the diachronic and the synchronic one. Our viewing of the English phonological system from the diachronic point of view will reveal, among others, two important characteristics, one peculiar to vowel phonemes and graphemes and another concerning consonant phonemes and the corresponding graphemes.

The vowels of English have undergone a number of changes regarding both quality and quantity in the course of a few centuries. These changes, at least one of which can be termed a 'major sound change'<sup>22</sup>, - the Great Vowel Shift - are of the following types: they are mergers, splits, monophthonging and diphthonging. The Great Vowel Shift caused a number of open, low vowels to shift to closer, higher positions. This was diagrammed by Jespersen<sup>23</sup> as follows:

Close	i:	~			u:
	Ť	K		K	1
Half Close	e:		ei	ou	0:
Half Open	ε:				Ť
Hall Open	с.				э:
Open	1				
Open	a:				

- 20. We have shown the various options that exist in the phonemic and phonetic integration of English loanwords into MG in what we believe to be a comprehensive model. A.-M. Aposto-lou-Panara, 1985.
- 21. A.-M. Apostolou-Panara 1985: 169 ff.
- 22. R. Lass 1976: 1-135. Also D. Leith 1983: 145-149.
- 23. Cited from J. C. Wells 1985: 185.

Accordingly, we may assume that Chaucer's text sounded differently than Shakespeare's did. Mergers, that is the homophoning of distinct vowel sounds, followed and they caused two vowels to be collapsed into one, such as /a:/ and /ɛi/ into /ɛ:/. In this sense the vowel in pane>, /pa:n/ in Middle English, shifted into the position of /ɛ:/ as in cpain>, /pɛ:n/, a result of the shift from Middle English /ɛi/. Later /ɛ:/ was to develop into /e:/ and finally into the diphthong /ei/. This merger may be schematically presented as follows:

Merger

$$\frac{\alpha}{\epsilon_{\rm i}} / \epsilon_{\rm i} / \rightarrow / \epsilon_{\rm i} / \rightarrow / \epsilon_{\rm i} / \rightarrow / \epsilon_{\rm i} / \epsilon_{\rm i$$

A split is a phenomenon that causes one sound to develop into two divergent directions. Such a split is that of Middle English short /u/ into /o/ and /a/, as in <good, foot>, /god/, /fot/, and in <blood, love>. /blad/, /lav/.

/e1/

Monophthonging caused certain diphthongal sounds to contract into monophthongs. Such is the case of  $/a_0/$  in the late Middle English <law, ball, taught> which eventually converged into  $/_0:/$ .

On the other hand, Middle English monophthongs such as those in <house, mouth>, /hu:s, mu: $\theta$ / diphthongize into / $\alpha$ u/, i.e. /h $\alpha$ us, mau $\theta$ /.

The above mentioned phenomena that occurred at some time or other in the evolution of the English language caused both qualitative and quantitative changes in the vowel system.

We may turn our attention now to the consonants of English. One of the most important phonetic phenomena that mostly affects the consonant sounds of a language is that of elision. Elision is called the silencing of a sound. This, in English, is distinguished into two kinds: it is 'diachronic' and 'synchronic'. Diachronic elision is the elision that has taken place in the past, at a given moment in the evolution of the English language. It is otherwise known as 'historical elision'. The consonant sounds that have been affected by historical elision are the following: /t, l, r, w, p, k, g, b/.

/t/ has become silent in an environment of /s+t/ in medial position as in the instances <Christmas>, <listen>, <fasten>, <castle>, and the like, which correspond to the following phonemic sequences: /krisməs/, /lisn/, /fa:sn/, /ka:sl/.

/l/ has become silent in certain environments such as in a sequence of /l+k/, /l+m/, /l+f/ as in <walk, calm, half>, etc. but this is not without exceptions<sup>24</sup>. Examples of this are, <falcon, realm, elf>, /f o:lkan, relm, elf/. Loss of /l/ also occurred in <could, would, should> in early Modern English.

/r/ became silent in post-vocalic positions after the 16th century. Examples of this loss are, <card, poor, doctor>, / ka:d, pull, dp ktd/.

/w/ was lost in the unaccented terminations of place names such as Chiswick, Greenwich, etc.<sup>25</sup> which became /t $\int \iota z\iota k$ , grinidz/, etc.

One important case that has to be mentioned here is that of final /g/ in a post-nasal position, that is in the cluster /ng/. From this cluster, that was phonetically realised as

<sup>24.</sup> A. C. Gimson 1989: 205.

<sup>25.</sup> A. C. Gimson 1989: 217-218.

[ $\eta$ g] due to point assimilation, /g/ came to be deleted some time during the 17th century, causing [ $\eta$ ], the velar allophone of /n/, to rise to phonemic status<sup>26</sup>. This has been termed 'NG coalescence'. This is of particular interest for our discussion here as a considerable number of nominalised participles ending in - ing have come into MG via borrowing. In initial position and in a combination with /n/, /g/, as well as /p/ and /k/ have been elided. Elision has also affected /b/ in final position after /m/ and initial /p/ before /t/. Instances of the above are the following: <gnome>, /naum/, <know>, /nau/, <pneumatic>, /njumætik/, <comb>, /kaum/, <ptempedator, /ta:migan/.

On a synchronic plane we find that elision is also active to a degree. Synchronic elision, which is also known as 'contextual elision', is the kind of elision that may take place when certain phonetic environments render it necessary. Such phonetic environments may be a sequence of three or more consonants. In this case one or two consonants of the sequence will have to be elided. This mostly affects the alveolar plosive stops /t,d/ when occurring between two other stops. Such sequences are /ktp/, /ptb/, /bdd/, /bdt/, etc. as in liked Peter>, /laktpi:td/, [lakpi:td], <stopped behind>, /stoptbihaund/, [stdpbihaund], <rubbed down>, /rdbddduon/, [rdbdduon], <robbed Tom>, /robdtom/, [robtom], etc. In a sequence of more than three consonants, as in <next spring>, /nekstsprin/, [nekssprin] the alreolar stop is elided. Contextual elision may aslo occur when two identical consonant phonemes are in sequence, in which case they are pronounced as one, as in the previous example. This is called 'simplification'.

Of the vowels, the central half-open phoneme  $/\partial/$ , is usually affected by contextual elision, as in the cases <button>,  $/b\Lambda t\partial n/$ ,  $[b\Lambda t\eta]$ , <tunnel>,  $/t\Lambda n\partial l/$   $[t\Lambda \eta]$ , etc. The underlying principle of contextual elision, as well as of other phonetic phenomena, is that of economy of movement, or ease of articulation. Elision of the sort is permissible only so long as it does not disturb the phonemic distinctions, thus impeding intelligibility. In this sense we see two forces at work in the English phonological system, one that encourages innovation in the name of the least effort and another that presses for the preservation of equilibrium in the system.

The above mentioned phenomena are inextricably connected whith the issue of loan integration we are raising here, that of graphemic reinterpretation.

The graphemes of English appear as single graphs or combinations of graphs with allographic possibilities. The great variety is, of course, due to the diachronic reasons as we have already mentioned. It is indeed notable that the orthography of English has changed so little despite the important phonetic changes that occurred in a rather short time. Typical of this is the case of historical elision which has left the graphemes of the elided phonemes totally unaffected. Actually, a very low percentage of the English lexicon can be said to offer itself to analogical interpretation of graphemic values into phonemic ones. This means that very little guesswork is allowed as far as the pronunciation of English is concerned as, quite often, what seems identical, at first glance, may not prove to be so at closer examination. Instances of this may easily be derived from

<sup>26.</sup> According to the taxonomic-phonemic view there «clearly is a phoneme  $/\eta$ /, since there is no other phoneme to which the sound type  $[\eta]$  can plausibly be assigned. The generativist, however, usually argues that there is no underlying phoneme  $/\eta$ / and that all surface occurrences of  $[\eta]$  are derived by rule from underlying /n or /ng/». J. C. Wells 1985: 61.

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any pronouncing dictionary. A few references will suffice to make the point! (a) may stand for /ei, /æ/, / $\epsilon_{\theta}$ /, /1/, / $\theta$ /, as in the words <late>, <cat>, <care>, <image>, <about>, not to mention the combinations with other graphemes that allow for two or even three more interpretations. This is certainly idiosyncratic, but it is a fact that allows of no deviations as far as primary interpretation goes, as is the case of learning English as a foreign language. In the case of loan integration, however, which is our concern here, the rules are different, as the loan is called upon to accommodate itself in the phonological system of the new language at the other end of the contact. In this sense, where the loan has been introduced through the written channel, it is the graphemic rather than the phonemic patterns that tend to intervene in the choice of equivalent patterns in the recipient language, provided, of course, that the person involved in the introduction of the loan is himself ignorant of the intricacies of English phonetics.

Examples of this sort of graphemic reinterpretation or secondary graphemic interpetation can easily be found in MG as the written channel has been a major source of loans for a number of years before the advent of the television and other more sophisticated technological devices of communication. Such examples are the following:

ENGLISH M. GREEK		EN	GLISH	M. GREEK			
Gr.	Ph.	Gr.	Ph.	Graph.	Phon.	Graph.	Phon.
t		τ	t	<newcastle></newcastle>	/nju:ka:sl/	<Νιουκάστλ>	/njukastl/
g		γκ	g	<camping></camping>	/kæmpıŋ/	<κάμπινγκ>	/kambing/
1		λ	1	<folklore></folklore>	/fauklo:/	<φολκλόρ>	/folklor/
r		ρ	r	<bar></bar>	/bα:/	<μπαρ>	/bar/

In parallel to the above we may note two more cases from American English, those of /t/ and /s/ in <Connecticut> and <Illinois> which appear in MG respectively as follows:

ENGLISH M. GREEK			REEK	ENC	GLISH	M. GREEK		
Gr.	Ph.	Gr.	Ph.	Graph.	Phon.	Graph.	Phon.	
t	_	τ	t	<connecticut></connecticut>	/kənetıkət/	<Κονέκτικατ>	/Konektikat/ <sup>27</sup>	
s		ς	s	<illinois></illinois>	/ılınɔı/	<Ιλλινόις>	/ilinois/	

An interesting case is that of <Greenwich>, <Norwich>, /grundʒ/, /nordʒ/ in E, rendered in MG as /grinuits/, /noryuits/. The difference in pronunciation between the two languages definitely points towards graphemic reinterpretation. What is important here, however, is that the mediator has fashioned his interpretation on a model he must have been conscious of, thus drawing information from an already current interpretation on the basis of analogy. The information relevant here is the rendering in MG of

<sup>27.</sup> The rendition of the vowel of the last syllable of <Connecticut> with vowel /a/ rather than vowel /u/ as it should have been in a typical graphemic reinterpretation raises the issue of oral rather than written introduction. The graphemic interpretation of /k/, however, leaves the point open for discussion. The instance /konektikjut/, which we have in our corpus, seems to be a better approximation. From M. Lundemis, 'To siderenio Potami', *I Glossa mou*, A 5th Dhemotic Reader, Athens, 1988, OEDV, p. 19.

 $\{w\}$ , /w/, a labiovelar semivocalic continuant, as either  $/\gamma u/or/u/$ , the two being in a relationship of free variation<sup>28</sup>.

Before moving on to the synchronic part of our investigation we feel inclined to include to the above mentioned cases the following instances:

ENGLISH M. GREEK			REEK	ENG	GLISH	M. GREEK		
Gr.	Ph.	Gr.	Ph.	Graph.	Phon.	Graph.	Phon.	
eo	e	03	eo	<leonard></leonard>	/len∂d/	<Λέοναρντ>	/leonard/	
ia	9	ια	ia	<special></special>	/spe∫∂l/	<σπέσιαλ>	/spesial/	
io	9	ιο	io	<eurovision></eurovision>	/juaravızan/	<Γιουροβίζον	>/jurovizion/	

as their graphemic representation indicates that at some point in their evolution the graphemes <eo>, in <Leonard>, <ia> in <special>, and <io> in <Eurovision> may have had a closer approximation in the grapheme/ phoneme equivalence.

Examples of graphemic reinterpretation connected in English with contextual elision are the following:

ENGLISH M. GREEK			REEK	EN	GLISH	M. GREEK		
Gr.	Ph.	Gr.	Ph.	Graph.	Phon.	Graph.	Phon.	
р		π	р	<part time=""></part>	/pa:taim/	<παρτ τάϊμ>	/parttaim/	
t	_	τ	t	<softwear></softwear>	/sofwea/	<σόφτγουερ>	∕softγuer/	
t		τ	t	<best seller=""></best>	/bessel∂/	<μπεστ σέλερ>	>/bestseler/	
t	—	τ	t	<fast food=""></fast>	/fa:sfu:d/	<φαστφούντ>	/fastfud/	

Simplification of two identical phonemes in a sequence is functional in both MG and English. Such is the following example:

ENGLISH M. GREEK			REEK	EN	GLISH	M. GREEK		
Gr.	Ph.	Gr.	Ph.	Graph.	Phon.	Graph.	Phon.	
SS	S	ςσ	SS	<intelligence< td=""><td>/intelid_ans</td><td>&lt;Ιντέλιντζενς</td><td>/indelidzens</td></intelligence<>	/intelid_ans	<Ιντέλιντζενς	/indelidzens	
				Service>	s3 :vis/	Σέρβις>	servis/	

Apart from the above mentioned cases, which are related to the evolution of the English language, we may notice some other instances of graphemic reinterpretation. These are cases that do not seem to be explicable through any apparent pattern pertaining to synchronic or diachronic reasons. Rather, it would seem, that graphemic reinterpretation here must be ascribed to the bilingual person's instinct in turning the graphemic values into phonemic ones as faithfully as he is in a position to. Accordingly, the graphemes of the model undergo a reinterpretation more consistent with the graphemic and phonemic system of the recipient language than those of the donor language. Examples of the above are the following:

a) Single graphs corresponding to one vowel phoneme in English and rendered as single graphs corresponding to one vowel phoneme in MG, except for the case of /u/ which is graphically denoted by a digraph, <ou>.

In a typical process of phonemic over-differentiation, /w/ may rarely be also rendered in MG as /v/. For more details see A.-M. Apostolou-Panara 1985: 174-5.

ENGLISH M. GREEK		ENC	GLISH	M. GREEK			
Gr.	Ph.	Gr.	Ph.	Graph.	Phon.	Graph.	Phon.
а	1	α	а	<manager></manager>	/mænid3/	<μάνατζερ>	/manadzer/
а	æ	α	а	<camera></camera>	/kæmərə/	<κάμερα>	/kamera/
а	э:	α	а	<qwartz></qwartz>	/kwɔ:ts/	<κουάρτς>	/kuarts/
e	1	3	0	<basket></basket>	/ba:skit/	<μπάσκετ>	/basket/
0	9	0	0	<commercial></commercial>	/kəm3:∫əl/	<κομέρσιαλ>	/komersial/
u	Λ	ου	u	<rum></rum>	/rʌm/	<ρούμι>	/rumi/

b) Digraphs in English corresponding to single vowel phonemes in English, rendered in MG as digraphs or trigraphs corresponding to two distinct phonemes, as in the case of /ou/ in /kroul/, or to a diphthong as in the case of /ui/ in /kruizer/.

ENGLISH M. GREEK			EEK	E	NGLISH	M. GREEK		
Gr.	Ph.	Gr.	Ph.	Graph.	Phon.	Graph.	Phon.	
aw	э:	οου	ou	<crawl></crawl>	/krɔ:l/	<κρόουλ>	/kroul/	
ey	1	εϊ	ei	<volley></volley>	/volı/	<βόλλεϋ>	/volei/	
er	9	ερ	er	<super></super>	/su:pə/	<σούπερ>	/super/	
ui	u:	ουϊ	ui	<cruiser></cruiser>	/kru:zə/	<κρούϊζερ>	/kruizer/	

c) Single graphs, digraphs or trigraphs that correspond to diphthongal glides in English are rendered in MG as single graphs, digraphs or trigraphs corresponding to single phonemes or two distinct phonemes.

ENGLISH M. GREEK				ENGLISH		M. GREEK	
Gr.	Ph.	Gr.	Ph.	Graph.	Phon.	Graph.	Phon.
ay	eı	αϊ	ai	<overlay></overlay>	/əʊvəleı/	<οβερλάϊ>	/overlai/
oe	90	30	oe	<poe></poe>	/pəʊ/	<Πόε>	/poe/
ow	ασ	οου	ou	<clown></clown>	/klaun/	<κλόουν>	/kloun/
eu	1ð	εου	eu	<linoleum></linoleum>	/lınəʊliəm/	<λινόλεουμ>	/linoleum/
air	63	ερ	er	<airbus<< td=""><td>/ɛ∂bʌs/</td><td>&lt;ερμπάς&gt;</td><td>/erbas/</td></airbus<<>	/ɛ∂bʌs/	<ερμπάς>	/erbas/
а	eı	α	а	<quaker></quaker>	/kweık∂/	<κουάκερ>	/kuaker/
uo	09	ουο	uo	<fluoride></fluoride>	/fluəraıd/	<φλουοράϊντ>	/fluoraid/

One important feature that may be said to characterize the loans which have undergone graphemic reinterpretation is that they are subject to revision as oral contact may cause the bilingual public to become more familiar with the original of certain old loans. In this case an adaptation takes place, more faithful to the model this time. This revised form is eventually established. Such is the case of the loan /nDrid $\mathfrak{I}$ , already established in MG as /nor $\eta$ uits/, which is slowly being replaced by /norits/, a closer approximation to the original. For some time the two forms seemed to co-exist but it appears as if the newer form will prevail.

Sometimes, a revised form of an old loan that refers to a different object, may co-exist with the old form as the two are not semantically connected in the new linguistic milieu. Such is the case of /kruizer/ that refers to a recreation boat and /kruz/ that refers to the missile. No apparent connection seems to exist between the two in MG, at least not for the time being. At other times, an old loan seems to be so well established in the recipient language that any revised form seems to go against one's feeling for language. As such old, unrevised loans may be considered the following: /zersei/, /grinuits/, /kuaker/, etc.

Speaking of revised forms of loans it would be an omission not to mention the current tendency to 'simplify' the graphemic shape of older loans, a tendency which is restricted to the graphic substance of the word. In this sense, words such a  $\langle \sigma \pi \rho \alpha \ddot{\upsilon}, \sigma \pi \rho \dot{\varepsilon} \ddot{\upsilon}, \pi \dot{\varepsilon} \nu \alpha \lambda \tau \upsilon, \sigma \dot{\eta} \rho \alpha \lambda \rangle$ , etc. become  $\langle \sigma \pi \rho \dot{\varepsilon} \ddot{\upsilon}, \pi \dot{\varepsilon} \nu \alpha \lambda \tau \upsilon, \sigma \dot{\eta} \rho \alpha \lambda \rangle$ , etc. This phenomenon that has been touched upon by Contossopoulos<sup>29</sup> and Kamaroudis<sup>30</sup> constitutes an extension of the already mentioned tendency in MG to reduce redundant graphic symbols. Thus, we note here a pull in the opposite direction from the one we have been discussing, that is, visual fidelity to the origin of the loan. Rather, we instance a case of fidelity to the recipient language, if we may interpret the phenomenon in question as such.

In view of the above mentioned idiosyncratic features of the donor language under examination, the patterns of the recipient language and the role of the mediator in the act of borrowing as they appear to interact in the instances referred to for validation of our assumption, we may proceed with our conclusions.

Graphemic reinterpretation seems to be operative in the integration of English loanwords into MG to a considerable extent. According to the causes that may lie behind graphemic interpretation we may distinguish this function of loanword integration into two types which we may term: a) a syst e m at i c graphemic reinterpretation and b) an intuitive graphemic reinterpretation. Type a) will cater for those loans that have undergone graphemic reinterpretation only in so far as an idiosyncratic feature is concerned due to diachronic considerations pertaining to the phonological system of English; this is a case that is bound to appear every time a loan of such historical background enters MG through the written channel, provided that the bilingual person mediating in the contact is unaware of the fact, which is a strong possibility. Type b) will cater for all the other loans that have undergone graphemic reinterpretation through a bilingual person who may be said to be ignorant of the graphophonemic relationships of the English phonological system to a considerable extent. This is a case that is bound to occur every time a loan enters MG through the written channel. Considering, however, the great expansion and popularity that the English language enjoys in our times, we may predict, without much risk, that intuitive graphemic reinterpretation will gradually be on the decline. Systematic graphemic reinterpretation, on the other hand, will persevere as intricacies and idiosyncratic features of the sort can be perceived only when the loan enters the recipient language through the oral channel; otherwise they are reserved only for those who know.

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<sup>29.</sup> N. G. Contossopoulos 1978.

<sup>30.</sup> S. Kamaroudis 1985: 338-345.

### BIBLIOGRAPHY

- Allen W. S. 1987<sup>3</sup>: Vox Graeca, The pronunciation of Classical Greek (Cambridge: C.U.P.).
- Apostolou-Panara A.-M. 1985: The phonological integration of English loanwords into Modern Greek. Ph. D. Thesis, Univ. of Athens (unpub.).
- Babiniotis G. 1972: "The theoretical background of historic orthography" (in Greek), School of Philosophy Yearbook, Univ. of Athens, 22.
- Babiniotis G. 1980: Theoretical linguistics (in Greek) (Athens).
- Bolinger D. 1946: "Visual morphemes". Language 22.
- Contossopoulos N. G. 1978: L'influence du français sur le grec. Emprunts lexicaux et calques phraséologiques (Athènes).
- Gimson A. C. 1989: An introduction to the pronunciation of English (London: Edward Arnold).
- Householder F. K. Kazazis A. Koutsoudas, 1964: Reference grammar of literary dhemotiki (The Hague: Mouton and Co).
- Joseph B. D. I. Philippaki-Warburton, 1987: Modern Greek (Kent: Croom Helm).
- Kamaroudis S. 1985: "Style chaise longue: Simplifications orthographiques recentes en grec moderne", *Studies in Greek Linguistics*, Proceedings of the 6<sup>th</sup> Annual Meeting of the Dept of Ling., Faculty of Pholosophy, Arist. Univ. of Salonica.
- Lass R. 1976: English phonology and phonological theory. Synchronic and diachronic studies (Cambridge: Cambridge University Press).
- Leith D. 1983: A social history of English (London: Routledge and Kegan Paul).
- Llorach E. Alarchos 1968: "Les représentations graphiques du langage". In A. Martinet, Le Langage (Paris).
- Motsiou B. 1985: "On the standardization of the Modern Greek linguistic terminology". *Studies in Greek Linguistics*, Proceedings of the 3rd Annual Meeting of the Dept. of Ling., Faculty of Pholosophy, Arist. Univ. of Salonica.

Pulgram E. 1951: "Phoneme and grapheme, A parallel". Word 7.

- Pulgram E. 1965: "Graphic and phonic systems: Figurae and Signs". Word 21.
- Saussure F. de 1964: Course in general linguistics. Peter Owen (trans.) (London).
- Uldall H. 1944: "Speech and writing". Acta Linguistica 4.
- Vachek J. 1944-49: "Some remarks on writing and phonetic transcription". Acta Linguistica 5.
- Vachek J. 1959: "Two chapters on written English". Brno Studies in English (BSE) 1.
- Wells J. C. 1985: Accents of English 1, An introduction (Cambridge: Cambridge University Press).