RULE BORROWING

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An ongoing debate in historical linguistics revolves around the general question of borrowability: Are there constraints that bar certain kinds of linguistic features from being transferred from one language to another in language contact situations? Historical linguists are in general agreement that the most common, and most easily identified, interference features are words. There is also general agreement that new phonological, morphological, and syntactic rules can enter a language as a side effect of lexical borrowing. For instance, the inherited English stress rule was simple: stress the first syllable in the word. Massive lexical borrowing from French after the Norman Conquest of 1066 destroyed this simple rule for the lexicon as a whole, replacing it, on one account, with a complex rule that is supposed to account for both native and borrowed English words: stress the penultimate vowel in the word if the final vowel is lax and is followed by no more than one consonant, but stress the last vowel in the word if that vowel is tense and/or is followed by more than one consonant (Chomsky & Halle 1968:70). But those who believe in the existence of this rule do not believe that the rule itself was borrowed from French, because French has no such stress rule; instead, those who accept(ed) Chomsky & Halle's English stress rule would argue that it was abstracted by English speakers from the lexicon as enriched by thousands of French loanwords.

Similarly, English speakers who pluralize the borrowed noun phrases *poet laureate* and *court martial* as *poets laureate* and *courts martial*, maintaining the Noun-Adjective word order of the source language, are not applying a rule that was borrowed **as a rule** from French or Latin; they are merely using a borrowed singular phrase and a plural phrase that was

borrowed separately, even if (for some speakers) such formations currently have the status of a minor rule. Occasionally we find analogic extensions that provide evidence for speakers' innovative application of a rule abstracted from borrowed lexical items. So, for instance, borrowed Latin singular forms like *alumnus, bacillus, stimulus* and the corresponding borrowed Latin plurals *alumni, bacilli, stimuli* have given rise to a minor English rule for plural formation in foreign-seeming nouns, and this rule has been extended to words which, like *octopus*, never had such a plural etymologically. Some English dictionaries give alternate plural forms *octopuses* and *octopi* for this noun, but not the etymologically expected *octopodes*. (The word is originally a Greek compound comprising *octo-* 'eight' and *pous, pod-* 'foot'; it does not contain the Latin noun suffix *-us* that usually corresponds to a Latin plural suffix *-i*.)

For processes like these, there is no controversy. What is involved is lexical borrowing followed by the abstraction of a rule from the individually borrowed lexical items, not rule borrowing per se. The genesis of the rule takes place in English and the rule is created by English speakers; it does not enter English as part of the borrowing process. Before moving on to examples for which a process of rule borrowing itself might be proposed, we need a definition of 'rule'. For this purpose, the ideal definition will not be theory-internal, but will instead be maximally inclusive. Trask offers a definition that works well (1993:245): a rule is

> 'any statement expressing a linguistically significant generalization about the grammatical facts of a particular language, especially when formulated within the formalism of some particular formal description...'

This definition covers not only traditional generative rewrite rules but also lexical generalizations, Optimality Theory 'constraints', and other generalizations that typically lack arrows

in graphic representations. The topic of this article is thus language change through the transfer of generalizations from one language to another.

A slightly less obvious example is found in Asia Minor Greek, which has borrowed massively from Turkish in all grammatical subsystems—lexicon, phonology, morphology, syntax, and (though the most comprehensive source of information, Dawkins 1916, does not provide many examples) lexical semantics. The most-affected Greek dialects have a vowel-harmony rule that matches the Turkish rule closely, applying both to Turkish loanwords and to native Greek vocabulary. This could easily be another instance of a rule abstracted from borrowed lexicon and then extended to native words, analogous to (but more systematic than) the analogically extended Latin-origin English plurals in *-i*. But the picture is complicated by the fact that the vowel harmony rule is inconsistently applied, even in Turkish loanwords: the word *ǰuván-us* 'a youth' is a Turkish loanword (though ultimately it comes from Persian), and its plural in Asia Minor Greek is *ǰuván-iri*. This plural form would violate the Turkish vowel harmony rule, according to which (among other things) a suffix-initial vowel must agree in the feature [back] with the last vowel of the stem (Dawkins 1916:47, and see also the discussion in Thomason & Kaufman 1988:218). Elsewhere, however, the same dialects contrast front-vowel and back-vowel plural suffixes in native vocabulary, e.g. *kléfč-iri* 'thieves' vs. *ártup-uri* 'men', as well as in borrowed Turkish words. Inconsistencies of this type suggest that bilingual Greek speakers might possibly have borrowed the rule itself, independent of the loanwords that would have provided evidence for it. (The relevant speakers would presumably have been primarily members of the Greek speech community, because speakers with Turkish as their first language were much less likely to know Greek than vice versa.) Dawkins makes an observation that hints at manipulation, probably unconscious, by bilinguals who regularly spoke Turkish in addition to Greek (1916:68):

'The fullness with which the vowel harmony is observed clearly depends on how

far the individual speaker is accustomed to talk Turkish and has the Turkish ear for these distinctions...It [is] more or less prevalent and thorough in proportion as more or less Turkish is spoken alongside of the Greek dialect.'

A search for cases of rule borrowing turns up all too many indeterminate examples for which, as with vowel harmony in Asia Minor Greek, a case could be made for or against a process of rule borrowing. One type of indeterminacy is delayed-action syntactic change that ultimately, but not immediately, results from the borrowing of a grammatical morpheme. An especially clear example is the ongoing change in noun-phrase coördination in Siberian Yupik (Menovščikov 1969:128, and see also Thomason & Kaufman 1988:55-56). The starting point was the Yupik suffixal construction, with the comitative suffix *-łju* 'with' (1a below). Then the conjunction *ɨnkam* 'and' was borrowed by Yupik speakers from the Paleosiberian language Chukchi and used in double-marked coördinate constructions (1b). Finally, the native Yupik suffixes were dropped and NP coördination was expressed solely by the borrowed conjunction (1c) (all three sentences in ex. 1 mean 'on the tundra live birds and beasts'.

PLACE EXAMPLE 1 ABOUT HERE.

But the historical sequence of events described here is inferred, not actually attested: Menovščikov found all three constructions in use in Siberian Yupik. The hypothesized sequence is of a common type, with double marking—here, the comitative suffixes on the nouns plus the borrowed coördinate conjunction—as a transitional stage between the original construction and the final construction containing only the innovative form (regardless of whether the innovation is expressed by native or borrowed material). Menovščikov does not, unfortunately, say which speakers used which variants (so that we can't know whether, for instance, the oldest speakers used only constructions like 1a and the youngest speakers only constructions like 1c), but it still seems reasonable to posit a historical transition corresponding to (1)a-c.

The important point in the present context, however, is that the borrowed conjunction arguably had at first only a minor impact on the language's syntactic structure, when it was inserted into coördinate NPs as in (1)b. The more significant structural change, abandonment of the comitative suffixes entirely, happened some time after the initial borrowing: that is, even if the historical transition was not sharply marked by a temporal separation between the three variants in (1), constructions like (1)c surely appeared later than constructions like (1)b. But in that case, the end-stage rule—NP coördination via conjunction alone—was not itself borrowed from Chukchi; only the lexical item, with part but not all of its structural baggage, was borrowed. Even if Yupik speakers moved to the stage represented by (1)c as a result of continuing fluent use of Chukchi, we still can't prove that the rule itself was borrowed.

Comparable examples are reported from other contact situations, for instance Pipil (a Uto-Aztecan closely related to Nahuatl) in contact with Spanish in El Salvador, as reported by Harris & Campbell (1995:147-149, citing Campbell 1987, 1985). In particular, new relative clause constructions have been innovated in Pipil that make use of the relative marker *ke*, a borrowing from the Spanish relative marker *que*. But since the Pipil examples, like the Siberian Yupik example, begin with lexical borrowing, they cannot be considered indisputable instances of rule borrowing.

Another type of indeterminate example is one in which a rule is lost, not gained, under the influence of another language that lacks the rule. For instance, just as the Indo-European language Asia Minor Greek (partially) adopted a vowel harmony rule under the influence of Turkish, so certain dialects of the Turkic language Uzbek lost their inherited vowel harmony rule under the influence of Indo-European, specifically the Iranian language Tadzhik (Menges, Comrie 1981:65-66). But although this change obviously alters the phonological rule system of the relevant Uzbek dialects, it is not evident that "rule deletion" is a plausible candidate

for a borrowed rule. Examples like these, then, will also not provide evidence that rule borrowing is possible.

Yet another type of contact-induced change that is problematic for claims of rule borrowing is one in which, although the receiving language does change significantly under the influence of the source language, both of the resulting constructions existed in the receiving language before the source language influenced it. In such cases the change is in the frequency and/or the distribution of a pre-existing construction; it is not a case of adopting a completely new rule. Asia Minor Greek again offers an example. In the most-affected dialects, the inherited Greek definite article has been almost entirely lost, but it is retained in the accusative case, the only place in Turkish grammar in which definiteness is expressed morphologically (Dawkins 1916:46, 87). This dramatic alteration in the morphosyntax of the Greek article is certainly due to Turkish influence; it cannot be coincidence that the article has come to be used always and only where Turkish employs an accusative case suffix, namely, to mark a definite object. It is also evident that what has been borrowed into Greek is the pattern of definiteness marking, because there is no borrowed Turkish morpheme and Greek retains its inherited morphosyntactic means of expressing definiteness. Still, from the viewpoint of Greek structure, the change is in frequency (much reduced) and distribution (greatly restricted) of article usage. Skeptics who prefer to believe that rule borrowing is impossible will therefore reject examples of this sort on the grounds that no entirely new category has appeared in Greek.

A final type of change that is indeterminate from the perspective of rule borrowing is a process through which the receiving language does indeed get a new rule as a result of influence from the source language, but the new rule is not identical to the source-language rule. The question here is whether it is reasonable to talk about rule borrowing when (in effect) only part of a rule has been borrowed. Interference in Ethiopic Semitic languages

from Cushitic languages whose speakers shifted in large numbers to Semitic provide two relevant instances of morphosyntactic borrowing. The Semitic languages that were most heavily influenced by Cushitic have replaced the inherited Semitic rules for expressing two morphosyntactic categories by Cushitic rules, but only partly. In both cases the grammatical morphemes themselves do not change; they were and are native Semitic affixes. First, the inherited Semitic formation of the negative perfect consisted of a verbal prefix; Cushitic, in sharp contrast, expresses the negative perfect by means of a verbal suffix. Ethiopic Semitic uses a prefix-Verb-suffix construction, combining the Semitic prefix with a copy as a suffix. The resulting construction is neither purely Semitic nor purely Cushitic. The addition of the suffix to the negative perfect construction is obviously due to Cushitic influence (and this analysis is supported by the existence of a wide range of Cushitic features introduced into Ethiopic Semitic), but the end result is not identical to the equivalent Cushitic construction. Second, the inherited Semitic formation of the causative also consists of a verbal prefix. The relevant Cushitic languages form the causative with a doubled verbal suffix. Ethiopic Semitic forms the causative with a doubled prefix—maintaining the placement of the causative affix but adopting the Cushitic pattern of doubling the affix.

Examples of this general type, where the end result of interference (especially in typologically congruent grammatical subsystems) differs both from the original receiving-language structure and from the corresponding source-language structure, are easy to find in the phonology. One striking example is the development of a stress pattern, in a dialect of Croatian spoken near the Hungarian border, that is unique in all of Serbo-Croatian. According to Pavle Ivić (1964), the fixed penultimate stress rule of this dialect arose when Hungarian speakers shifted to the local Croatian dialect and failed to acquire the complex prosodic system, including its free (phonemic) stress. Instead, they apparently assumed that stress was fixed, as it is in Hungarian. But, realizing that it was not fixed on the first syllable, as

in the Hungarian rule, they settled on a kind of average stress placement, on the penult. As in the Ethiopic Semitic example, here too there is no doubt that interference brought about the change; but the result, though clearly the adoption of a rule, is not the adoption of the same rule as in the source language.

All these indeterminate examples provide a rather clear indication of what sort of example would be a **non-**controversial instance of rule borrowing. The ideal example would involve no lexical transfer—that is, although there might be lexical transfer from the same source language to the same receiving language, borrowed morphemes would be unconnected to the proposed transferred rule. In addition, the proposed rule borrowing should result in identical rules in source and receiving language. Fortunately, the ideal case is not hard to find.

There are two main types of contact-induced structural change that frequently involve little or no lexical transfer. First, in cases of language shift, the receiving language is altered as a result of imperfect learning of its structures by shifting speakers; in such a case, especially if the shifting group has lower social, economic, and/or political status than the original target-language speech community, lexical transfer may be minimal. In any case, unless the shifting group is especially prestigious, phonological and syntactic interference features will predominate. By contrast, when imperfect learning is not a factor, i.e. when the initiators of the changes are fluent bilinguals in the source and receiving languages, lexical borrowing is (almost?) always by far the most common type of interference. (For discussion of this distinction, see Thomason & Kaufman 1988, Van Coetsem 1988, and Thomason 2001:ch. 4.) Second, in dialect borrowing, where both lexicon and structure of the source and receiving languages overlap to a very great extent, structure is often transferred without morphemes. The same is true of interference between very closely related languages.

One example in the latter category is an innovative phonological rule in dialects of certain K'ichean languages of the Mayan family that are in intimate contact with Mayan languages

of the Mamean branch of the family. This is a dissimilation rule that palatalizes velar stops when there is a uvular later in the word (Campbell 1998:74). A morphological example that also belongs in this category is found in the Serbo-Croatian dialect of Hvar, as described by Hraste (1935:17-25). In the 1930s, elderly speakers of the dialect still used their inherited pattern of syncretism in the oblique plural noun cases of *o*-stem nouns, according to which the genitive/locative plural suffix *-ih* was opposed to a dative/instrumental plural suffix *-ima*. But under the influence of Standard Serbo-Croatian, younger Hvar speakers had replaced this pattern with the Standard one, in which the genitive plural suffix is unique to the genitive and opposed to a single dative/instrumental/locative plural suffix. But only the distribution of the suffixes changed; the original Hvar suffixes remained *-ih* and *-ima*, in partial contrast to the Standard Serbo-Croatian genitive plural *-a:* vs. *-ima*. In other words, only the syncretism rule has been borrowed.

A morphological example resulting from shift-induced interference led to the emergence of the so-called 'second genitive', a partitive case, in Russian. Although old interference from Uralic languages in Proto-Slavic is controversial, in part because of the paucity of Uralic loanwords (which, however, is actually characteristic of shift-induced interference; see Thomason & Kaufman 1988:238-251 for discussion of Slavic/Uralic contact), more recent shift-induced interference from shifting Uralic (probably Finnic) speakers to Russian is not. One generally agreed-on instance is the development, in the singular of *o*-stem nouns, of a partitive construction alongside the inherited genitive construction. The partitive, or second genitive, case suffix *-u* is native to Russian; it was originally the genitive singular suffix of a now-vanished noun class that was parallel to the *o*-stems. The genitive case suffix *-a*, which used to fulfill partitive as well as other 'genitive' functions in the *o*-stems (as did *-u* in the other noun class) , is also native. The preservation of the *-u* suffix and its restructuring into a partitive suffix is due to imperfect learning of Russian by shifting Uralic speakers whose

native language(s) had such a distinction. As a result, Modern Russian distinguishes phrases like *čaška čaj-u* 'cup of tea' (literally 'cup tea-PARTITIVE') from phrases like *cena čaj-a* 'price of tea' (literally 'cup tea-GENITIVE').

Examples of this general type can easily be multiplied. Another typical set of examples comes from the Indic language Shina, which has acquired a sizable number of morphosyntactic features from shifting Burushaski speakers (the examples in this paragraph are all from Lorimer 1937, and other examples may also be found there). No transferred morphemes relevant to these constructions are found in Shina; the patterns must therefore have entered Shina as patterns, not via abstraction from lexical items. Among Lorimer's examples are plural verb agreement with an interrogative pronoun; a singulative suffix derived from the numeral for 'one' and ordered in a suffix string as in Burushaski; and a discourse feature, used in narratives, in which a sentence begins with the verb of the preceding sentence, in the infinitive form and with an oblique case suffix (dative in Burushaski and the accidentally homophonous locative in Shina).

All the evidence that rules can be transferred from one language to another leaves a vital question unanswered: By what process(es) is rule transfer implemented? Crucially, this question pertains to the the innovation itself, not to the spread of an innovation through a speech community. A focus on the individual's innovation rather than the group's adoption of an innovation separates the analytic issues addressed here from issues typically studied in (socio)historical linguistic investigations, e.g. those of Labov (1994:45) and Hopper & Traugott (1993:38; both of these passages are cited in Hale 2003). Of course both the innovation and the spread of a change must fit into a single overall picture of linguistic change; but the innovation seems a reasonable place to start, because all the proposed constraints on rule borrowing (and other kinds of contact-induced change) are aimed, ultimately, at the issue of (im)possible innovations, not of (im)possible spread.

A focus on the individual's innovation in accounting for linguistic change is preferred by many historical linguists, but it is especially prevalent among generativists. If, as generative historical linguists tend to believe (see e.g. Hale 2003, Lightfoot 2003), children are the sole agents of language change, and if all change occurs during first-language acquisition as the result of a difference between 'the grammar generating the primary linguistic data (PLD) used by an acquirer and the grammar ultimately constructed by that acquirer' (Hale 2003:345), then it is difficult to see how most kinds of contact-induced change—in particular shift-induced interference, which requires imperfect second-language learning—could occur at all. This is especially true given another assumption common among generativists, namely, that adults cannot change the grammar they internalized during first-language acquisition.

There is good evidence that children who are growing up bilingual create grammatical constructions that fall under the rubric of rule borrowing, at least from a retrospective viewpoint. One of the most striking examples in the literature is in Queen's research on a group of schoolchildren who grew up bilingual in Turkish (their parents' language) and German (the main language of the community) (Queen 1996, 2001). These children received input from both languages for first-language acquisition, and that input included a Turkish clausal intonation pattern and a German clausal intonation pattern that performed the same syntactic function. Queen found that the children dealt with the competition between these patterns by incorporating both of them into both their languages and introducing a functional distinction between them—analogous to the preservation in English of the old past tense *hung* of the verb *hang* after the appearance of the analogically formed innovative past tense *hanged*, with a novel semantic distinction introduced between the two past-tense forms (roughly, *hanged* for executing people by hanging, *hung* for hanging anything other than a person). Significantly, neither Turkish- nor German-speaking adults in the community noticed the innovation in either language, which suggests that the innovations were nonsalient. The

process itself seems akin to rule borrowing, but with a difference: cases of rule borrowing, both the clear ones and the indeterminate ones, involve one-way transfer of rules from one language to another, not a process through which competing structures are retained in both languages. And children's bilingual first-language acquisition per se is very unlikely to lead directly to anything that looks like shift-induced interference, because failure to learn target-language structure is characteristic of second-language acquisition, not of first-language acquisition.

In other words, adults, or at least people beyond the age of first-language acquisition, must play a role in rule borrowing. Some generativists have claimed that adults can only add a few minor rules or other features to their language (e.g. Chomsky & Halle 1968:251), and that the grammar internalized in early childhood does not change at all. Aside from Queen's results, many, most, or all of the innovations discussed in this article first arose in adults' speech. The status of innovations in adults' speech is a matter of vigorous debate, but this issue need not be settled here. Whatever the status of borrowed rules may be in an innovating adult's speech, they must comprise part of the adult's linguistic knowledge, because they are used systematically. They will therefore form part of the input to the next generation of language acquirers in the speech community, and so the innovation is integrated into the community's language. But the innovators are not the first-language acquirers but the adults who implement the borrowing. Rule borrowing proceeds, then, either as partial activation of one of a bilingual adult's languages while s/he is speaking the other language (see e.g. Grosjean & Soares 1986) or as a carryover from the first language of someone who is trying to learn, because s/he is shifting to, a target language. (This set of options is oversimplified, but space does not permit exploring more subtle distinctions here.) In all cases, of course, the innovation will not become a change in the language until and unless other speakers innovate in the same way and, eventually, learn the innovation from

the original innovators. But the innovation itself, in this as in most cases of contact-induced language change, appears to originate in adult speech.

Finally, a bibliographical note. The literature on rule borrowing is not rich—or rather, many examples are discussed in the literature, but the topic of rule borrowing itself is not often addressed directly. The present article is based largely on Thomason in press; other treatments of the topic are Campbell 1976, for phonology, and Harris & Campbell 1995:ch. 6, for syntactic borrowing.

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(1) a. *Nunivaɣmi* *kijaχ̣taqut* *tɨɣ̣iɣat-ɬju* *qawaɣɛt-ɬju.*

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b. *Nunivaɣmi* *kijaχ̣taqut* *tɨɣ̣iɣat-ɬju* *ɨnkam* *qawaɣɛt-ɬju.*

c. *Nunivaɣmi* *kijaχ̣taqut* *tɨɣ̣iɣat* *ɨnkam* *qawaɣɛt.*