CAN RULES BE BORROWED?

Sarah G. Thomason

University of Michigan

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1. INTRODUCTION. It is a pleasure and a privilege to have the opportunity to contribute to a Festschrift for . . . .

This paper continues a general line of research that he and I began together in the mid-1970s, on contact-induced language change. The title of the paper refers to borrowing in its general sense rather than in the narrower sense proposed in Thomason & Kaufman 1988 (see below); starting with section 3, after introducing that narrow sense of 'borrowing', I will usually use the more general term 'transfer'—by which I mean any route through which a feature from one language gets into another language. (That is, I do not mean 'transfer' in the narrow sense that is sometimes used to refer only to first-language interference in a second language.)

A recurring issue in historical linguists' discussions of borrowability concerns the possibility of rule borrowing. Probably the most popular traditional view is that the grammatical rules of one language can only be transferred to another language through abstraction from borrowed lexical items. That is, on this view the rules themselves are not borrowed at all; instead, lexical items are borrowed, and some or all of their phonological and morphosyntactic structure is adopted as a concomitant of the lexical borrowing. A comparison of the donor language and the borrowing language makes it look as if the new rules in the borrowing language were borrowed directly. In this paper I argue against this traditional view and

for the proposal that both phonological and morphosyntactic rules can be transferred from one language to another. The argument is complicated by the problem of deciding what counts as direct transfer of a grammatical rule. But even on the narrowest interpretation of the notion of contact-induced grammatical change, it's possible to show that no absolute constraint against direct rule transfer can be maintained. I also argue that the continuing popularity of the no-rule-borrowing position results in part from a pervasive tendency to underestimate speakers' ability to manipulate their languages' structures deliberately.

The structure of the paper is as follows. Section 2 covers four necessary preliminaries—a definition of 'a rule', a definition of contact-induced language change, a relevant sociolinguistic predictor for kinds of contact-induced change, and the crucial distinction between possibility and probability of language change in any given case. In section 3 I discuss kinds of contact-induced change that are at best controversial instances of rule borrowing; section 4 then presents what I believe are clear examples of borrowed rules. The paper ends with a brief concluding section.

2. PRELIMINARIES. In order to talk about rule borrowing, we need to know what counts as a rule. Various definitions of 'rule' can be found in the literature; in this context, Trask's definition seems most relevant: 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...' (1993:245). The main point is that rules are not interpreted here as theory-specific formal devices; in particular, not all rules are generative rewrite rules. Lexical generalizations and Optimality Theory constraints, to name just two other types of generalizations, also count as rules. In other words, in this paper 'rule' is construed broadly; the topic is contact-induced transfer of generalizations, as opposed to single (sets of) elements.

The second necessary preliminary is a definition of contact-induced language change. This too is a potentially controversial issue; my definition is certainly not perfect, and certain aspects of it may well be problematic. But it will serve to make my starting point clear. Here it is: Contact is A source of linguistic change if it is less likely that a given change would have occurred outside a SPECIFIC contact situation. This definition obviously includes transfer of linguistic features (with or without transferred morphemes)—that is, all linguistic interference. Less obviously, it also includes innovations in a dying language that do not make its structure more like that of the dominant language to which its speakers are shifting. Some changes in dying languages are borrowings from the dominant language; but some are structural attrition without approximation to any structures in the dominant language (see Fenyvesi 1995 for discussion).

Another type of contact-induced change that can't be characterized as interference involves innovations that appear at a late stage of a chain reaction triggered by an initial instance of feature transfer. This 'snowball' effect can certainly lead to new rules, but the new rules are not themselves borrowed from the source language (see section 3 below for examples and further discussion). A potentially serious problem arises at this point: as Mark Hale points out (p.c. 2001), in principle ANY internally-motivated change could be viewed as the end product of a chain of innovations triggered ultimately by some change in the remote past, including remote contact-induced changes, because every internally-motivated structural change in a language is ultimately the product of the entire structural history of the language. So there can be no sharp dividing line between innovations triggered more or less directly by a (fairly recent) contact-induced change and innovations triggered very indirectly by a long-ago contact-induced change. There is no solution to this problem; I would like to restrict my definition of a chain reaction to changes directly triggered by a particular relatively recent contact-induced change, but there is certainly an inevitable fuzzy

boundary between this kind of chain reaction and the chain reactions that stretch back into a language's remote history.

Yet another type of non-obvious non-interference contact-induced change comprises innovations that are introduced deliberately to make a language more different from a neighboring language (or dialect). An example is found in a dialect of Lambayeque Quechua in Peru, which displays systematic lexical distortion—the metathesis of certain consonant-vowel sequences, for instance changing *yawar* to *yawra* and *kabalta* to *kablata* (David Weber, p.c. 1999, citing Dwight Shaver's research)—apparently because the speakers wanted to differentiate their speech more sharply from neighboring Lambayeque Quechua dialects.

The third preliminary observation is that a robust sociolinguistic predictor distinguishes between two kinds of interference, a distinction that will be relevant to discussions in the following sections. Under conditions of "full" bilingualism—that is, when imperfect learning does not play a significant role in the interference process—non-basic lexicon will be transferred first, under less intense contact conditions, and structure and/or basic vocabulary only later (if at all), with increasing intensity of contact. Typically, though not always, interference in this circumstance will be incorporated from a second language into speakers' first language. Truly full bilingualism is not required; all that is required is that the people responsible for the transfer speak the language that is receiving the interference features quite fluently. Thomason & Kaufman (1988) label this type of interference BORROWING.

In sharp contrast, interference in which imperfect learning does play a significant role primarily involves phonology and syntax; lexicon and morphology, though for different reasons, lag behind. Thomason & Kaufman call this type of interference SHIFT-INDUCED INTERFERENCE—a clumsy term that is also somewhat misleading, since sometimes no actual shift occurs. The process is more complicated than in the case of borrowing (in our narrow sense). To explain why, and to avoid extra complications, I'll assume that a group

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of people is shifting to a second language, a target language (TL), that the shifting group is integrating with the original target-language speakers to form a single speech community, and that the shifting group is larger than the original TL speech community. Under appropriate social conditions, two things are likely to happen: first, some features of the shifting speakers' L1 will be transferred into the TL; and second, the shifting speakers will fail (or refuse) to learn certain features, especially marked features, of the TL. Both types of interference will combine to form the shifting group's version of the TL. But as the original TL speakers integrate into a single community with the shifting group, they will borrow—in the narrow sense of Thomason & Kaufman 1988—some features from the shifting group's version of the TL; the result will be a third version of the TL, a version that incorporates a subset of the interference features in the shifting group's version. For the purposes of this paper, the extra complications of processes of shift-induced interference are irrelevant; but the distinction between borrowing and shift-induced interference is needed to understand parts of the arguments below.

The fourth and final preliminary is perhaps tangential to the main topic of this paper, but since it is the source of considerable confusion in the literature, it's worth emphasizing here in order to avoid possible misunderstanding. It is this: the question of whether a linguistic change is POSSIBLE is settled, in my opinion, as soon as a new feature appears anywhere, even just once, in a single person's speech. The future and ultimate fate of an innovation is then a matter of linguistic and especially social PROBABILITY, not possibility. Of course some innovations are more likely to survive and spread than others; but any innovation is a potential survivor. The most important implication of this premise is that, because calculating the social and linguistic probabilities is so difficult (i.e. impossible, at the current and foreseeable future state of our knowledge), one can talk sensibly only about NECESSARY conditions for change, not about SUFFICIENT conditions for change. In

particular, the fact that suitable social conditions make a given type or degree of contact-induced change possible in a given contact situation is never a guarantee that that type or degree of change will happen. It might, or it might not. Only when social and linguistic conditions are unsuitable can one be sure that a given type or degree of contact-induced change will not occur. Therefore, the absence of a particular type of contact-induced change in a particular intense contact situation can never provide an argument that that type of change is impossible.

With these background observations, we are now ready to consider candidates for transferred rules.

3. WHAT COUNTS AS RULE TRANSFER? Reasonable people will certainly disagree on answers to this question. In this section I will try to eliminate the most controversial kinds of cases, in an effort to set the stage for more convincing examples in section 4.

First, and most obviously, probably no one will want to argue that a new rule that arises in language A through abstraction from morphemes borrowed from language B counts as rule borrowing. So, for instance, some varieties of Asia Minor Greek have acquired partial vowel harmony patterns through interference from Turkish (Dawkins 1916:68, and see examples in Thomason & Kaufman 1988:218); but since the relevant varieties of Asia Minor Greek have so many loanwords and even inflectional suffixes borrowed from Turkish, the vowel harmony seems most likely to have arisen in Greek via abstraction from the harmonizing borrowed Turkish constructions. Similarly, the elaborate English stress rule proposed by Chomsky & Halle (1968:70) arose as a result of massive lexical borrowing from French. Before the flood of French loanwords into English, English stress was (to simplify somewhat) word-initial; after the flood, stress came to be predicted by a much more complicated rule, according to Chomsky & Halle: if the final V is lax and is followed by no more than one C, stress the

penultimate V, but stress the final V if it is tense and/or is followed by more than one C. If one accepts this proposal (and many phonologists didn't and don't), it is clear that the rule itself was not borrowed from French; instead, it would have been abstracted from the patterns found in the loanwords.

It's harder to feel confident about the processes involved in syntactic cases of borrowed morphemes, because it is possible for morphemes and rules to be transferred separately. But some examples seem fairly clear, especially in cases of delayed syntactic effects. One example is noun phrase coördination in Siberian Yupik (Menovščikov 1969:128, and see also Thomason 2001:153). Siberian Yupik originally had a coördinate construction in which a comitative suffix was added to both coördinates, as in 'beasts-COM birds-COM' (meaning 'beasts and birds'). But after borrowing a conjunction meaning 'and' from Chukchi, the language changed so that the comitative suffix became optional, with all three variants recorded: 'beasts-COM birds-COM', 'beasts-COM and birds-COM', and 'beasts and birds'. This is a prime example of the 'snowball' effect mentioned above: it's not the Chukchi noun phrase coördination rule that was borrowed, but merely the conjunction; the evolution of the new rule was internal to Siberian Yupik, though a direct consequence of the borrowing of the conjunction. That is, the development of the new rule was a contact-induced change by my definition, but it was not an instance of interference.

Another type of change that doesn't count as rule transfer is the acquisition of sets of elements from another language. This too is an obvious non-contender for transferred-rule status, because no actual rules are involved at all. So, for instance, the click phonemes borrowed into Zulu and a few other Southern Bantu languages from neighboring 'Khoisan' languages, though dramatic in their impact on the receiving languages' phonological systems, do not constitute generalizations, so they can't be rule borrowing. Or, to take a more elaborate phonological example, the processes that led to tonogenesis in Vietnamese were

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presumably triggered by the introduction of many Chinese loanwords (and were thus contact-induced changes), and later proceeded by internal routes, in another chain reaction (James Matisoff, p.c. 1986); but again, no rules resulted from this set of changes.

The loss of sets of elements, or even the loss of rules, also doesn't count, although some people might want to make a case for the latter as a kind of negative rule transfer. The loss (via mergers) of interdental fricatives in Asia Minor Greek, as a result of Turkish influence (Dawkins 1916:44, 76, 77), and of tones in Swahili after and because of massive lexical borrowing from Arabic, are clearly not instances of rule transfer. But what about the loss of vowel harmony rules in some dialects of the Turkic language Uzbek under the influence of the Iranian language Tadzhik (Menges 1945, Comrie 1981:65-66)? This innovation (or set of innovations) is clearly a contact-induced change in the dialects' rule system, but it doesn't involve transferred rules; so it doesn't appear to be a strong candidate for rule transfer.

A more problematic category comprises contact-induced changes in the frequency and/or the distribution of linguistic features—including changes in already existing rules. Here we are clearly dealing with judgment calls: people who believe that changes in frequency and distribution don't count as contact-induced changes at all certainly won't accept them as instances of rule transfer. But for most experts, a change in frequency or distribution is definitely a change; and if it is partly or entirely caused by contact, it is a contact-induced change. Transferring part of a rule might then reasonably be classified as rule transfer. Even scholars who agree with this general position, however, would probably not want to argue very strongly for rule transfer in such cases; these are not the cases most likely to convince skeptics.

An example is the partial loss, in some dialects of Asia Minor Greek, of the definite article. The article is lost in these dialects everywhere EXCEPT in the accusative case—a pattern that matches the Turkish marking of definiteness rather closely. Turkish has no

definite article, but it does distinguish an indefinite accusative object (unmarked) from a definite accusative object (marked with an accusative suffix) (Dawkins 1916:46, 87). What is borrowed from Turkish is not the specific morphological means of marking definiteness of objects, but rather the rule that dictates marking definite objects as definite and leaving indefinite objects unmarked. The change, from a strictly Greek viewpoint, is a restriction in the distribution of the definite article; but an analysis of the contact dynamics suggests that the Turkish generalization—the rule—has been borrowed into Greek.

A more common type of change in frequency and distribution involves an increase in the range of a construction that is rare in the receiving language but that corresponds to a major pattern in the source language. Montana Salish offers a striking instance of the phenomenon. This is not a completed or even an ongoing change in Montana Salish; indeed, though gravely endangered, the language appears to be undergoing virtually no structural change or lexical borrowing from English, the dominant language for most of the remaining fluent speakers of Montana Salish. The sentence types under discussion here were produced by a single elderly speaker in a single elicitation session because (as he said when queried) he thought I wanted "Englishy" sentence structures in translations of English sentences. The examples are relevant in the present context because, as emphasized in section 2, they are at least potential changes, if not actual ones. Even this speaker didn't otherwise produce such sentences during elicitation, much less in ordinary conversation; but he was able to do so at will, and the sentence types may therefore be viewed as potential cases of rule borrowing. What he did was this: in translating English ditransitive sentences like 'Johnny stole huckleberries from Mary', he produced fully grammatical but stylistically marked sentences like (literally) 'Johnny steal OBLIQUE huckleberries from Mary', instead of the unmarked Salish transitive construction that would literally correspond to 'Steal-DERIVED.TRANSITIVE-RELATIONAL-TRANSITIVE-3RD.AGENT Mary OBLIQUE Johnny DEMONSTRATIVE OBLIQUE huckleberries'.

The word order, the verbal morphology, and the oblique marking differ sharply between the "Englishy" version and the ordinary Salish version. The "Englishy" sentence, however, would normally be used only for limited and specific purposes in discourse, notably to signal a change of subject; for all other purposes—including out-of-context sentences in elicitation—the ordinary Salish version would normally always be used. If such translation equivalents should become the norm in Salish, the language would have changed dramatically, both morphologically and syntactically, in the relative frequencies and distributions of the two sentence types; and the change would certainly be contact-induced. (Note that although this example is only a potential change, the same general type of change is extremely common in language contact situations, where infrequent word orders and other syntactic patterns increase in frequency to match source-language structure more closely.) But calling the changes rule borrowing would still be problematic, because both sets of morphosyntactic rules already exist in Montana Salish. A comparable but simpler example may be an actual ongoing change in Montana Salish: some elders produce SVO sentences more often than is customary; other elders will object that VSO order should be used instead because, traditionally and still most often, VSO is the unmarked word order and SVO is used only to emphasize the subject. A claim of rule borrowing in such cases seems more promising if we focus on discourse-level rules rather than on sentence-level rules, since the current distribution of the patterns in Salish is governed by discourse rules. But again, skeptics are unlikely to find such examples convincing even on a discourse level.

A final type of problematic case is also a common phenomenon in contact-induced change, namely, a situation in which the receiving language ends up with a rule that differs significantly from the source-language rule. Here too we have a judgment call; can we talk about rule transfer when apparently only part of a rule has been transferred? One good example is the stress rule acquired by a dialect of Serbo-Croatian as a result of influence from Hungar-

ian. Hungarian speakers shifted to (the predecessor of) this dialect in sizable numbers, and the change in stress is clearly an example of imperfect learning during the shift, i.e. shift-induced interference. The change process is hypothesized to have been roughly as follows: recognizing that Serbo-Croatian, the TL, did not have fixed word-initial stress, as Hungarian does, but assuming that it had fixed stress somewhere in the word, the Hungarian learners constructed a version of the TL with a rule fixing stress on the penult; and this aspect of their version was adopted by the original TL speakers, so that now the whole dialect has fixed penultimate stress instead of the free stress that characterizes other Serbo-Croatian dialects (Ivić 1964).

A second and especially interesting prosodic example is the distribution of a particular phrase-final intonation pattern in both languages spoken by a group of children growing up bilingual in Turkish and German in Germany. Turkish and German have different intonation patterns in the pragmatically equivalent phrase-final positions; but these bilingual children had both the Turkish and the German patterns in both of their native languages, distinguished pragmatically. That is, in each of their languages they fused the German and Turkish patterns into a single new system with a new functional distinction (Queen 2001).

Morphosyntactic examples of differing source-language and receiving-language rules are also easy to find. As we saw in the Siberian Yupik case mentioned above, one option (presumably an intermediate stage, since another option was to omit the comitative suffixes altogether) was a hybrid of the exact same type, in principle, as Queen's case of fused intonation patterns—that is, Yupik speakers used both the borrowed Chukchi conjunction and the native comitative suffix, with sentences like (literally translated) 'beasts-COM and birds-COM'. A somewhat more complicated set of examples is found in shift-induced morphological interference from Cushitic languages in some Ethiopic Semitic languages. The relevant Cushitic languages form the negative perfect with a verbal suffix and the causative

with a doubled verbal suffix, and they use postpositions instead of prepositions; The inherited Semitic constructions have prepositions and a single verbal prefix each in the negative perfect and the causative. The most-affected Ethiopic Semitic languages, however, express the negative perfect with a prefix-Verb-suffix construction, the causative with a doubled verbal prefix, and adpositional constructions with circumfixes, i.e. an adposition that appears both before and after the noun phrase (Leslau 1945, 1952). All these innovations in Ethiopic Semitic are contact-induced changes, but they blend the Cushitic and Semitic patterns instead of simply reflecting direct adoption of entire Cushitic rules. They may or may not be cases of rule transfer, depending on whether one wants to include partial transfer of rules.

We've now looked at five types of contact-induced change that certainly don't, probably don't, or at best controversially do count as rule transfer: a new rule that arises in language A through abstraction from morphemes borrowed from language B; acquisition of sets of elements from another language; loss of sets of elements or even of rules; changes in the frequency and/or the distribution of linguistic features; and cases in which the innovative receiving-language rule differs significantly from the source-language rule. In the next section I'll present some candidates for rule transfer that are likely to prove less controversial.

4. (Probably) clear examples of transferred rules. At least some of the prerequisites for a convincing case of rule transfer should now be evident. In particular, we're looking for a contact-induced change in which an innovative generalization in the receiving language A matches a pre-existing rule in the source language B, but in which no morphemes have been transferred from B to A. One good place to look is interference between very similar systems—especially in dialects of the same language and in closely-related languages. Such languages will share a very large proportion of their vocabulary, which makes structural interference without morpheme transfer somewhat more likely than in other borrowing situ-

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ations; moreover, there is likely to be considerable typological congruence between them, and thus none of the hindrances often posed by typological distance to structural interference.

One example is the innovation of a palatalization rule in some Mayan languages under the influence of other Mayan languages: velar stops are palatalized 'when followed by a uvular in the same root' (Campbell 1998:74) in dialects of several K'ichean languages that are spoken near Mamean languages (K'ichean and Mamean belong to two different branches of the Mayan family). Similarly, the Bantu languages KiShambaa and Gonja KiPare share an innovative tone-spreading rule but little or no borrowed lexicon (David Odden, p.c. 1993); the most likely explanation is that the rule arose in one of the two languages and spread to the other.

A morphological example is found in the Hvar dialect of Serbo-Croatian, which has come under the influence of Standard Serbo-Croatian. The Hvar dialect belongs to the čakavian dialect group; the standard dialect (both its Serbian and its Croatian variants) belongs to the štokavian dialect group. A comprehensive description of the Hvar dialect reports a fairly neat age-graded distribution of certain declensional features, such that older speakers have the inherited rules while younger speakers—probably the first generation to have been intensively exposed to the standard dialect in school—have the innovative rules (Hraste 1935:17-25). Specifically, in *o*-stem nouns, older speakers have a pattern of oblique plural case suffixation in which a syncretic GEN/LOC.pl suffix *-ih* is opposed to a syncretic DAT/INST.pl suffix *-ima*. In the oblique cases of *o*-stem plural noun inflection in the standard dialect, by contrast, the separate genitive plural suffix *-a:* is opposed to a single syncretic DAT/INST/LOC.pl suffix *-ima*. Younger Hvar speakers have the same two oblique plural suffixes as their elders—they have not adopted the standard dialect's GEN.pl suffix *-a:*—but the distribution of the two suffixes has changed to match those of the standard dialect: they use *-ih* only for the GEN.pl and *-ima* for the DAT/INST/LOC.pl. In other words, they have

borrowed the syncretism rule for oblique plural cases from the standard dialect.

Contact-induced structural changes that do not involve morpheme transfer are especially common in shift-induced interference, and indeed probably more common than changes that do include transferred morphemes. In shift-induced interference, where typological distance is a less significant factor than in borrowing (in the narrow sense of Thomason & Kaufman), such changes often link languages with otherwise very different kinds of structures. Examples are fairly easy to find in the literature.

The Indic language Shina, for instance, has undergone considerable shift-induced interference from the isolate Burushaski. Two of these interference features are of special interest in the present context. First, Shina has acquired a rule in which an interrogative or indefinite pronoun takes plural verb agreement. And second, Shina has acquired a singulative construction that employs a suffix derived from the numeral for 'one'; this construction has a very close analogue in Burushaski, although the actual suffixes (like the numerals) are quite different. The ordering of this suffix relative to other nominal suffixes matches closely in the two languages: Noun(-pl)-SGV-(CASE). The specific functions of the construction are rather complex, and they also match closely in the two languages—the singulative functions as an indefinite article when added to a singular noun and as a number of individuals when added to a plural noun. No transferred morphemes relevant to these constructions appear in Shina. (These examples, together with several others that might also count as rule transfer, are from Lorimer 1937.)

A comparable morphological example occurs in Russian as a result of shift-induced interference from Uralic (probably Finnic) languages. In masculine *o*-stem nouns, in addition to the inherited genitive singular case suffix -*a*, Russian has a so-called 'second genitive' suffix -*u* (a native suffix, but historically from a different noun class). The two suffixes are functionally distinguished: the 'second genitive' is a partitive, and the original genitive is

used for other typically genitive functions (possessive, etc.). So, for instance, *čaška čaj-u* 'cup of tea' (lit. 'cup tea-PARTITIVE') is contrasted with *cena čaj-a* 'price of tea' (lit. 'price tea-GEN').

Clear examples can also be found in borrowing situations even when the languages in contact are not closely related; but it's harder to find convincing examples in this category, because where there is borrowed structure there are typically many transferred morphemes as well. Still, some kinds of borrowed structure are usually not expressed by borrowed morphemes; perhaps the most common type of example is basic sentential word order. Here there are many cases in which typological distance is arguably not a relevant factor, because S and V and O tend to perform the same functions in sentential syntax no matter what order(s) they occur in. The Montana Salish example discussed above was in part a potential case of contact-induced word-order change—and not only were no transferred morphemes involved in that particular set of potential changes, but the language as a whole has virtually no lexical borrowing from English: like many (most?) other languages in that region of North America, Montana Salish speakers construct new words for new cultural features out of native morphemes, instead of borrowing the words from English. Comparable word-order examples are easy to find, both in completed changes and in potential changes. Speakers of the Waikurúan language Kadiwéu of Brazil, for instance, tend to use SVO word order in translating sentences from the SVO language Portuguese during elicitation sessions, though in texts Kadiwéu word-order patterns vary among SOV, VSO, OVS, SVO, VOS, and OSV (Sandalo 1995). Unfortunately, however, these examples and many others as well are changes in frequency, not in possible word orders; they therefore fit better in section 3 than here under clear cases. It seems likely that some of the many well-documented completed changes in word order do show brand new word-order patterns; but it's very hard to prove, given the inevitably fragmentary data from past contact situations, that an innovative basic word-order

pattern is truly new.

Better examples can surely be found, but in this general category even the most promising cases tend to suffer from the same problem: fragmentary data. In Kupwar, a village at the border of Indic- and Dravidian-speaking territory in India, there are four local languages, two of them Indic and two of them Dravidian. There has been extensive syntactic borrowing among the four languages, so that the local varieties of all four languages differ significantly from varieties spoken elsewhere. Not all of this convergence can have been mediated by lexical borrowing, because in most of the shared constructions no shared morphemes are involved. The rules include (among other things) subject/verb agreement patterns in four different constructions, the syntax of the yes/no question marker, and rules for the use of demonstrative and possessive forms in both attributive and predicative constructions. (These examples are from Gumperz & Wilson 1971—which is the only systematic study of the famous Kupwar case.) But we have too little detailed information available about the syntax of the four varieties before they began to converge structurally to be positive that any of the changes introduced a totally new construction into any of the languages.

5. CONCLUSION. My main conclusion (not surprisingly) is that rules do indeed get transferred in contact-induced change. The mechanisms of rule transfer are not well understood. For both phonological and morphosyntactic borrowing, it is quite possible that bilingual speakers simply import a pattern from a second language into their first language because (for whatever reasons) they like the way it sounds—palatalized velars might sound nicer than unpalatalized velars before uvulars, for instance, and SVO word order might seem more prestigious than VSO word order. Another possibility that has often been mentioned, and that has some experimental support in certain cases, is that adopting (say) a word-order pattern from another language that speakers use regularly lessens the cognitive burden of

moving back and forth between languages. In this scenario, a Montana Salish speaker might use English SVO word order increasingly instead of the native verb-initial word-order rule because it's easier.

In shift-induced interference, the learners in the shifting group might simply use (parts of) some of their L1 rules when speaking their L2. This too would be a quite direct type of rule transfer into the L2, and it would account both for phonological and for morphosyntactic rule transfer.

Another possibility for morphosyntactic rule transfer is that it begins with calquing of individual words or sentences and then generalization by analogy from those words or sentences to other words and sentences. This mechanism would again raise the issue of whether a rule has in fact been transferred: calquing might well be considered more akin to bare-bones lexical transfer than to application of a set of rules, and the analogic generalization might then be considered equivalent to the delayed-action contact-induced changes discussed above.

These are unlikely to be the only mechanisms of rule transfer. Sorting out all the mechanisms will probably require experimental research of a sort that most historical linguists (including me) are not equipped to undertake. But at least it seems clear that the traditional picture, which allows only for rules getting from one language to another by piggy-backing on borrowed morphemes, does not account for all cases of rule transfer.

It should be noted that most of the changes discussed in this paper are likely to have been implemented by adults, or at least not as part of a process of bilingual first-language acquisition; the intonational fusion discussed in Queen 2001 is the only exception. I believe, in fact, that the often-proposed constraint against rule transfer arises from a mistaken belief that speakers, individually and in groups, cannot deliberately make significant structural changes in their language. Evidence that speakers can and do make such changes is now

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readily available in the literature (see e.g. Thomason 1999), and it should no longer be ignored. I do not mean to suggest that many, much less all, of the changes discussed above were made deliberately, though some of them certainly might have been (especially those that affected the languages of small speech communities). The point, rather, is that the main locus of language change cannot reasonably be assumed to be in processes of first-language acquisition.

Finally, as we have seen, convincing examples of rule transfer in contact-induced change are easiest to find in cases where there is little or no lexical transfer—between very similar systems and in shift-induced interference. Other examples are likely in cases where, for cultural reasons, lexical borrowing but not structural borrowing is rigorously avoided (see e.g. Aikhenvald 1996). It is only in cases like these that we can be certain that rule transfer is completely independent of morpheme transfer. This does not mean that all instances of direct rule transfer are in cases like these; it does, however, mean that skeptics are likely to be convinced only by cases like these.

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