The Phonology of Loanwords into Italian

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Abstract

The intention I have pursued in this work is that to show and, at least in part, to explain the behaviour of loanwords into Italian, especially of English borrowings. The paper focuses on the assignment of stress to loans and on the adaptation of consonant clusters according to the constraints set by the Italian grammar. There is vast and also recent literature about the phonology of loanwords and thus about the way words that are borrowed from a donor language are adjusted and reproduced in a host one, according to the grammar of the borrowing language. The paper consists of different sections: in the first one I illustrate the Italian syllable structure and in the second one I compare Italian and English syllables and phoneme inventories in order to focus on differences and similarities between the two languages, both on the phonetic and on the syllabic point of view. In the third section I give a background on loanwords phonology so as to explain how the adaptation of loanwords works, trying to focus on all processes and aspects that must be taken into account in order to show that a language's grammar does not represent the only important aspect that regulates adaptation. The fourth section focuses on the behaviour of wellintegrated loanwords in Italian and a last section contains an analysis on partially-integrated ones in order to discuss different issues about the data collected.

- Section one: Italian syllable structure

The purpose of this first section is to give an outline of the structure of the Italian syllable, and specifically I will focus on how consonant clusters in Italian behave when they are syllabified, on where stress is usually placed and on the role played by weight in the assignment of stress.

Onsets in Italian may contain from a minimum of zero to a maximum of two consonants, and the only clusters that are tautosyllabic in this language are those that present sequences of a consonant and a liquid (CL) or a nasal (CN), where the first consonant in the cluster is a stop or a fricative (McCrary, see references). This is shown in the following examples:

<u>tr</u> o.ta	"trout"
<u>fr</u> us.ta	"whip"
la. <u>dr</u> o	"thief"
ve. <u>tr</u> o	"glass"
al.le. <u>gr</u> o	"cheerful"
<u>fl</u> au.to	"flute"
af. <u>fr</u> on.to	"affront"
<u>pn</u> e.u.ma.ti.co	"pneumatic"
i. <u>pn</u> o.ti.co	"hypnotic"

As depicted by the words above, onsets consist of a maximum of two consonants both word-initially and word-medially and there are no instances showing threeconsonant onsets.

Geminates follow strict distributional rules, since they are always heterosyllabic (e.g. $a\underline{f.fron.to}$) and cannot be found word initially. From this follows a more or less wide amount of three-consonant clusters word-internally, and these clusters may be of two types: either VC₁.C₁C₂V, i.e. a consonant following geminates (e.g. $a\underline{f.fran.ca.re}$, $f\underline{ab.bro}$), or VC₁.C₂C₃V, where the first consonant is always s (e.g. $ra\underline{s.trel.lo}$, $r\underline{is.plen.de.re}$). Both forms of three-consonant clusters show that only the two final consonants in the cluster serve as an onset, whereas the first one, either part of geminates or s, is the coda of the preceding syllable.

Three-consonant clusters are possible word-initially as well, but only in the form sCL, i.e. with s as first consonant in the cluster followed by a consonant (stop or fricative) and a liquid (McCrary, see references). Like in the examples above, s is not syllabified in the onset of the word, but may be seen either as directly linked

to the syllable σ or serve as the coda of a preceding dull-syllable (e.g. <u>s.tr</u>a.da, <u>s.gr</u>a.zia.to, <u>s.pl</u>en.di.do, <u>s.fr</u>on.ta.to)

All other clusters occurring in this language are heterosyllabic, and they include all sC(C) clusters mentioned above and geminates. This is shown in examples like:

A <u>l.d</u> o	"Aldo"
pa <u>r.l</u> a.me <u>n.t</u> o	"parliament"
a <u>n.t</u> i.co	"ancient"
a <u>m.p</u> io	"wide"
pa <u>s.t</u> o.re	"shepherd"
ra <u>s.tr</u> e <u>l.l</u> o	"rake"

Italian codas are said to contain a maximum of one consonant, but are not allowed word-finally. This implies that no Italian words end in a consonant, with the exception of *s*, in case we accepted the hypothesis of it being syllabified as a coda in examples like *las.tra.da* (the street) or *los.fi.ni.men.to* (the exhaustion). In the case of three-consonant clusters, a coda may precede only tautosyllabic clusters and not heterosyllabic ones. This implies that, as shown in the abovequoted examples, while VC₁.C₁C₂V (e.g. <u>*at.tri.bu.to*</u>) and VC₁.C₂C₃V (e.g. <u>*es.pre*s.sio.ne</sub>) sequences are possible, VC₁C₂.C₂V or even VC₁C₂.C₃V sequences are illegal in Italian (McCrary, see references). This fact may find an explanation in the **Onset Maximisation** principle:</u>

Syllable-initial segments are maximised to the extent consistent with the syllable structure conditions of the language in question (Harris 1994).

What this principle basically implies for Italian is the preference for the creation of complex onsets over codas, i.e. the tendency in case of three-consonant clusters to use at least two consonants in the cluster as an onset, and only one as a coda. Phonotactic constraints allow only sonorants to appear as codas, apart from few exceptions like gemination, which often provides non-sonorous codas (e.g. *fab.bri.can.te*).

All these constraints allow to predict the distribution of geminates in Italian, i.e. they show that a geminate can occur as the first consonant of an onset-cluster while the other geminate occupies the coda position of a preceding syllable. In tautosyllabic clusters geminates are not legal, because this would violate the constraint that allows a single coda consonant and would also violate distributional rules that apply to geminates. In addition, gemination is the only process that provides sequences of two stop-consonants in Italian. As a matter of fact, sequences of two occlusives that do not share the same place features (e.g. *ct*, *pt*) are not attested in this language. Most words deriving from Latin that originally presented these clusters have undergone changes, such that the first plosive in the cluster was deleted and the second one linked to its timing-slot, creating geminates.

As for weight, Italian is a quantity determined language, which implies that all stressed syllables in this language must be heavy. Foot-binarity is also on. There are two devices that apply to Italian in order to create heavy syllables: vowel lengthening and branching rimes. As discussed above, branching rimes are perfectly possible in the phonology of Italian, thanks to the presence of one possible coda consonant. Gemination thus also plays a role in the creation of heavy syllables, and particularly the phenomenon of raddoppiamento sintattico, i.e. the gemination of a word's initial consonant if preceded by a stressed vowel, is found in place of vowel lengthening for the satisfaction of foot-binarity. Vowel length appears to be non-phonemic in this language, since all vowels in the Italian inventory are said to be underlyingly short, and this may be accounted for by the fact that long vowels phonotactics does not allow V: word-finally, even when they are stressed (e.g. caf.fé, pa.pà), or even by the fact that no (C)V:C structures exist. Open syllables' nuclei undergo lengthening for weight, and thus stress, purposes. Therefore, satisfaction of quantity determinacy is achieved with (C)V: or (C)VC syllables, and a (C)V:C sequence would be superfluous, since the lengthening of a vowel in a syllable that is already heavy because provided with a coda would only create an unnecessary super-heavy syllable.

Finally, I would like to make a remark on stress placement and on the preferred syllable structure. The preferred stress pattern in Italian is penultimate stress, which is evident most of all in stress shifts occurred over adaptations from Latin to Italian (Repetti, 1993), although it is not a strict rule, since local varieties may behave differently in this respect. Penultimate stress is anyway the most recurring pattern, since it also occurs in the case of words with other heavy syllables rather than the penult. This can be shown if we consider a bunch of

polysyllables that could carry stress in various positions to satisfy quantity determinacy:

$pantera \rightarrow [pan'te:.ra]$ *['pan.te.ra]	"panther"
$particolareggiato \rightarrow [par.ti.ko.la.redʒ'dʒa:.to] *['par.ti.ko.la.redʒ'dʒa:.to]$	edʒ.dʒa.to]
*[par.ti.ko.la'redʒ.dʒa.to]	"detailed"
$sorprendentemente \rightarrow [sor.pren.den.te'men.te] *['sor.pren.den.te'men.te] *['sor.pren.den.te'men.te'$	en.te.men.te]
*[sor'pren.den.te.men.te] *[sor.pren'den.te.	.men.te] "surprisingly

From these few examples it is possible to notice that stress tends to fall on the penult, regardless of other preceding heavy syllables. Being word-final consonants and V: banned in Italian it would be logically impossible to find word-final heavy syllables, able to carry stress. Yet there is a considerable amount of words that do carry final stress in Italian. Most of them are verbs that for conjugation purposes are provided with a stressed final vowel. Here are a few examples:

così [ko'zi]	"so"	canterà [kan.te'ra]	"he will sing"
perché [per'ke]	"why, because"	tornò [tor'nɔ]	"he came back"
però [pe'rɔ]	"but"	tenterò [ten.te'rɔ]	"I will try"

We could argue that these forms are an exception and are lexically marked to carry final stress on a light syllable. But there are varieties, and mine is one of them, that insert a glottal stop at the end of these words (thus [ko'zi?], [per'ke?],

[pe'ro?] and so forth) so that the final syllable becomes heavy and can therefore be stressed. Even so, they prove to be an exception because penultimate stress is not respected.

As for the syllable structure, keeping in mind all that was stated before, Italian seems to prefer (C)VC syllables over (C)VV ones. Evidence (Repetti, 1993) can be drawn by differences between classical and spoken Latin, with adaptations like

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ba:ka \rightarrow bak:a "berry"
su:ku \rightarrow suk:u "juice".
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According to Repetti, present Italian forms *bacca* and *succo* derive from and behave like spoken Latin in this respect.

- Section two: Italian vs English

In this section I will analyse the most important and relevant differences and similarities between the Italian and English syllable and phoneme inventory, so as to account for the behaviour of words borrowed from English.

A first important difference between the two languages is that vowel length is phonemic in English, differently from Italian, which means that long vowels can also occur in non-stressed or secondary-stressed syllables rather than only in prominent ones. This points out another difference, which regards the role of quantity for stress assignment: while Italian is a quantity determined language, English is quantity sensitive, which implies that all heavy syllables must be stressed, although the contrary is not true. So both light and heavy syllables can carry primary stress in English, whereas only heavy ones can in Italian (cf. previous section).

English onsets behave pretty much like Italian ones in that they can contain from a minimum of zero to a maximum of two consonants (cf. Harris 1994). What differentiates these two languages in this respect is that some CC sequences are possible in English, but not in Italian. Hereafter are a few words in both languages that show instances of syllables that have from zero to two onset consonants:

English Italian

Ν	awe /ɔː/	uscio / <u>u</u> .ʃo/	"door"
ON	law /Ioː/	ma /ma/	"but"
OON	bra /braː/	trota /tro:.ta/	"trout"

Like in the previous-section-quoted Italian examples, English presents a series of three-consonant sequences in onset position where the first consonant of the sequence is always s, whereas the second consonant is a stop and the third one a liquid or a glide (cf. Harris 1994). Similarly with what was stated in the previous section, s in a sC(C) cluster is always heterosyllabic with regards to the following consonants, which means that it does not belong to the onset, but to the coda of a preceding syllable, or may also link directly to the o node. This can be observed in examples like *astray* /əs.trei/, *askew* /əs.kju:/ and *asplenium* /æs.pli:.ni.əm/, where

s does not constitute a third element in the onset of the second syllable but is syllabified with the preceding one as a coda.

As for codas, an important aspect that differentiates English and Italian is that no word-final codas are allowed in Italian. This can be attested by the fact that no Italian words end in a consonant, with no exception. So codas in Italian can be found only word-medially, whereas in English (and thus in words borrowed from it) word-final codas are perfectly legal and occur very frequently. It is nowadays agreed by most phonologists that word-final consonants should be treated as onsets of following dull-syllables rather than actual coda-consonants. This thesis is accounted for by the fact that word-final consonants behave much more like onsets than other internal codas on a distributional point of view. Word-final consonants (either considered as codas traditionally or as extra-syllabic) may be one to four, whereas word-internal codas, like in Italian, appear to contain only one consonant, thus hindering the creation of possible super-heavy syllables (for restrictions on English super-heavy rimes see Harris 1994, pp. 77). To avoid further discussion about the actual existence of word-final codas in English as well, let us argue that word-final consonants, or word-final degenerate syllables are not legal in Italian and therefore never occur. Keeping this in mind, it is however important to point out that word-final consonants were absolutely illegal for old Italian, whereas we do have some instances of frequently used words that end in a closed syllable nowadays. Apart from a few function words, these are all loanwords to which no final vowel was added when adapted. As for word-internal codas, English allows a wider range of consonants to occupy this position, and unlike Italian seems to prefer codas over onsets.

A further interesting difference that distinguishes the two languages is that in English geminates occur only graphically, but not phonetically. The only exceptions happen in the case of the addition of word-level morphology in examples like *critically* or *unnatural*, where the double *l* and *n* graphemes are actually pronounced as geminates. A double grapheme in Italian, on the contrary, is always pronounced and treated as a couple of geminates. This aspect will prove important in the loanwords adaptation analysis.

On the other hand, sequences of stops with different place of articulation are perfectly legal in English, so that we have words like *a<u>ct</u>*, *o<u>pt</u>imal and so forth, whereas I pointed out before that only geminates provide two-stop sequences in*

Italian. There are few other clusters that never occur in Italian, but that do occur in English: fricative/stop sequences like in *after*, *soft*; frivative/fricative sequences like in *sixth* [sɪksθ]; stop/fricative sequences like in *excellent* ['ek.səl.ənt]. This difference also shows that phonotactic constraints allow different consonants to be codas in the two languages: non-sonorous codas appear to be perfectly legal in English, like in *laughter* ['lɑ:f.tə], *chapter* ['tʃæp.tə], *sector* ['sek.tə], whereas they are not in Italian, the only exception being s like in *esperienza* [es.pe'rjen.tza], *estroverso* [es.tro'vɛr.so].

A last important distinction concerns the phones of both languages. The same phonemic input surfaces as a different phonetic output due to the different nature of Italian and English. This may be illustrated by differences in the contrast between [+ voice] and [- voice] stops in both languages. In English, the dichotomy mostly depends on VOT and aspiration, whereas the distinction in Italian actually depends on full voicing. There are, of course, various other different phonetic realisations of the same phones, but this distinction will not be treated here. Apart from these differences in the production of phones, there is in both languages a small but quite significant amount of sounds that do not belong to the inventory of the other. In the adaptation of loanwords, this inevitably leads to the substitution of phones of the donor language that do not belong to the host one for others that are in the inventory of the latter and that may resemble the original ones in different ways. Since the focus of this paper is on consonants, I add a chart that shows the inventory of consonants in English and Italian. Boldtyped symbols are the ones that belong to either language and IT specifies that they belong to Italian but not to English, whereas EN indicates that they do belong to English but not to Italian.

	Glottal	Bilabial	Labio- dental	Dental	Alveolar	Post- alveolar	Palatal	Velar
Plosive	?	p, b		t, d				k, g
Nasal		m		n			л IT	ŋ
Trill					r			
Flap					٢			
Fricative			f, v	θ , ð En	S, Z	ſ		h EN
Affricate					ts, dz	t∫, dʒ		
Lateral					I		λ IT	
Approxi mant		w					j	

Although vowel adaptation will not be treated here, I add the inventories of Italian and English vocoids to show how the two languages differ in this respect.

Italian	Front	Back	En	ıglish	Front	Central	Back
			High	Tense	i		u
Close	i	u		Lax	I		ប
			Mid	Tense	е		0
Close-mid	е	о		Lax	3	٨	э
						Ð	
Open-mid	ε	Э	Low		æ		a
Open	а						

- Section three: Some background on Loanword Phonology

There are several aspects to take into account in order to understand how borrowings from a donor language are adapted into a host language. The first important thing to keep in mind is that both languages may have very different grammars, which inevitably leads to adaptations that vary considerably from the input provided by the donor language. Nonetheless there are a few other processes that cannot be explained by simply looking at the differences between grammars but that basically result from phenomena like perception and orthography.

As the literature on loanword phonology suggests, perception plays a pivotal role in loanwords adaptation, specifically for loans borrowed orally from the donor language: the way a word from a different language is perceived proves to be important, because speakers of a host language will try to mimic its original phonetic form. Nonetheless, loans' surface form usually stands out from its original counterpart in the donor language, and the difference may depend both on a grammatical and a perceptive basis. There are three views that explain the role of perception in the adaptation of loanwords (Yip, 2005). First of all, misperception of the donor language's input causes it to be adapted in the host one. Misperception is mostly due to the fact that the host language may miss some of the donor language's distinctions and consequently make up for this lack by substituting the segments it lacks with ones it does have. Another view focuses on distinct realisations of the same loan by different speakers: for instance, bilinguals' percept is very close to the input provided by the donor language, whereas speakers that have smaller familiarity with the donor language tend to misperception and hence less accuracy. In case the loan is borrowed by bilinguals, the adaptation is mostly controlled by the grammar of the host language, being the input more or less identical to the donor-language output. The third and last view mediates between the two previously stated ones and regards a percept that includes so-called reflexes of non-native segments, although it is different from the percept of a donor-language native speaker. The host-language speaker transforms the percept according to this and thus provides an input for the phonology that is modified even further by the grammar. If the grammar had very little, if anything at all, to do with perception in the first two views, it has access to the percept in this last one, with particular importance to acoustic and visual cues. This view will prove effective for the analysis on this paper as well.

Various models have been proposed to explain and show loanwords adaptation, some of which quoted by Yip (2005) are Silverman (1992), Kenstowicz (2001), and Kenstowicz and Suchato (in press); Yip herself proposes one that derives from the last view illustrated above. The model she uses is shown hereafter:

L2 source \rightarrow Perceptual module \rightarrow Non-native percept \rightarrow L1 grammar \rightarrow Adapted loanword

It is clear from this model that the host language's grammar works directly on the non-native percept, using it as an input and Yip points out that the grammar of the host language "must accommodate constraints specific to mimicking foreign inputs (or more precisely their percept)". Adapted loans do depend on the grammar of the host language even in the case when a host-language speaker were mimicking the donor language output. As a matter of fact, loans are usually adapted in a way that makes them closer to forms belonging to the host rather than the donor language.

Yip (2005) also discusses what perception has to deal with, distinguishing between perception of the presence of a segment (or property), perception of a distinction between two segments, and the perception of the basis lying under this distinction. In other words, the *presence* of a segment is perceived if the segment is not deleted in the adaptation process, but lingers where it originally was. The distinction between two segments is perceived when they have at least one feature they do not share in the donor language, and they are kept distinct even in the adaptation, no matter if they change. The basis underlying the distinction between two segments is perceived, instead, when two segments that did not share at least one distinctive feature in the donor language are adapted as distinct in the host language as well, and the nature of the distinction must be the same. In cases like this one, it is evident how important the host-language grammar is in order to adjust loans, since complete mimicking would introduce segments that do not exist and that may therefore be rejected. But even if the donor-language distinction actually exists in the host language as well, phonotactic constraints of the latter may not allow distribution of certain

segments in some positions, leading to their substitution. The grammar of the host language also intervenes in the choice of a segment to substitute for another that does not belong to its inventory (Yip, 2005). Not all phones are suitable for substitution, because the choice often depends on the similarity between the original segment and the substituting one and in a way also on the possibility of its distribution in the host language. There may be many different possibilities, though, so that the grammar of the host language has to set priorities in the choice in order to provide an adaptation that provides an output as similar as possible to what is set by its constraints.

It is also important to point out that local varieties and exposure of a same hostlanguage speaker to a donor language must be considered in the analysis of loans adaptations, since they may vary considerably. Speakers that do have some kind of knowledge and fluency in the donor language usually tend to adapt loans as little as possible, i.e. they tend to keep to their original form as strictly as their knowledge allows them to and they often produce sequences that are illegal in their mother-tongue. This can be explained if we consider that a speaker that is or has been in contact with a donor language is logically more sensitive to perceptive cues and is, let us say, 'trained' to mimic them in a more or less accurate way; thus the level of proficiency of a bilingual speaker proves to be important (Vendelin and Paperkamp, 2005). On the other hand, speakers that do not have any type of contact with the donor language tend to adjust loanwords so that their output is much more similar to their language's grammar.

Along with perception, as pointed out at the beginning of this section, it is also believed that orthography may play a role in loans adaptations, at least to some extent. According to Vendelin and Paperkamp (2005) orthography has an impact on adaptation in two ways: they argue that some are so-called "reading adaptations" in that they are pronounced as if they were native words. Some remain reading adaptations in the host language, whereas others may enter as such and then undergo further adjustments, depending on the frequency with which they are used and, thus, with which a less proficient host-language speaker is exposed to a more proficient output. Secondly, orthography may be important because the host language may have some sort of standardisation that regulates how graphemes in the donor language are to be pronounced. As for Italian, in my personal experience I have noticed that speakers that do have some knowledge of the donor language do follow these 'standard rules' once they encounter loans, whereas those speakers who were not taught to speak the language from which the loans are borrowed tend to rely much more on reading adaptation. Vendelin and Paperkamp (2005) point out that although an orthography based analysis of loans adaptation was already introduced by Lovins (1975), Danesi (1985), LaCharité and Paradis (2000, 2005), Paradis and Prunet (2000), its influence was described as marginal. The experiments they carried out, instead, show that a grapheme-to-phoneme-correspondence-strategy adaptation is quite common and in some cases proves more effective than adaptations under oral conditions. This may be true mostly for those loans that enter a host language in their written form first, since graphic adaptations usually occur in the case of loans borrowed in their oral form. It results from their experiments that also bilingual speakers are influenced by the graphic representation of loans in their adaptations (on Canadian Italian see Danesi, 1985; Cravens, 1989 and Repetti, 1993).

Taking for granted that orthography does play a role, it is nonetheless hard to quantify the influence it actually has. Vendelin and Paperkamp point out that adaptations based on the between-language grapheme-to-phoneme correspondence are "often indistinguishable from adaptations based on phonological and/or phonetic minimality. The influence of orthography, then, is necessarily underestimated." They also reckon that possible influence of orthography cannot be a priori excluded even for those loans that are adapted from an oral input, and that reading and between-language grapheme-tophoneme adaptations may be identical in some cases and very different in some others. They do believe anyway that non-well-integrated loans serve as evidence for the influence of orthography much better than well-integrated ones.

A last aspect indicated by Rando (1970), Erasmi (1983), Repetti (1993), and Vendelin and Paperkamp (2006) among others is the prestige that the donor language enjoys for the host language in the nature of adaptations. In synthesis, if loans are borrowed from a donor language that does not represent much for a host language on a social point of view, they will be adapted according to the latter's grammar and mispronunciation is hardly pointed out or noticed at all. On the contrary, if the ability of a speaker to mimic loans in a way as close as possible to the their original form is source of prestige, because the donor language itself is considered prestigious, then adaptations usually tend to be, as far as possible, very similar to the loans' original form, and mispronunciation or variant adaptations are sometimes seen as symptoms of ignorance or excessive carelessness. In the case of Italian, and as far as I have observed in my personal experience, on a social point of view speakers who use loans instead of corresponding native terms and do so by mimicking the word's native pronunciation as accurately as possible tend to be considered better educated than speakers who do not use loans at all, or who do so in an 'abysmal' way (cf. Rando, 1970).

In order to summarise, there are several aspects that must be kept in mind in order to understand the adjustments a loanword endures in a host language: perception, phonetic and local variation, level of bilingualism, orthography, degree of integration of the loan and the role played by the donor language.

- Section four: The Data

Before providing lists of loanwords, I believe it is necessary to spend a few lines about the status of foreign loans into Italian in order to account for different processes of adaptation.

As I mentioned in the previous section, two different categories of loanwords are distinguished cross-linguistically, i.e. well-integrated and partially-integrated loanwords. So-called well-integrated loans include those loans that are now considered and treated by native speakers as belonging to their own language and in most cases it is difficult to go back to the source, to their foreign origin. Partially-integrated ones, on the contrary, are loans that notoriously come from a foreign source and speakers are aware, at least in most cases, that they did not belong to their native language originally. The distinction between these two categories is important, because loans seem to behave differently in terms of adaptation according to their degree of integration in the host language.

Repetti (1993) argues that in the case of well-integrated loanwords, the hostlanguage grammar plays a pivotal role, since borrowings are adjusted according to its constraints, with no attention to the terms' original stress pattern or segments' length, either vowels or consonants. What the host language maintains, with the exception of a few instances, is the individual phonemes. The introduction of these loans into the Italian language date back to decades and centuries ago, and in the case of Italian they come mostly from languages such as Arabic, Spanish and French (Erasmi, 1983; Visconti, see references). All examples of well-integrated loans I will quote hereafter were taken from Repetti (1993) to show how they have been adapted in accordance with the Italian grammar. All first examples ended in a vowel originally and show how penultimate stress is assigned and compensated for by use of the preferred syllable structure in Italian. Arabic words like *garrāfa*, *qabāla*, *zarāfa* and terms of Spanish origin like *bellaco*, *despacho*, *flota* and *tabaco* all underwent similar adaptations, i.e. they were first syllabified according to Italian rules, assigned penultimate stress by making the penultimate syllable bimoraic with the creation of geminates by spreading the following consonant and thus creating a (C)VC stressed syllable, favoured in Italian. My opinion is that phones adaptation probably derives from misperception or mispronunciation, the latter being the main reason for this sort of adaptation at present as well:

<i>garrāfa</i> → [kaˈraf.fa]	"decanter"
$qab\bar{a}la ightarrow$ [gaˈbɛl.la]	"tax"
$zar\bar{a}fa \rightarrow$ [dʒiˈraf.fa]	"giraffe"
$bellaco \rightarrow [vi\Lambda'\Lambda ak.ko]$	"coward"
$despacho \rightarrow [dis'patf.tfo]$	"dispatch"
$flota \rightarrow$ ['flot.ta]	"fleet"
$tabaco \rightarrow$ [taˈbak.ko]	"tobacco"

No other adjustments were needed, since the mere assignment of penultimate stress proves effective to produce perfectly legal Italian sequences. A different case is represented by a few other words, which include other well-integrated loans that originally ended in a consonant (like most borrowings). Some of these still came from Arabic, like *al-barqūq*, *al-manāh*, *al-anbīq*, but we also have some from other languages: English *beaf steak*, German *Bier*, Spanish *caracol* and Turkish *ibrīq*, to name just a few. In the case of these words as well, only individual phonemes were borrowed and a final vowel was added as a morpheme marker: all examples being singular, *o* for masculine and *a* for feminine. The final vowel created legal sequences, since I stated in the first section that no closed word-final syllables are possible in Italian, and the process described before was

repeated: syllabification according to Italian rules, penultimate-stress assignment by making the penultimate syllable heavy with gemination, thus creating a (C)VC stressed syllable.

al - $barq \bar{u}q \rightarrow$ [al.bi'kɔk.ko]	"appricot"
al -man $\bar{a}h$ \rightarrow [al.ma'nak.ko]	"almanac"
$al\text{-}anbar{\imath}q ightarrow$ [a.lam'bik.ko]	"still used to make spirits"
$beaf steak \rightarrow$ [bis'tek.ka]	
$Bier \rightarrow$ ['bir.ra]	"beer"
$caracol \rightarrow$ [ka.ra'kɔl.lo]	"movement of a horse"
$ibr\bar{\iota}q \rightarrow$ ['brik.ko]	"jug"

The purpose of this work is to focus on relatively new loans, instead, and consequently on partially-integrated ones (that behave in the same way), in order to underline a sort of evolution, or different tendency, in loanword adaptation. Most of these recent loans come from English and have been widely used in Italian over the past fifty years, after World War II (Rando, 1970). Repetti (1993) agrees with Klajn's (1972: 156) and Hayes' (1991: 46) analysis that "the main phonological innovation in Italian in this century is the incorporation of vast numbers of consonant-final words" that have introduced final consonant extrametricality in a language where it did not exist before. Extrametricality makes it possible for metrical rules to ignore the last consonant in the assignment of stress and therefore to treat a word-final syllable ending in a single consonant as a light syllable rather than a heavy one; thus the Italian grammar can apply the favourite penultimate stress.

Apart from word-final consonants and stress placement, my analysis will focus on how individual phonemes that do not exist in Italian (i.e. /h/, / θ / and / δ /) are adapted when borrowed from English, on how illegal clusters such as *ct* and *pt* are treated and on the importance of orthography in loanword adaptation.

Over the past decades a whole lot of foreign words have been introduced into Italian, especially English ones. The borrowing process is still very active and productive to such an extent that most loans enter unnoticed into use and often remain limited to *lingue speciali*. Nowadays, most of them are used in music, technology, computing, business and mass-media, although a great amount belongs to everyday language.

The data that follows comes from different sources: most of it was collected by myself while talking to friends and family, reading newspapers and magazines, whereas some, which is specific to certain fields of use, was gathered from Biancardi 1994, 1997 and more recent one through online searches. It is divided into numbered groups, where the adaptations will be transcribed in their phonetic form with respective original English graphic forms. A few examples will appear in different groups because they result relevant for different processes. All polysyllables will be given with relative syllabification in order to make the analysis clearer.

- Section five: The Analysis

All the data listed show some recurring patterns in adaptations that prove to be useful for an analysis on a general point of view. What follows does not want to be a complete and exhaustive list of loanwords, since it would take much longer to record all new loans that enter the Italian lexicon, since they do so with surprising speed.

a. (C)V(V) loans

 authority [au'tɔ:.ri.ti], baby ['be:.bi], barbecue ['bar.be.kju], beauty ['bju:.ti], chilly ['tʃil.li], hobby ['ɔb.bi], jolly ['dʒɔl.li], party ['par.ti], pony ['pɔ:.ni], privacy ['praj.va.si], security [se'kju:.ri.ti], sexy ['sɛk.si], show [ʃo], shampoo ['ʃam.po], video ['vi:.de.o], video camera [,vi.de.o.'ka:.me.ra]

The dataset in 1. shows loans that end in a vowel and do not therefore go against the constraint on Italian that bans word-final consonants. What emerges from the examples is that stress does not seem to change at all from the original English pattern, except for a few instances like *shampoo*, where the shift in stress can be easily explained by simply looking at the Italian syllable structure illustrated in the first section. The English pronunciation is [ʃæm'pu:], two heavy syllables with stress on the final one, while the Italian version, as shown in the dataset, is ['Jam.po], a stressed heavy syllable followed by a light one. My opinion is that stress placement was readjusted as a consequence of syllable adaptation. It was said that word-final V: are not legal in Italian, which implies that the final [u:] of English *shampoo* had to be shortened in the adaptation process, which made the resulting syllable [po] light, and therefore unable to carry stress. This led stress to be placed onto the preceding syllable, which is heavy and hence able to carry it. In the other instances, the tendency for stress is to fall on the penult in disyllables, and on the antepenult on the others (e.g. *barbecue, privacy, security*) or more precisely, it appears that stress is kept where it originally was.

- b. Monosyllabic (C)VC(C) loans
 - Badge [beidʒ], bar [bar], chack [tʃak], chat [tʃat], chic [ʃik], club [klab], freak [frik], gas [gas], jazz [dʒɛtz], match [mɛtʃ], mouse [mauz], net [nɛt], rock [rok], rum [rum], shock [ʃɔk], slip [zlip], sniff [znif], snob [snɔb], stop [stɔp], top [tɔp], track [trak], tram [tram], trip [trip], web [wɛb], yacht [jot]
 - box [boks], cart [kart], chart [tʃart], fax [faks], film [film], jeans [dʒins], link [liŋk], sport [sport], sprint [sprint], surf [surf] [sɛrf], test [tɛst], trade [trejd], trend [trɛnd]

Monosyllabic loans with a (C)VC structure behave in a peculiar way when adapted into Italian. Repetti's quotation of Bertinetto (1985: 604) points out that most monosyllables with word-final single consonant have two different pronunciations, at least in some areas: there is a "foreign" pronunciation that keeps the final consonant and a "native" one that adds a final vowel. In the latter case, the final consonant always lengthens before adding the vowel (cf. wellintegrated loans data in the previous section). The following examples illustrate both pronunciations:

 $chic \rightarrow [fik] ['fik.ke]$ $chat \rightarrow [tfat] ['tfat.te]$ $freak \rightarrow [frik] ['frik.ke]$

$sniff \rightarrow [snif] ['snif.fe]$

and the same could be said for all words listed in 2. above. This behaviour is quite interesting, because it happens regularly in other circumstances as well. It is usual practice in Italian to add affixes, especially suffixes, to loans so as to create neologisms (Rando, 1970; Repetti, 1993). When the added suffixes begin with a vowel, the final consonant always lengthens, creating geminates. A few instances using the examples quoted above:

$chic + issimo \rightarrow [fik'kis.si.mo]$	"very chic"
$chat + are \rightarrow [tfat'ta:.re]$	"to chat"
$freak + etto + ne \rightarrow [frik.ket'to:.ne]$	"strange person"
$sniff + are \rightarrow [sniffa.re]$	"to sniff cocaine"

The same is not true for examples in 3., i.e. monosyllabic loans with a (C)VCC structure. The addition of an affix beginning with a vowel does not cause gemination of the last consonant. This can be illustrated by the following examples:

$fax + are \rightarrow [fak'sa:.re]$	"to fax"
$film + ato \rightarrow [fil'ma:.to]$	"film"
<i>jeans</i> + <i>eria</i> \rightarrow [dʒin.se'ri:.a]	"jeans store"
$surf + ista \rightarrow [ser'fis.ta]$	"surfer"

This difference in behaviour clearly shows that in monosyllabic loans ending with a single consonant gemination provides an onset for the following syllable when an affix beginning with a vowel is added. On the other hand, monosyllabic loans with a (C)VCC structure supply an onset for the following syllable with the second consonant in the final cluster, and gemination is not needed. This proves that word-final consonants are extrametrical in Italian, or better, that the last consonant in a (C)VCC word-final syllable does not further contribute to the weight of the syllable, because it can actually be considered as if behaving like an onset, and becomes such when a following syllable is added (cf. the raddoppiamento *sintattico* process, which shows this behaviour quite exhaustively).

- c. Polysyllabic loans ending in a (C)VC(C) syllable
 - 4. access ['atʃ.tʃɛs], advisor [ad'vaj.sor], alcohol ['al.col], aquascooter [ak.kwas'ku::ter], basket ['bas.ket], baby sitter [be.bi'sit.ter], bestseller [bes'tsɛl.ler] [bes'sɛl.ler], body building [bɔ.di'bil.diŋ], budget ['badʒ.dʒet], bulldozer [bul'dɔdz.dzer], business ['biz.nes], camper ['kam.per], camping ['kam.piŋ], charter ['tʃar.ter], cocktail ['kɔk.tɛl] ['kɔt.tɛl], computer [kom'pju:.ter], dribbling ['drib.bliŋ], download [daun'lo:d] ['daun.lod], email [e'mejl] [i'mejl], flipper ['flip.per], happy hour [ɛp.pi.'a:.uar], killer ['kil.ler], manager ['ma:.na.dʒer], meeting ['mi:.tiŋ], Milan ['mi:.lan], modem ['mɔ:.dem], monitor ['mɔ:.ni.tɔr], outlet ['aut.lɛt], poker ['pɔ:.kɛr], pullover [pul'lɔ:.ver], rooter ['ru:.ter], sandwich ['sɛn.dwitʃ], screen saver [skrin'sɛ:.ver], shaker ['ʃɛ:.ker], shopping ['ʃɔp.piŋ], slogan ['zlɔ:.gan], smoking ['zmɔ:.kiŋ], sponsor ['spon.sor], teenager [ti'nɛ:.dʒer], topmodel [tɔm'mɔ:.del], tuner ['tu:.ner], tunnel ['tun.nel]

All examples in 4. are polysyllables and stress is placed as a rule on the penult, but only if it is heavy. Some data like ['mo:.ni.tor] and ['ma:.na.dʒer] behave in a different way and represent an exception in that they keep the original English stress. What differentiates (C)VC polysyllables from (C)VC monosyllables is that the final consonant of all words in 4. does not geminate when a suffix beginning with a vowel is added, and in this respect they behave like words in 3., i.e. (C)VCC monosyllables. The following examples illustrates this:

$alcol + ista \rightarrow [al.ko'lis.ta]$	"alcoholic"
manager + $iale \rightarrow$ [ma.na.dʒe'ria.le]	"of a manager"
monitor + $aggio \rightarrow$ [mo.ni.to'radʒ.dʒo]	"monitoring"
$pullover + accio \rightarrow [pul.lo.ve'ratf.tfo]$	"ugly pullover"

What all these last data show is that, except for a few instances, stress falls on penult heavy syllables, no matter what syllable in the loan they originally fell on.

 account [ak'kaunt], antitrust [an.ti'trast], aquapark [ak.kwa'park], background [bɛg'graund], blue jeans [blu'dʒins], compact disk [kɔm.pad'disk], discount [dis'kaunt], go cart [go'kart], hot line [ɔt'lajn], jukebox [jub'bɔks], popcorn [pop'korn] [pok'korn], *showgirl* [ʃo'gɛrl], *weekend* [wi'kɛnd] [wik'kɛnd], *windsurf* [win'tsɛrf]

Words in 5. differ from the ones in 4. in that they have a (C)VCC structure, i.e. they all end in a cluster. The dataset shows that stress, in these instances, falls on the last syllable of the loan rather than on the penult, even when the latter is heavy (e.g. *account, discount, hotline* and the likes). Repetti (1993) argues that "penultimate stress is not permitted if the final syllable is bimoraic", in which case it will always fall on this one. What can be observed is that, like for (C)VC monosyllables in 2., the last consonant is extrametrical and may serve as an onset for a possible following syllable when creating neologisms from these loans.

airbag [er'bɛg], aquagym [ak.kwa'dʒim], avatar [a.va'tar], backstage [bɛk'steidʒ], backup [bɛk'kap] ['bɛk.kap], bazar [badz'dzar] [ba'zar], beauty case [bju.ti'keiz], bluetooth [blu'tut], boutique [bu'tik], CD [tʃi'di] [tʃid'di], check in [tʃɛk'kin], copyright [kɔ.pi'rait] ['kɔː.pi.rait], D.J. [di'dʒɛj], hotel [o'tɛl], pic nic [pik'nik], playboy [plej'bɔj]

What represents a problem is the loans listed in 6. They all have a (C)VC structure, but instead of behaving like words in 4. they are stressed on the last syllable. This obviously goes against the assumption that final consonants are extrametrical, because otherwise we would have to allow monomoraic stressed syllables in Italian. Erasmi (1983) and Repetti (1993) argue that polysyllabic loans with final stress and a (C)VC structure have a special marking in the lexicon that blocks extrametricality, so that for these words the final consonant is still visible to metrical rules. This makes the final syllable in all examples in 6. bimoraic like it happened for words in 5., thus allowing stress to fall on it. Interestingly enough, if a suffix beginning with a vowel is added to these loans, they behave like monosyllables in 2. in that the final consonant geminates and thus also provides an onset for the newly created syllable. Thus:

$hotel + accio \rightarrow [o.tel'latf.tfo]$	"ugly hotel"
boutique + $etta \rightarrow$ [bu.tik'ket.ta]	"small boutique"

It is also interesting to notice that to this group belong words that end in a glide as well (e.g. *playboy*, *D.J.*), which implies that glides are probably not treated like consonants in Italian and are therefore immune to extrametricality and consequently do contribute to the syllable's weight.

d. Loans with unfamiliar phonemes

All data in d. present a series of loans with phones that do not belong to the Italian inventory.

 hacker ['a:.ker], hair stylist [ɛr'staj.list], hamburger [am'bur.ger], hammerless ['am.mer.lɛs], handicap ['ɛn.di.kap] ['an.di.kap], happening ['ɛp.pe.niŋ], hard copy [ar(d)'kɔː.pi], hard core ['ar.kɔr] [ar(d)'kɔr], hard disk [ar'disk], hobby ['ɔb.bi], hostess ['ɔs.tes], hotel [o'tɛl], hot line [ɔt'lajn]

Words in 7. all start with [h], which exists in Italian, but only as a grapheme for pronunciation (e.g. $ricchi \rightarrow ['rik.ki]$ "rich people" and $ricci \rightarrow ['ritf.tfi]$ "hedgehogs") and morphological (e.g. $ha \rightarrow [a]$ "he has" and $a \rightarrow [a]$ "to, at") purposes. On a phonetic point of view, it is completely void, which means that it is not realised phonetically and therefore is not part of the syllable at all. What emerges from the data is that [h] is still treated the same way in loans, since in no cases is it audible in the Italian adaptation. As I mentioned in a previous section, there is anyway no strict rule regulating loanwords pronunciation in a host language but only tendencies. Although most Italian speakers tend not to introduce the new phone, there are some who probably have a wider knowledge of the donor language, or who do so for hypercorrectness, and pronounce [h] in those instances (cf. for examples Rando, 1970; Erasmi 1983). If it is true for [h] anyway it is not for other phones, since the literature on the subject points out that only those speakers who are quite familiar with the donor language tend to adapt loans as little as possible and try to mimic the original pronunciation as faithfully as they can. This may also imply a hypercorrectness in stress placement, which is rarer though.

8. thermos ['tɛr.mos], thesaurus [te'zau.rus], thriller ['tril.ler], bluetooth [blu'tut]

8. is a list of loans with the dental fricative that does not belong to the Italian inventory. During adaptation of these words, we would expect two possibilities: we would either expect the dental fricative to be replaced by another fricative present in Italian, like [f] or [v] for instance, or we would also expect the inexistent sound to be deleted, like in the case of [h]. The possibility of an alternative fricative substituting for $[\theta \ \delta]$ is an interesting one, and is what Italian English learners tend to do, at least during their first contact with it. Thus, words like this [OIS] tend to be pronounced as [vis], and words like thief [Oi:f] as [fi:f]. Since the dataset shows that none of the two possibilities mentioned is true, chances are that these loans were not borrowed from an oral input, because the perception of a fricative in the donor language would have probably led to adapting them by using another fricative in the host one. What happens instead is that in all instances the dental fricative is substituted for by [t] in Italian, with no exceptions. I suppose that in this case a possible explanation that allows to account for this adaptation is orthography. Rando (1970), Erasmi (1983), Repetti (1993) and Visconti (see references) all point out the important role played by orthography in loans adaptation into Italian. The grapheme-to-phoneme correspondence is said to be very strict in this language, and this is obviously maintained in loanwords as well. A possible explanation is that being th the grapheme corresponding to the English dental fricatives, either voiced or voiceless, Italian speakers will adapt is as being a t, hence [t], because the th grapheme combination does not exist in Italian and the dental voiceless stop is the candidate that graphically resembles th the most. Although this may sound sensible, it cannot be taken for granted, since other languages with different writing systems do adapt the English dental fricatives as [t] (e.g. Thai, Russian, Hungarian) and orthographic similarity cannot account for these instances.

Also the fact that the non-existing dental fricative is not deleted could be explained through orthography. As mentioned before, the grapheme h exists in

the Italian alphabet, although it never finds phonetic realisation. Here are a couple of examples to illustrate this:

 $ho \rightarrow [5]$ "I have" $hanno \rightarrow [an.no]$ "they have"

We could therefore argue that the deletion of [h] in loans is a normal process since the correspondence in the Italian language for graphic h is phonetic [\emptyset]. On the other hand, I said before that the grapheme th does not belong to the Italian series of grapheme combinations and this creates a different case from the previous one. Basically speaking, it might be that h is dropped in loans by Italian speakers because they are used to associating it with no phonetic realisation, whereas th is a sort of "new grapheme" and since Italian pronunciation seems very faithful to orthography this new grapheme is not ignored, and thus not dropped. A little further down in the paper I will analyse other cases that show the supposed importance of orthography in loanwords adaptation into Italian.

cocktail ['ksk.tɛl] ['kst.tɛl], compact disk [ksm.pak'disk] [ksm.pad'disk], jukebox
 [jub'bsks], hard copy [ar(d)'ksː.pi], hard core ['ar.ksr] [ar(d)'ksr], popcorn
 [pop'ksrn] [pok'ksrn]

The dataset in 9. includes loans that contain an illegal cluster in Italian, i.e. loans with stop-stop sequences. I argued before that two-stop clusters are allowed only as a result of gemination, and both sounds must therefore have identical place of articulation. But two-stop clusters with different places of articulation are quite common in English and will therefore be adapted when borrowed. What the dataset shows is that the first consonant appearing in the cluster is deleted and the following one geminates so as to fill the empty slot left behind and to supply a perfectly legal sequence in Italian. This form of adaptation was introduced in the first section, when I mentioned how two-stop-with-different-place-of-articulation clusters where adapted into Italian from Latin. There do exist very few examples of *pt* clusters coming from Latin into Italian (e.g. *cripta* "crypt", *criptico* "cryptic") that have lingered, although the pronunciation of these terms varies from actual

[pt] to [tt], the latter considered typical of older people's speech or of less educated ones. Thus:

 $cripta \rightarrow$ ['krip.ta] ['krit.ta] $criptico \rightarrow$ ['krip.ti.ko] ['krit.ti.ko]

It is true that hypercorrectness in mimicking loans pronunciation leads most people to maintain the unfamiliar cluster, so this tendency to adapt sequences like *ct* and *pt* cannot be considered universal, since they mostly appear in new and partially-integrated loans, hence they are still treated as foreign words, and this justifies the unfamiliar clusters. Orthography still plays a role, since words that maintain the [ct] and [pt] option do so also graphically (like *cri<u>pta</u>, ade<u>pto</u>, <i>compa<u>ct-d</u>isk*), whereas words that substitute the first stop for the geminate of the second have geminates in the graphic form as well (like *ottimo* from *o<u>pt</u><i>imus*, *fatto* from *fa<u>ct</u><i>um*). This implies that the orthographic form probably influences the phonetic one in these cases as well and that the adaptation of these sequences in loans varies from speaker to speaker, according to their faithfulness to the written form and to their willingness to produce more articulatory effort with unfamiliar sequences.

As mentioned in the previous section, and as suggested in the literature on the subject (Rando, 1970; Erasmi, 1983; Cravens, 1989; Repetti, 1993; Visconti, see references; Vendelin and Paperkamp, 2005; Yip, 2005) it is believed and linguists agree on the influence that orthography has over loanword adaptation, although the amount of importance it has is still uncertain, and probably cannot be considered universal for all languages. It is nonetheless attested that Italian pronunciation of words depends to a wide extent on the graphic form of these words (cf. Rando, 1970; Erasmi, 1983 and Repetti, 1993). It is also true that except for some cases, most of which regard well-integrated loans, loans that are borrowed and adapted into Italian usually keep their original written form, viz. their graphic 'appearance' does not change. As a matter of fact, symbols like k, w, y, x and j are usually maintained in the spelling, even though they do not actually belong to the Italian grapheme inventory and their phonetic rendition sometimes

varies according to the speaker (e.g. w remains a glide [w] for most speakers, but may be substituted for the fricative [v] by others).

If we observe the data provided in the previous section, there is another clue that may prove the importance of orthography for Italian phonetics, i.e. how geminates are treated. As it was said before, geminates do not actually exist in English, apart from a few exceptions that are limited to affixation cases. Italian geminates are, on the other hand, true geminates and their presence is shown graphically by the repetition of the same symbol. Interestingly enough, when Italian speakers encounter double consonants in loanwords, i.e. "graphic geminates", they treat them as such phonetically as well, no matter what the original pronunciation was.

Thus:

shopping:	[ˈʃɒ.pɪŋ] → [ˈʃɔp.piŋ]	account:	[əˈkaʊnt] → [akˈkaunt]
tunnel:	[ˈtʌn.əl] → [ˈtun.nel]	baby sitter:	$[\texttt{'bei.bi'sit.ter}] \rightarrow [\texttt{be.bi'sit.ter}]$
tennis:	['ten.1s] → ['ten.nis]	killer:	$[kI.ə] \rightarrow [kil.ler]$

We could compare these examples with others showing that gemination does not occur in other words that have the same stress pattern but do not have graphic geminates:

pony:	[ˈpɔː.ni]	rather than	*['pɔn.ni]
beauty:	[ˈbjuː.ti]	rather than	*[ˈbjut.ti]
hacker:	[ˈaː.ker]	rather than	*[ˈak.ker]
meeting:	[ˈmiː.tiŋ]	rather than	*['mit.tiŋ]

This behaviour clearly shows that Italian loans adaptation seems to rely more on orthography rather than actual perception, the only exception to this being those instances of hypercorrectness named before.

In her paper, Repetti (1993) analyses a further aspect that underlines the importance of orthography for stress placement purposes. The starting point is the attempt to understand why in Italian some words have a (C)VV stressed syllable (e.g. *shaker* ['fɛː.ker]) whereas others have a (C)VC stressed one (e.g.

sponsor ['spon.sor]), in other words why in some instances vowel length serves to create heavy syllables, whereas in others branches rimes are the case. What she argues is that the writing system affects the pronunciation of loans in Italian, and that they follow the rules of the Italian writing system so that if in the graphic form the stressed vowel is followed by a single consonant, the vowel will be pronounced as long, whereas if two consonants follow the stressed vowel, then one consonant will serve as a coda and consequently create a heavy syllable with no need of vowel lengthening. It was stated in the first section that vowel length is non-phonemic in Italian, which explains why it only serves to make a non-branching rime heavy for stress purposes; considering this, the choice between (C)VV and (C)VC stressed syllables could logically depend only on the writing system.

We could go even further in trying to prove that orthography plays a leading role in words', and thus also loanwords' pronunciation in Italian, and to do so we should focus on English graphic geminates. Repetti (1993) states that "Italian does not have a rule of consonant gemination in unstressed position" so data presenting words with graphic geminates in unstressed position adapted as phonetic geminates in Italian could effectively prove the influence of the writing system. She provides such data:

 $pullover \rightarrow [pul'lo:.ver]$ $Mississipi \rightarrow [mis.sis'si:.pi]$ $Cincinnati \rightarrow [tfin.tfin'na:.ti]$

According to the Italian rule regulating gemination (cf. first section), it occurs where it serves to provide a coda for a light syllable, thus only after stressed syllables. The data presented before and the one quoted here from Repetti (1993) show that graphic geminates are still treated as phonetic ones in Italian, even though they do not occur after a stressed syllable (but actually before).

What emerges from the data is an interesting divergence in the adaptation process between well-integrated and partially-integrated loans. The logical question that rises is if partially-integrated loans will always be treated as foreign borrowings, or if in due course they will gain the status of actual Italian words like well-integrated ones. If they do, adaptation will not be limited to pronunciation and stress adjustments, but will also include possible elimination or substitution of phones that do not exist in Italian, a possible standard substitution of cacophonous clusters through gemination and, quite obviously, insertion of a word-final vowel to those loans that end in a consonant. There is no precise way in which we could be sure of these further adaptation here and now, but if we look at by now well-integrated loans chances are that one day they will occur. On the other hand, it is also true that nowadays new words are borrowed extremely frequently and the ability of mastering English, among other languages, for Italian speakers has achieved more and more importance. This implies that new loans will probably tend to be adapted as little as possible and to keep their original form. As I pointed out in the previous section, most terms that are borrowed presently are restricted to specific fields and are therefore familiar to people who use them but not to all speakers. This implies that complete adaptation will be less likely for these words, because they are used for specific purposes and not in all-days language.

The data I collected show that modern English loans never seem to be fully assimilated; in fact, Italian speakers seem keen on maintaining their original form rather than adapting them, and this obviously for prestige purposes. An interesting case is represented by those words that appear to have a double stress pattern, one faithful to the original English one and another which is different. There were a few examples of this in the dataset, which I repeat here:

$download \rightarrow$	EN [daʊnˈləʊd]	IT ['daun.lod] [daun'loːd]
hard core \rightarrow	EN [ˌhaːdˈkɔː]	IT ['ar.kɔr] [ar'kɔr]
$copyright \rightarrow$	EN [ˈkɒp.i.rait]	IT [kɔ.piˈrait] [ˈkɔː.pi.rait]
$backup \rightarrow$	EN [ˈbæk.ʌp]	IT [bɛkˈkap] [ˈbɛk.kap]

What these instances show is that some speakers tend to leave stress where it originally was, although an adaptation with a different pattern is common, and in some cases more used. My opinion is that loans whose stress pattern is not changed behave so for hypercorrectness and prestige purposes.

Careful listening suggests that word-final consonants are always subject to adaptations, even if not as clearly as it was for well-integrated loans. As a matter of fact, it seems that Italian speakers always add a "neutral" final vowel to words ending in a closed syllable. This sound may be very similar to a schwa, although it does not belong to the Italian vocoids inventory. This means that all instances that were presented here as ending in a consonant should actually be treated as ending in a $[\vartheta]$, which would logically follow from the Italian grammar's constraints and hence reasonable. Nonetheless, I have not found exhaustive proof of this phenomenon, except for Visconti (see references) who points this out and for personal perception. Future experiments may be useful to prove how wide-spread it is and thus attest the introduction of a new phoneme, i.e. $[\vartheta]$, in the Italian inventory which may remain limited to modern loans adaptation.

– Conclusions

The analysis I have carried out leads to some conclusions on the behaviour of new loans in Italian, which in a way seems to distinguish itself from the way wellintegrated loans were adapted through the past years. What emerges from the data is that adaptation affects phonemes, stress placement and syllabification as well.

As for phonemes, they seem to be borrowed almost unchanged from the donorlanguage output, except for those that are not part of the Italian inventory and that are therefore replaced by existing ones. As it was pointed out at the beginning, the same phonemes have different respective phones in both languages and are therefore adapted according to the language's inventory. The choice for the substitution may be dependent on orthography, like some data show, although a cross-linguistic analysis demonstrate that this cannot be taken for granted.

Stress in loans seems to follow a recurring pattern, i.e. to fall on the penult heavy syllable. There are a few exceptions to this, where stress is placed on the very last syllable of the word or is faithful to the donor-language pattern. Exceptions may be considered as such because specifically marked in the lexicon to behave in a different way. Moreover, there is a bunch of relatively new loans subject to two different stress patterns, which in my opinion depends on the hypercorrectness of the speaker to try and pronounce loans in what can be considered a "more elegant" way, viz. leaving stress where it originally was.

As for syllables, there are several changes that are due to adaptation. Gemination of a consonant after a stressed vowel to create a heavy syllable is very common, although it appears to happen in unstressed position as well, depending on orthography. New loans ending in a consonant have also introduced a "legal violation" of the constraint on Italian banning word-final closed syllables, and thus the concept of last-consonant extrametricality. There are anyway reasons to argue that, still, no words in Italian end in a consonant, since it appears that speakers tend to add a schwa sound at the end of them; further studies may serve to attest this.

Unsurprisingly, orthography seems to play a pivotal role in the adaptation process, especially because most people first learn new words from their written form and are therefore misled by it. Although I did not go into details here, we could argue that also in Italian there is a grapheme-to-phoneme correspondence that regulates pronunciation of "new" words, and vowels are treated in a very interesting way in this respect. New loans do not undergo graphic adjustments, and this is interesting if we consider the fact that they do not undergo full assimilation either. Anyway, this could be a longer process and in future we might discover that in time new loans will be adapted exactly like present wellintegrated loans were.

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