tending to deploy phonemes according to Spanish phonological rules. As regards syntax and morphology, transfer of morphemes and grammatical relations from one language to the other was noted and some effects on word-order. Loanwords were sometimes transferred from one to the other, and given appropriate morphological endings. Lexical borrowing tended to occur when he did not have an equivalent word (expressing the same meaning) in the other language. Fantini also notes some confusion of cultural norms of behavior (e.g., shaking hands or kissing), and some interference affecting conversational and discourse convention.

3. Effects of Bilingualism on Cognitive and Academic Development

In the past, being bilingual was felt by many monolinguals to be profoundly detrimental to a child’s psychological, social, and cognitive development. Hence in Wales in the UK, for example, strenuous efforts were at one time made to stamp out the use of the nondominant language, Welsh, in schools. Such attitudes have long been discredited. Early experimental work that claimed to show the detrimental effects of bilingualism has been shown to have a number of serious methodological weaknesses, including testing in the child’s less dominant language, ignorance of cultural differences that would influence the child’s response to testing, and prejudice on the part of experimenters. More recent research suggests that bilingual children may have some cognitive advantages over their monolingual peers, developing metalinguistic awareness earlier, and displaying more flexibility in cognitive tasks. Baker (1988) presents an excellent discussion of these issues.

Continuing concern has been expressed, however, for the plight of some sequential bilinguals who are required to acquire an L2 rapidly upon commencing education, or following migration to a new country. Results of studies have been misleading. While some children cope well and have an enhanced quality of life and experience as a result of their bilingualism, other groups fail consistently to do well in school. The research centers around the work of Cummins (see Cummins, Jim) and colleagues in Canada who set up and evaluated the highly successful ‘immersion’ programs for English-speaking school entrants acquiring French (see, for example, Cummins and Swain 1986). These children, who were taught by bilingual teachers entirely through the medium of French for the first two years, did well. The conclusion was that this success resulted from careful planning, teachers who understood and accepted English from the child, and the fact that French was a new language for all the children.

Less fortunate children who have to acquire an L2 rapidly in a sink-or-swim context may give the appearance of competence in L2 in day-to-day conversation. However, it is suggested that they may fail to acquire more academic (and less contextualized) language in the early days of formal education when this may be crucial for later academic development. They are still at this stage inexpert in the L2, and do not have opportunities to develop this style of language use in L1, since it is not used in school. These findings remain controversial, but the implications are that carefully planned introduction of the L2, and/or mothertongue programs so that use of the L1 can be maintained and extended into new areas, are desirable. Good bilingual education can then become a positive asset.

See also: Bilingualism, Individual; Bilingualism, Societal; Code-switching: Overview; Language Transfer and Substrates.

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Borrowing

J. Heath

A ‘borrowing’ is a form that has spread from one linguistic variety (the ‘source’) into another variety (the ‘target’ or ‘replica’). In this sense it is nearly synonymous with ‘loanword,’ but a borrowing is often really a stem (smaller than a word), and may be a phrase (larger than a word). Borrowing is also the term for the act of incorporation itself, so there is a certain semantic ambiguity between process and
result in the usage of the term. Although the focus here is on language-to-language transfer (see Language Transfer and Substrates), the concept may also be used when discussing the spread of a form among mutually intelligible dialects of a single language, or even among registers or variants (see Register).

The close analysis of borrowings involves many aspects of linguistic structure—particularly phonetics/phonology, morphology, and lexical semantics. The study of borrowings is of interest to general linguistics because the borrowing language may have several possible ways of incorporating the foreign form into its own phonological, morphological, and semantic systems, and the options implemented may reveal something about deep seated developmental tendencies of the language that are not otherwise clearly evident. But the study of borrowings cannot rely entirely on considerations of pure linguistic structure, however ‘deep.’ Rather, borrowing patterns also reflect the social and historical context in which the language contact takes place. For this reason, borrowings play an important role in historical linguistics and sociolinguistics.

1. Basic Concepts and Terminology

1.1 Borrowing versus Code-switching

The term ‘borrowing’ is semantically misleading from the start, since it implies that the source language relinquishes a form in lending it temporarily to the target language, which is expected to return the form later (with or without interest). It is a historical quirk that the term ‘borrowing’ is used instead of spreading, imitation, proliferation, cloning, or mitosis. However, there is a more substantive terminological difficulty due to the sometimes fuzzy boundaries between borrowing and code-switching.

In extreme cases, the difference between borrowing and code-switching (see Code-switching: Overview) is clear. The word ‘money’ is a thirteenth-century borrowing from French, but few modern speakers of English would be aware of its foreign origin. At the other extreme, a pair of bilingual speakers might converse for a while in pure English, then shift abruptly into French for a ten-minute stretch—because French seems more appropriate to a new topic, because they do not want an enervating English monolingual to overhear them, or for some other reason. In other words, a borrowing is (ideally) a historically transferred form, usually a word (or lexical stem), that has settled comfortably into the target language, while code-switching is (ideally) a spontaneous, clearly bounded switch from sentences of one language to sentences of another, affecting all levels of linguistic structure simultaneously.

However, if actual speech patterns in bilingual environments are observed, one finds that borrowing and code-switching are not always so clearly distinct. For one thing, many borrowings are only partially nativized into the target language, and even monolingual speakers may be conscious of their foreign status. Second, widely used (hence presumably borrowed) forms may have a degree of internal phrase structure that speakers are (to varying degrees) aware of, as when French femme fatale or Latin quid pro quo is used in English. Coming from the other direction, spontaneous mixing of material from two languages most often takes the form of incorporating phrases or words from a foreign language into slots in a clearly primary base language, rather than abrupt shifts from entire sentences of one language to those of another. In other words, borrowings may resemble code-switches in retaining a foreign status and/or a discernible internal structure, while code-switches often resemble borrowings in brevity (words, short phrases) and in being fitted into another language’s syntax.

To deal with such problems, some scholars have expanded the terminology by adding a third term such as ‘code-mixing’ to cover certain intermediate cases such as phrasal code-switching. Still further terms are needed for special cases, such as ‘loanblend’ for combinations of a borrowed and native element, like the German altfäschen ‘old-fashioned’ (containing German alt ‘old’). However, the basic difficulty is not the lack of labels—which could easily be multiplied further—but the intrinsically gradient and fuzzy nature of the continuum, and it is perhaps best to keep the terminology simple while remaining aware of its limitations.

An additional problem in using degree of nativization to distinguish borrowings from code-switches is that nativization may be more advanced on one linguistic level than another. For example, the phonological segments of the foreign form may be closely adhered to, as when an English speaker carefully replicates the voiceless n of the Japanese borrowing sukiyaki, but the prosody (stress, intonation, etc.) may be entirely native. In a case like formulae [formjologi ~ formjolay], some English speakers make a point of retaining the Latin (nominative) plural suffix, even if occasionally mispronounced, but the phonology of the stem is adapted to English, as seen especially in the intrusive [j] before original *n. On the other hand, there are cases like (plural) femmes fatales [fım fút-ul-z], where an English speaker can pronounce the final s [z] as the (English) plural marker, while carefully retaining the segmental pronunciation and even prosody of the French noun phrase. In general, a form may behave like a nativized borrowing on one level, and like a spontaneous code-switch on another. Even on a single level, the extent of nativization of various segments may be inconsistent. In some cases, moreover, whether nativization has occurred is moot, as when a string of
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segments in a foreign form happens to require no phonetic adjustment in the target language, or when (say) a plural ending happens to be shared by the two languages.

1.2 Borrowing versus Transfer

‘Borrowing’ requires an actual copying of forms (stems, morphemes, words, phrases). ‘Transfer’ (also called ‘interference’) is a more subtle result of language contact, whereby inherited forms already in the target language are adjusted in some way under the influence of one or more source languages. If the source language producing the interference is spoken by a dominated group within the speech community, it is called a ‘substratum’ language (frequently a substratum dies out after a few generations, leaving its imprint on the surviving language); if the source is a neighboring language it is called an ‘adstratum.’ Mutual interference may be called ‘convergence,’ and regions containing three or more languages that have converged extensively over a long period of time are called Sprachbünde (singular Sprachbund), using a German word meaning ‘language-association.’ Typological convergence among dozens or hundreds of languages in a major region (USA, Southern Asia) is the focus of ‘areal linguistics’ (see Areal Linguistics), which provides tantalizing maps of trait distribution (without usually being able to trace the myriad of individual historical shifts that produced it).

The most obvious kind of transfer is what is popularly referred to as a ‘foreign accent,’ consisting of several segmental and prosodic features carried over from the source (substratum) into the target language. Under favorable sociolinguistic conditions, an initially foreign accent may become established over time as the norm for the speech community. Language families that result from sudden expansion due to rapid military conquests tend to be highly divergent phonetically (and phonologically) because at least the outlying languages strongly reflect pronunciation patterns of various foreign languages (perhaps subsequently lost). This is a major reason why French (with Celtic and Germanic substrata) and Romanian (in a Sprachbund with an important South Slavic element) seem so different from each other and from Latin, while Italian (particularly as spoken in Tuscany and Rome) retains much of Latin phonetics and prosody. Going back further in time, the rapid expansion of ancient Indo-European languages from their original homeland into western and southern Europe, the Indian subcontinent, and other distant areas is reflected in the radically different phonologies of languages like Old Irish, Old Norse, Latin, Greek, Albanian, Sanskrit, and Tocharian, which makes recognition of cognates difficult. Another major case of rapid expansion was the Arab conquest of (Berber and Coptic) North Africa, Persia, and the Aramaic-speaking Levant.

Transfer is also important in morphology and syntax. While some actual borrowing of affixes can take place (see Sect. 2.5), the more common pattern in a Sprachbund or stable bilingual zone is some borrowing of mutual convergence in the semantics and pragmatics of grammatical categories, with little or on actual borrowing of affixes. For example, Basque (a non-Indo-European isolate) has now cohabited with the Romance languages Spanish and French for nearly two millennia, and it is no accident that Basque has a system of grammatical categories (including perceptive/imperfective aspect, a subjunctive mood, and an infinitive) that resembles those of its neighbors. However, the actual affixes are native Basque forms (with one or two interesting exceptions), and there is little sign of convergence in such formal details as the order of stems and morphemes within the verb or noun.

Morphosyntactic interference is usually gradual, involving many slight rearrangements of native structures, and for this reason it is particularly difficult to distinguish ordinary, language-internal historical change from change due to external interference. In fact, to the extent that each language is a well-integrated grammatical system (a point emphasized by many typologists and functionalists), a sharp distinction between internal and external causation is impossible to make. For one thing, the target language is inevitably selective in undergoing only a subset of the theoretically possible morphosyntactic pattern transfers favored by contact with the source language. For another, any significant change in one component of the target language (e.g., due to external interference) is likely to have an immediate ripple effect, by which other components are adjusted formally or functionally to jibe with or to compensate for the initial change. In actual historical linguistic practice, successful analyses of morphosyntactic change generally consider complexes of external and internal factors simultaneously.

Long-term bilingualism also favors significant semantic convergence in the lexicon, in addition to actual borrowings. John Gumperz and Robert Wilson have claimed that the three languages spoken in Kupwar, a town in India, have converged to the point of virtually complete grammatical and lexical intertranslatability. One form of lexical convergence is the ‘calque’: the recreation, using native material, of a compound or phrase from another language. English ‘skyscraper’ is copied by German Wolkenkratzer (‘cloud-scraper’), French gratte-ciel (‘scrape-sky’), and other European equivalents. English speakers learning another modern European language may fumble a few lexical distinctions, but thanks to an accumulation of calques and other
lexicale con vergences they can count on finding translation equivalents for such words as yes and thank you, and in general do not have to enter a new thought world. They are not so lucky when learning Navajo or Warlpiri, and even Latin poses problems ('yes' is a diffused innovation absent in ancient Indo-European languages, as Antoine Meillet pointed out in 1925).

2. Borrowing Mechanics
In some cases, borrowing a stem presents no special phonetic, phonological, or morphological difficulties. If the stem is the source language happens to consist of segments, syllabic combinations, and a prosodic (e.g., stress) pattern that are already quite normal within the target language, no phonetic adjustment is necessary. This presumably facilitates borrowing between closely related languages, not to mention dialects of the same language. If, in addition, the relevant word class in both languages has a high-frequency form (e.g., the nominative singular of nouns) that lacks affixes, the stem can readily be borrowed in this morphologically bare form, and can then be fed into the regular derivational and inflectional system of the target language in order to create whatever morphologically marked forms (plural, dative, etc.) are needed.

However, in almost all cases of borrowing across language boundaries, at least some of the borrowings require phonological adjustment. Moreover, the target and/or source languages may have inflectional systems that make it impossible to transfer stems in unaffixed form. Insofar as the pronunciation and/or morphology of the source form are clearly nonnative to the target language, choices among several alternatives have to be made.

2.1 Phonological Adaptation of Stems
The first variable is whether the aberrant source form is adjusted to fit the new phonological system, or retains much of its original pronunciation even as it becomes common in the target language. The French borrowing déjà vu occurs in a variety of pronunciations in English, ranging from [deʒa ˈvu] through [deʃa ˈvuː] to [deʃa ˈvjuː]. Here the second variant changes the aberrant front rounded vowel [y] to a more native English vowel (long or tense /u/, realized as [uː]); the third form proceeds to insert [ɪ] between a consonant and this vowel, as in many other English words, so that /u/ is pronounced like ˈvjuː. Clearly the extent of the speaker's (and the community's) bilingualism, and various situational factors, play a role in such variation.

In addition to the degree of nativization, choices must be made among two or more possible ways to nativize the source forms. A foreign phoneme (i.e., a cluster of phonological features) that has no exact equivalent in the target language is likely to be equidistant from two or more target phonemes each differing from it in one feature. For example, French high front rounded [y] in vu is nativized into English as high back rounded [uː], but there is no obvious reason why it could not have been borrowed with a high front unrounded vowel as *[vɪ], both changes involving adjustment of one phonological feature.

It is also necessary to consider suprasegmental aspects of nativization into a target language. Not only does each language have characteristic prosodic patterns (stress alternations, pitch-accent, tone contours, or whatever), but these prosodies often interact closely with segmental phonology. The most significant recent revisions of phonological theory have involved the recognition of previously unsuspected syllabic and rhythmical bases for many phonological phenomena. Thus, English stems borrowed into Japanese must be supplied with a pitch-accent pattern, while multisyllabic Japanese stems entering English must be adapted to the target language's system of alternating stressed and unstressed syllables, as in sukiyaki pronounced [ˈsuːki,jəki] or [ˈsuwki,jəki].

Somewhat similar problems arise when the target (but not source) language is characterized by vowel-harmony patterns (as in Turkish, borrowing from Arabic, Persian, or English), or by rigid canonical shape restrictions on stems (Arabic, borrowing from European languages). Interesting problems also arise when the source or target language is rich in consonantal but weak in vocalic distinctions, while the opposite prevails in the other language.

2.2 Spelling Pronunciations
Because literacy, including multilingual literacy, is now so pervasive, it is almost impossible to understand the phonology of recent borrowing in some regions (notably Europe) without recognizing the mediating role of spelling. Of course, this can hardly be avoided in borrowings from defunct languages, such as newly coined Latinisms, but the issue is also important in connection with living languages. The most obvious demonstration of orthographic interference is the frequent pronunciation of 'silent' letters in borrowed forms, corresponding to zero in the actual source form. Thus, standard dialects of Spanish (both continental and Latin) long ago ceased to pronounce initial /b/, but it is often revived in borrowings into English such as hacienda.

However, there are probably many other cases where a phonological adaptation, though of a type not incompatible with oral transmission, may have been influenced by orthography. In the case of (dejà) vu discussed above (Sect. 2.1), the consistent avoidance of front unrounded *[iy] in favor of back rounded [uː] in nativized pronunciations may have been subtly favored by the orthography (as well as by
other factors including the pre-existing English stem view).

Even when the source and target languages have entirely different scripts, the transcription of source forms in the written form of the target language may result in pronunciation differing from what one would expect from oral transmission. For example, the transcription of sukiyaki in restaurant menus may well have played a role in pointing toward English pronunciations like [suwi-kia-yi]. Had the transmission been entirely oral, the voiceless u would very likely have been missed by English speakers, resulting in a pronunciation beginning with [ski...]. Of course, to the extent that orthographies (which often omit prosodic information) mediate borrowing, the earlier comment about the relevance of source-language prosody must be reconsidered.

Orthographic complications are substantially absent in borrowings that take place in many intertribal, colonial, immigrant, and native-minority contexts, where literacy in the target and/or source languages is low. There are also some contexts where literacy in both languages is fairly high, but where sharp differences in scripts, or puristic avoidance of loanwords in written language, effectively eliminate literacy as a factor in borrowings. One example is European (French, Spanish, Italian, English) borrowings into North African Arabic, which are rarely mediated by written languages. Here, for example, the French high front rounded [y] is often converted into i rather than u, French bureau [byo] is borrowed as [biru].

2.3 Relexification and Hybrid Borrowings
'Relexification' occurs when vocabulary from one source language is largely replaced by vocabulary from a successor source language. This happens in pidgins and creoles (see Pidgins and Creoles: An Overview), but can also apply to borrowed lexicon in less traumatic circumstances. Examples are Third World countries that have been under the successive political and cultural influence of different European powers. In Morocco, Spanish was the first dominant European influence (on the coasts), to be followed by a more thorough domination by French, while English has increased in popularity. In the Philippines, Spanish was the long-term colonial language, but English has completely replaced it under American influence. Former German, Portuguese, Italian, and Dutch colonies or zones of influence (e.g., Tanzania, Angola, Somalia, Indonesia) are in various stages of transition, usually toward English as a sort of neocolonial language.

Because the successor source language has many cognates with the previous source language, 'hybrid borrowings' result. For example, Moroccan Arabic initially borrowed Spanish interés as intîris ('bunk interest'), but most Moroccans know the word in the form antîris. The first syllable has been changed under the influence of French intérêt, the middle syllable is neutral, and the final syllable unmistakably continues the original Spanish borrowing. (For a different type of multiple-source contamination, see Sect. 3.2.)

In many other cases, there is no such residue of the earlier borrowing, which has simply been replaced by a new borrowing from the successor source language. However, when the earlier and later borrowings are similar in form (as when they come from cognates in the two European languages), one may suspect that the historical process was not so much a second borrowing as a kind of updating of the old borrowing, like the partial updating seen in the hybrids.

2.4 Morphological Adaptation of Borrowings
It is true that some borrowed forms are strikingly impervious to visible morphological embellishment in target languages. Thus, a number of borrowings from Berber or other languages into Moroccan Arabic refuse to take the normal definite prefix l-, hence baltêz 'stork(s)' or 'the stork(s),' atay 'tea' or 'the tea'; contrast native kâb 'dog,' l-kâb 'the dog.' Similarly, some English speakers are uncomfortable with adding the English plural [-z] to weakly assimilated French borrowings like bête noire, éminence grise, or femme fatale (while other speakers have no such compunctions).

In extreme cases, a borrowing may be sufficiently inert or unstable morphologically in the target language to make its word-class status indeterminate. In Moroccan Arabic, the borrowing hinri 'hungry, hunger' (a fairly old loan from Andalusian Spanish hambre 'hunger,' but secondarily associated with English hungry) is used indiscriminately as a noun or adjective in a manner not characteristic of native lexical items. A related situation is exemplified by German Gesundheit 'health,' which occurs in English only as an exclamation after someone else sneezes. Such examples might be said to constitute a minor, pidgin-like lexical stratum in the target language.

However, in most cases a borrowed noun or verb stem eventually acquires the normal set of inflectional and derivational possibilities of its word class. When both languages are highly inflected, as is often the case at least for verbal morphology, it is no simple task to decide how a stem from one language is to be transferred to the other. Indeed, target languages often resort to strategies that evade the problem, for example, by borrowing verbs in an infinitive or other relatively simple form and adding a native verb like 'be' or 'do' in auxiliary function, or adding a 'thematizing' derivational affix between the borrowed root and regular target-language affixes.

The auxiliary structure is typical of borrowings from Arabic into Turkish. For example, instead of
attempting to find an inflected form of the Literary Arabic verb ‘to thank’ (perfective stem šakar- with pronominal suffix, or imperfective -škar- with pronominal prefix and suffix) that could be directly borrowed, Turkish took an Arabic verbal noun tašakkur ‘thanking,’ combined it with the native Turkish verb etmek ‘do’ (used here as an auxiliary), and produced the verb phrase teşekkür etmek ‘to thank.’

An example of a thematizing affix is German -ieren, which is used heavily in verb borrowings, particularly from Latin and French: finanzieren, diktieren, etc. Similarly, Mexicanano (Nahuatl) has thematizers such as -oa for borrowing Spanish verbs: costar-oa ‘to cost’ (Spanish infinitive costar).

2.5 Borrowing of Grammatical Morphemes

Linguists have sometimes argued that while lexical stems are readily borrowed, the morphosyntactic systems of each language are so tightly structured, and so far below the level of consciousness, that they do not permit direct borrowing of affixes and other bound forms from other languages except in peripheral cases. However, it is known that borrowing of bound morphemes is less rare than previously thought.

To begin with, it turns out that subordinating or conjointing particles (‘because . . .’; (so that . . .’), etc.) are rather easily borrowed in some contexts, including colonial or postcolonial zones where native languages have borrowed heavily from an overlain European language. Such particles are mechanically rather easy to integrate into the target language, since they typically occur at the beginning or end of the clause and can therefore be appended to the periphery of what is otherwise an intact clause in the target language. For example, younger speakers of many languages spoken in Francophone West Africa (Senegal, Mali, Burkina Faso, etc.) routinely use French mais ‘but,’ parce que ‘because’ (locally pronounced [paska]), pour que ‘so that,’ a moins que ‘unless,’ and similar clause-introducers, so that their complex grammar is at least superficially quite different from that of their grandparents. Hill and Hill (1986) report that many Spanish connectives and other particles like pero ‘but,’ para ‘in order to,’ and porque ‘because’ are common in modern Mexicanano (Nahuatl).

However, the introduction of a foreign affix into target-language word morphology is more problematic. Sometimes a source-language plural (or definite) affix acquires a precarious foothold in the target language when unaffixed/affixed pairs are borrowed, as in English formula, plural formulae from Latin, or Moroccan Arabic pisin, definite lapisin ‘(the) swimming pool’ from French la piscine. When such affixes occur also with nonborrowed stems, the question arises whether the affix was directly borrowed as such, or whether it was secondarily isolated by target-language speakers after digesting a number of such paired borrowings. For example, the minor English suffix -ette (from French) is used with non-French stems, not always in the original diminutive sense (kitchenette, majorette). However, it is difficult to describe the formative process in question as direct affix borrowing. Rather, English may simply have had a sufficient stock of double borrowings from French, like cigar and cigarette, to permit monolingual English speakers to recognize -ette as a derivational ending and to extend it (sporadically) to new combinations. When the source language has many lexical doublets involving a high-visibility derivational ending such as -ette, by the time the target language has absorbed a few hundred borrowed stems its native speakers are likely to segment the affix and may then expand its usage.

More difficult to borrow are true inflectional affixes, such as pronominal-agreement or tense/aspect/mood affixes on verbs, and case affixes on nouns, but a number of cases have been known for some time and many others have been reported. In one Romanian dialect, certain pronominal endings on verbs have been altered under Bulgarian influence: *afli ‘I find’ became aflum, and *afli ‘you find’ became aflis (the local Bulgarian endings are -am, -iš). In 1953, Uriel Weinreich explained this in terms of the sheer productivity of the relevant Bulgarian paradigm, which helped it ‘overflow’ into Romanian, but also in terms of the pre-existing ‘congruence in structure’ of verbal paradigms in the two languages. Later theory tends to emphasize two points: (a) the initial phonological similarity between Romanian -i and Bulgarian -iš as a kind of phonological catalyst, and (b) the increased phonological distinctiveness of the resulting paradigmatic endings. While factor (a) helps make the crosslinguistic morpheme association possible, (b) is more teleological, suggesting ‘formal renewal’ of a categorial distinction (threatened with neutralization due to phonetic erosion) as a therapeutic or functional basis for this type of borrowing.

One may conjecture that borrowings like this Romanian one take place in communities with heavy long-term bilingualism, resulting in frequent sentence-internal code-switching whereby Bulgarian words and phrases are inserted into Romanian sentence frames, leading to a certain blurring of the boundary between code-switches and borrowings.

3. Borrowing Routines

3.1 Historical Development of Routines

Studies of twentieth-century borrowing patterns, particularly in (ex-)colonies with a dominant European language, suggest that relatively streamlined ‘routines’ for instant borrowing of foreign stems
(including verbs) are developed over decades or centuries, after an early period of more sporadic and uneven borrowing. Because some early-period borrowings become stable lexical items in the target language, at later stages it is possible to recognize them as an archaic ‘borrowing stratum,’ distinct in type from the wave of later and incoming borrowings (including on-the-spot adaptations) that obey the existing productive routines.

As noted in Sect. 2.4 the principal routine for nativizing European verbs into Moroccan Arabic is to borrow the Spanish infinitive form in -ar (-er, -ir) as the Moroccan stem, and to borrow a composite of French forms (differing from one French conjugation to another) characterized by a final front vowel as the Moroccan imperfective stem. However, examination of early colonial borrowings that have survived, and the direct testimony of colonial-period publications, show that these routines were not automatic in the earlier periods. Some early borrowings appear to have been based on shorter source forms (vowel-final forms in -ar or -e for Spanish, and consonant-final unsuffixed forms for French). Thus French désérer ‘to desert (from army),’ a familiar military term in the colonial period, is recorded in Moroccan as zriti or zri, showing reduction of French vowels to fit typical Moroccan verb shapes, and fluctuation between vowel- and consonant-final form; if it were to be (re)-borrowed using existing borrowing routines, it would take the form *dizir, retaining the original syllabic structure and ending obligatorily in i.

Routines develop when a particular pattern of source/target phonological and morphological correspondences—not necessarily dominant in the earliest borrowing stratum—succeeds in becoming the productive method for incorporating new borrowings. A fully streamlined routine, which may emerge only after decades of community bilingualism, permits instant borrowing (e.g., application of target-language affixes) of any source-language form of the appropriate word- or conjugation-class. Routines permit Moroccans who know French to toss off forms like ma ta-y-t-yyutilizi-w-ř ‘it is not used,’ where the very un-Arabic-looking French verb utiliser ‘use’ is flanked by strings of Moroccan Arabic affixes and particles to create a sentence nucleus.

3.2 Relexification and False Routines

In Sect. 2.3, it was pointed out that a borrowed stem may be a hybrid, by which an early borrowing from one source language was later partially (e.g., in its first syllable) reshaped under the influence of a cognate from a new source language. However, there is also another type of hybridization found in these contexts in which routines play an important role.

When one European language gives place to another as the source of new borrowings for a native language in this situation, old borrowings from the first source language are secondarily associated with cognate forms in the successor source language. A Filipino, speaking Cebuano and English (but not Spanish), will notice many apparent English-Cebuano verb correspondences such as cultivate/kultivar and complicate/kumplikar. Of course, the Cebuano forms are historically from Spanish -ar infinitives cultivar and complicar, but, with the near-disappearance of Spanish as a second language in the Philippines, English/Cebuano bilinguals conceptualize the correspondences as a routine ‘add -ar to the English verb.’ This results in occasional pseudo-Spanish forms like Cebuano kumplinar ‘complain’ which can only be based on English (cf. the unrelated Spanish synonym quejarse ‘complain’). In Moroccan too, -ar (modeled on early Spanish borrowings) is recorded in a few French borrowings like sihar ‘to sign’ (the Spanish synonym es firman), and stem-final -i (typical of true French borrowings) is to be found in the first verb borrowings from English such as (slang) spiki ‘speak (English).’

Some of these ‘false routines’ produce only a handful of forms and then sputter out, giving way to emerging routines better adapted to the new source language. The Moroccan form sihar has been largely replaced by (or update as) sihi, sini, or sni.

4. Borrowing in Social and Historical Context

4.1 Official Languages

In the modern world, much borrowing into standard languages is mediated by multilingual literacy and may be literally controlled or monitored by official organizations or committees. Scientific and other academic terminology, for example, typically takes the form of neologisms coined from Latin or Greek compounds. These terms pass easily from English to French to Spanish, or vice versa in any direction—the suffixes are adjusted to the local language by well-oiled routines, the orthography of the stem is otherwise largely retained, and local spelling pronunciations emerge. It is debatable whether these international words can even be called borrowings—the original compounds may never have existed in Classical Latin or Greek, and it is often unclear whether one modern language X has borrowed the terms from a particular other modern language or has simultaneously (re)-created the classical neologism using its own Latin-to-X routines.

The role of advertising and (other) propaganda also deserves a mention. At the time of writing, the world had been bombarded with perestroika and glasnost, Russian terms that have become synonymous with administrative reforms in the former Soviet Union. Television audiences in the USA have likewise been saturated with commercials from Volkswagen emphasizing the word Fahrvergnügen ‘pleasure of driving (or traveling).’ By virtue of their
poverty and foreignness, such terms combine a (theoretically translatable) general meaning with a precise, almost proprietary association to a particular government or corporation.

For a very different aspect of the role of official institutions in borrowing, see Sect. 4.7, Purism.

4.2 Colonial (and Postcolonial) Contexts

For the purposes of this article, the label ‘colonial’ is applied to any system in which the large majority of natives are politically, economically, and/or culturally subordinated to one of the world’s hegemonic powers. This applies to some so-called ‘protectorates’ (e.g., Morocco), ‘administered territories’ (e.g., Puerto Rico), ‘zones of influence’ (e.g., Palestine), and annexed lands treated as provinces (e.g., Algeria), as well as to nominal ‘colonies.’ Moreover, most independent former colonies are included, as they have usually become more dependent culturally on the former colonial power than during the colonial period itself because of the huge postcolonial expansion of formal education, literacy, and broadcast media.

The extent of borrowing from colonial to native languages depends, to begin with, on the length of time involved and on the extent of actual colonial penetration. Some coastal regions were of interest to the colonial power essentially because of a port or to protect a sea lane; other colonies were valued as buffers against other hegemonic powers. Still others, like India and Algeria, were intensively colonized—settlers were brought from the home country to exploit local agricultural or other resources, modern European quarters arose beside native towns, natives worked for Europeans as laborers and domestics, and at least a small native elite was educated in European-type schools. With mass education, usually after independence, the colonial language took on a new importance, and the former power usually took pains to maintain its cultural (and hence political and economic) influence by sending teachers and textbooks, and by bringing native students and other visitors to the European country. In many parts of the Third World, the former colonial language is now an important vehicle for intertribal and regional communication (e.g., French and English in Africa).

If there is a consistent colonial language throughout this political sequence, one can expect a fairly standard ‘life cycle’ of borrowing patterns. At first, few natives speak more than a pidgin-like approximation to the colonial language, and colonial words are absorbed only painstakingly into the native (target) language, with significant phonetic distortion, morphological fusion or missegmentation, and speaker-to-speaker variation. Over several decades, at least partial bilingualism becomes widespread, a few hundred borrowings with recognizable connections to the colonial source form have become established (so that models are available to establish source-to-target equivalences), and new borrowings more closely adhere to the pronunciation and exact sense of the source form. Sentence-internal code-switching has become common in the fluently bilingual segment of the native population, and the distinction between code-switching and borrowing begins to break down. Routines have been developed to borrow verbs as well as nouns, so that lexical stems can be spontaneously borrowed (i.e., inserted seamlessly into a native-language frame). Patterns of borrowing and code-switching diffuse to some extent throughout the native community, but there is always a sociolinguistically significant asymmetry between young and old, urban and rural, privileged and underclass.

The whole system is, of course, disrupted by a sudden replacement of one colonial language by another, as when German or Italian colonies and zones of influence were reallocated after World War II. In the second half of the twentieth century, there has been a more gradual worldwide shift in favor of English, which is fast becoming an important and popular second foreign language even in the most strongly entrenched, defiantly non-English region of the Third World (Francophone West Africa). Some linguistic phenomena associated with reflexification of borrowed vocabulary in such contexts were touched on in Sects. 2.3 and 3.2.

4.3 Diglossia

‘Diglossia,’ a term introduced by Charles Ferguson (See Ferguson, Charles A; Diglossia), is the cooccurrence in a community of sharply different H and L (‘high’ and ‘low,’ i.e., official versus vernacular) varieties of the same language. The somewhat provocative labels high and low generally reflect the attitudes of native speakers, not of the sociolinguists who study the systems. To some extent, any language that is spoken on the streets, is written, and is used in schools and other formal contexts is characterized by some high/low variation, but the term ‘diglossia’ is most often applied in cases like Arabic and (Modern) Greek, where the language of writing (and of lectures and news broadcasts) is quite distinct from the modern vernacular. Standard Literary Arabic, for example, is close to the language of the Qu’ran and does not vary from one Arab country to another, while dozens of mutually unintelligible vernaculars have developed, from Timbuktu to Central Asia, in the intervening 1300 years. Until the Romance languages became widely used in writing during the Renaissance, one could describe their relationship to Latin as diglossic, though for the illiterate masses the matter was mostly irrelevant to daily life.

Diglossic borrowing (from the H variety into the spoken L form) is rather similar to borrowing from a colonial language. Again a local vernacular is up
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against a dominant international or at least supraregional variety used in schools, writing, and broadcast media, in a world with ever increasing literacy and exposure to media. Accordingly, the type of vocabulary that is borrowed from the H to the L variety tends to be of the same semantic types as in colonial contexts. In Morocco, where the local Arabic dialects borrow both from French and from Literary Arabic, these latter compete as suppliers of new borrowings, and although there is a partial division of labor (Literary Arabic for Islamic subjects, French for sports), this division is not sharp and is being undermined by shifts in official language usage (the gradual Arabization of the educational system and the bureaucracy). Because the diglossic H form is not considered foreign, there is no puristic weeding out of diglossic borrowings (as there often is with foreign ones).

Mechanically, diglossic borrowing is much more straightforward than borrowing from unrelated or distantly related foreign languages. Since the vernacular already shares many true cognates with the H variety, phonological and morphological correspondences are usually obvious, and new borrowings can simply follow these correspondences. Some diglossic borrowings may form an identifiable lexical stratum by virtue of containing a sound or other feature not characteristic of the L variety, like Moroccan su’al ‘question’ (glottal stops occur in Literary but, except for such borrowings, not in vernacular Moroccan). However, large numbers of diglossic borrowings blend imperceptibly into the L variety.

Subordinating particles and connectives noted above (Sect. 2.5) for bilingual borrowing are also important in diglossic borrowing. For example, younger Moroccans regularly use such Literary Arabic clause-introducers as bi’na ‘that’ (quotative) and li’amma ‘because’ instead of older dialect forms, a change with important syntactic ramifications.

4.4 Native Minority Communities

In the colonial cases discussed in Sect. 4.2 the politically dominant group is less numerous than the native population. However, there are also cases, notably in the Americas and Australia, where the native ethnic groups have been overwhelmed numerically by the intruders and have come to function permanently as ethnic minorities. A considerable variety of linguistic scenarios can develop in the situation, depending on such factors as the size, degree of intactness, and isolation of the minority groups, as well as less easily measurable cultural phenomena. Thus, in the Americas, the number of speakers of Nahuatl and Quechua, or even Navajo, has assured the vernacular viability of the languages despite extensive bilingualism with English or Span-

ish; some much smaller groups in the pueblos or canyons of Arizona and New Mexico have remained relatively intact due to conscious resistance to cultural domination. On the other hand, many Native American and Australian languages have already disappeared and others are dying off.

As long as the minority language (see Minority Languages) remains viable as a vernacular, the type of borrowing observed is similar to that found in ordinary colonial situations like Morocco, the Philippines, and Indonesia. However, as minority languages lose their viability and head toward eventual extinction, more extreme phenomena connected with ‘language death’ (see Language Maintenance, Shift, and Death) are observed. The native language, whose grammar is subject to simplification and instability among marginal speakers (e.g., when addressing monolingual grandparents), ceases to be the unquestioned base language for code-switching and the target language for borrowing. Instead, some form of the dominant majority language comes to be used among younger members of the minority group. At a certain point, the native language, along with other forms of traditional behavior associated with aged persons, comes to be viewed by the newer generation as a quaint anachronism or a symbol of low status, and as their elders die off the native language vanishes with them.

In this drastically altered landscape, one might still be able to speak of a ‘minority dialect’ (e.g., Native American English) of the majority language spoken among members of the minority. In some cases, a pidgin or creole may have developed among the natives, the lexicon coming mostly from the majority language (see Pidgins and Creoles: An Overview); later on this will slowly decreolize, producing a narrower continuum with the standard form of the majority language (an example is Australian Aboriginal English). In less extreme cases, the most consistent marker of the native dialect may simply be a noticeable accent. However, even as the minority dialect shows signs of merging completely with the standard majority language, a small number of highly visible and symbolically important borrowings from the original native language are maintained or even resurrected as expressions of ethnic identity. It is debatable whether such forms should be considered as borrowings into the majority language, or as the residue that has survived a continuous piecemeal replacement of minority by majority language material.

4.5 Immigrant Communities

Until the early-twentieth century, immigrants to the Americas could, if they wished, obtain unoccupied farmland and recreate in the New World the towns they had left behind. Since then, immigrants have
formed ethnic neighborhoods or small kin-based networks, usually in large cities. A wide variety of attitudes and behaviors toward language are observed within immigrant families, whether the children came with the parents or were born in the host country. Sometimes the parents attempt to maximize the use of the ethnic language (and ethnic culture in general), an approach that may reflect the hope of returning to the motherland, but may also be associated with strong parental control of children's behavior. Alternatively, some parents make explicit decisions to shift to the new majority language, an approach that may be consciously intended to improve the children's educational and career prospects.

In any event, sociolinguistic forces within immigrant neighborhoods or even simple families are extraordinarily complex, as the choice of spoken language becomes a critically important and easily manipulable symbol of identity. Moreover, in such communities there is considerable asymmetry in degrees of mastery of the respective languages, not only across generations but also, say, between elder and junior siblings within a family. Unless the ethnic community is regularly replenished by new waves of immigrants, linguistic assimilation is usually complete no later than the third generation (the second born in the new country). However, even at this stage, if ethnic identity has retained any significance in the host country, interesting ethnic varieties ('ethnolects') of the majority language may persist, consisting of a slight accent along with a repertoire of lexical items borrowed (or retained) from the ethnic language. Some of these lexical items are not understood by nonmembers, so the variety can function as a litmus test for ethnicity and as a barrier. A third-generation immigrant who smiles at the quaintness of his/her grandparents and has no strong identification with the old country may nonetheless find considerable satisfaction in using the ethnolect with peers, since it effectively expresses a special, intermediate identity.

Under very particular conditions, ethnic languages and dialects can endure over centuries. This happens when minority ethnic or religious groups coexist with majority populations over many generations but remain residentially and socially segregated. Jews in Europe and in Arab countries, particularly before the Nazi genocide (1939–45) and the mass immigration to Israel (after 1951), furnish many examples. The boundaries between Jews and Gentiles in some regions were sufficiently sharp to permit long-term coexistence of mutually unintelligible languages (Yiddish and Ukrainian; Judeo–Spanish and Bulgarian; Judeo–Arabic and Berber). In other cases, local populations of Jews and Gentiles spoke structurally quite distinct dialects of the same language (Yiddish and German, Judeo–Arabic and Muslim Arabic). Under late-twentieth-century conditions in Europe and the USA, some but by no means all Jews can still be readily identified by accent (especially in New York City and Philadelphia, where there are large Jewish concentrations). Some speakers can switch into an in-group, Jewish English ethnolect (often known as 'Yinglish') involving a variable amount of Hebrew and Yiddish vocabulary in an English base.

4.6 Decolonization
A pidgin is a relatively unstable variety developed in marketplaces, plantations, and similar environments for limited communication among native speakers of different languages; a creole is a pidgin that has become a native language for a new generation and has stabilized its grammar accordingly. Most pidgins and creoles (see Pidgins and Creoles: An Overview) are lexically derived from a European language (English, French, Portuguese, etc.). Of interest here is the fact that creoles tend to undergo extensive grammatical and lexical change subsequent to their emergence.

In many cases, the creole continues to be in a diglossic relationship to its original lexifier language—creole and standard English in Jamaica, creole and standard French in Haiti, creole and standard Portuguese in the Cape Verde Islands. In this case, the diglossic borrowing patterns described in Sect. 4.3 are applicable. The resulting convergence of the creole with the lexifier language is called 'decolonization.' In such contexts, there is a continuum of varieties ranging from the 'acrolect' (the standard European language) through the intermediate 'mesolect' to the 'basilect' (closest to the original creole), with the long-term tendency generally a contraction of the continuum around the acrolectal pole.

However, the vicissitudes of politics may result in the superimposition of a distinct European language on the creole. Tok Pisin (spoken in Papua New Guinea) is usually classified as an English-based creole, but it originated as a German-based creole (or pidgin) and was relexified when German power ended in the region. A major topic in creolistics is the difficult philological unraveling of similar replacements of lexifier languages in the early development of other pidgins and creoles, such as Papiamentu (Guianas) and Hawaiian Pidgin. In any event, relexification is basically the same process whether the target language is a creole or an ordinary language with a large stratum of borrowings (cf. Sect. 2.3) (see also: Pidgins and Creoles: Morphology; Pidgins and Creoles: Models).

4.7 Purism—The Target Language Fights Back
Even in unofficial contexts, borrowing (and code-switching) has powerful symbolic connotations. In many cases, borrowings are highly conspicuous.
perhaps because of some telltale phonological or orthographic feature or just because most people know they are foreign. Borrowings are therefore a prime target of linguistic nationalists and (other) purists, who find them an insult to their language.

The formative period of Modern Turkish is an instructive example. Under the influence of a charismatic political leader, Atatürk, Turkey emerged as an independent country after World War I, and promptly set about refashioning its cultural and political allegiances, shifting away from the Arabo-Persian sphere into the European one. The Arabic script that had been used in Turkish under the Ottoman Empire was thrown out in favor of the Latin orthography still in use. Official committees sifted through the lexicon, throwing out hundreds of well-entrenched Arabic and Persian borrowings, and incorporating many new borrowings from European languages. In case this latter development was interpreted as a challenge to Turkish sovereignty, the 'sun language' theory was propounded, claiming that Turkish was the original human language, so that borrowings from European languages were longest brethren being belatedly reintegrated into the fold.

Every modern standard language has passed through periods of intense lexical development, and in each case an elite group had to decide how to produce new vocabulary. The Romance languages, and to a large extent English (with its significant component of French borrowings dating to the Norman period), mined Latin and to some extent Greek for much of this vocabulary. The development of standard German took a mixed approach, accepting some of this Latinate vocabulary (along with many French borrowings), but self-consciously balancing them with internally generated German compounds—often transparent calques like Fernsehen modeled on television ('distant-seeing'). When literary Arabic was developed in the early Caliphate, Greek academic vocabulary was the semantic model, but new vocabulary was generated from Arabic roots using various derivational mechanisms, rather than by direct borrowing from Greek, and written Arabic continues to avoid European borrowings. Scholars engaged in the development of other standard languages (Basque, Swahili, Tok Pisin) continue to agonize over this perennial issue. In the case of standard French, the elite is less concerned with expanding an already impressive vocabulary than with stemming an unseemly flood of English borrowings.

4.8 Borrowing and Special Registers

While the conspicuousness of borrowings makes them anathema to the patriotic purists, it may also make them attractive in various special contexts. A sprinkling of foreign words gives sociolinguistic content to an ethnolect (Sect. 4.5), and a je ne sais quoi of erudition to a highbrow conversationalist. Urban street slang is a fertile ground for borrowings, at least in bilingual areas. Moroccan slang (from Fez) provides such examples as kambu 'country bumpkin', hick' (old borrowing < Spanish campo 'field'), zwadri 'pal, brother' (playful mixture of Moroccan ya-brother' and the Spanish kin-term type seen in madre and padre, with the canonical shape CCaCCI influenced by a Moroccan derivational formation of this template), the diglossic slang expression f-radama 'terrific!' (< Literary Arabic 'magnificence' or 'majesty'), and the English loan ti-stima 'get stoned (on drugs, etc.).'

See also: Language Transfer and Substrates; Contact Languages; Koinés; Intertwined Languages; Code-switching: Overview.

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Code-mixing

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The term 'code-mixing' is a fluid one that overlaps with 'code-switching' and 'mixed code' (see Code-switching: Overview; Intertwined Languages), but can be distinguished from them in some ways. However, the terms are sometimes used interchangeably and not all contact linguists (including the influential Myers-Scotton, see Myers-Scotton, Carol) would agree that the terms are distinguishable. Milroy and Muysken (1995: 12) describe the failure of prominent researchers working on a European