NOTES AND DISCUSSION

Polyglot Aphasics and Language Mixing: A Comment on Perecman (1984)

FRANÇOIS GROSJEAN

Northeastern University

Perecman (1984) *Brain and Language*, **23**, 43–63, proposes that language mixing (and especially utterance level mixing) in polyglot aphasics reflects a linguistic deficit and that spontaneous translation indicates a prelinguistic processing deficit. It is argued in this comment that both language mixing (including utterance-level mixing) and spontaneous translation are also found in normal polyglots, and that they may not therefore always be reflecting language deficit in aphasics. Only a good assessment of the patient's language and speech before and after the injury will determine if these behaviors do indeed reflect deficits. © 1985 Academic Press, Inc.

In an interesting review of mixed language recovery patterns in polyglot aphasics, Perecman (1984) proposes that language mixing (and especially utterance level mixing) reflects a linguistic deficit and that spontaneous translation indicates a prelinguistic processing deficit. In this comment, I will argue that language mixing (including utterance level mixing) and spontaneous translation are behaviors that are also found among normal polyglots, and that they may not therefore always reflect deficit in aphasics. Only good knowledge of the patient's language and speech before the injury and careful testing after the impairment will show if spontaneous translation and language mixing do indeed reflect these deficits.

This note will contain three parts. In the first, I will review what is known about language mixing in normal polyglots. In the second, I will

show that some of the "abnormal" language mixing that has been reported in the polyglot aphasic literature could in fact be perfectly normal language mixes (borrowings and code switches), and in the last part I will stress the implications that this should have on the future studies of polyglot aphasics.

LANGUAGE MIXING IN NORMAL POLYGLOTS

Considerable advances have been made in the last twenty years in the study of language mixing in normal polyglots; mixing is no longer considered as being simply the involuntary and accidental influence of one language on the other, or the inappropriate switching from one language to the other. It is now accepted that in some situations, language mixing (including utterance level mixing) is a deliberate communicative strategy used by polyglots among themselves. Mixing occurs at ALL levels of language in normal polyglot speech and is certainly not restricted to polyglot aphasic speech (Grosjean, 1982).

To better understand the complexity of language mixing, it is important to consider the speech mode a polyglot is in when speaking. In their everyday lives, polyglots find themselves at various points along a situational continuum which induce a particular speech mode. At one end of the continuum, polyglots are in a totally monolingual speech mode; they are with monolingual speakers of language A or of language B and they have therefore to restrict themselves to one language. At the other end of the continuum, polyglots find themselves in a bilingual speech mode; they are with polyglots who share their two languages and with whom they can mix languages when appropriate. Of course, polyglots differ among themselves as to how often they are in one mode or the other, but rare is the polyglot who is always confined to one speech mode.

In the monolingual speech mode, polyglots adopt the language of the monolingual interlocutor and deactivate, as best they can, the other language. As is well known, deactivation is rarely total, and this is seen in the interferences polyglots produce, that is, those deviations from the language being spoken (the base language) due to the involuntary influence of the other "deactivated" language. Interferences can occur at all levels of language: phonological, lexical, syntactic, semantic, etc. (Grosjean, 1982). It should be pointed out that certain interferences are static (a reflection of the speaker's fossilized interlanguage; a "foreign accent," for example) and that others are dynamic (as in the case of the accidental slip on the stress pattern of a word due to the stress rules of the other language); these latter interferences do not always occur when the polyglot is speaking a particular language.

In the bilingual speech mode, where the interlocutors share the same languages, the speakers choose a base language for the interaction and may then intermix the other language quite deliberately. The actual choice of the base language is a function of many factors such as the participants involved, the situation, the topic, and the function of the interaction. Once a particular base language has been chosen, a polyglot can bring in the other language in several ways: by switching completely to the other language for a word, a phrase, a sentence (this is known as code switching) or by borrowing a word from the other language and integrating it phonologically and morphologically into the base language (a speech borrowing). Note that interferences may still occur in this speech mode, but they are sometimes difficult to differentiate from speech borrowings. They are better studied, therefore, in the monolingual speech mode.

Code switching, as in the French–English example, "Va chercher Marc AND BRIBE HIM avec un chocolat chaud WITH CREAM ON TOP," has received much attention recently from researchers who have studied the psychosocial and communicative factors underlying switching, the grammatical constraints or rules that govern intra- and inter-sentential switching, and the developmental aspects of switching. (See, for example, Gumperz, 1976; Scotton & Ury, 1977; Pfaff, 1979; Poplack, 1980; Grosjean, 1982). It is now accepted by most researchers that code switching reflects linguistic and communicative strategies in polyglots speaking to one another, that natural switches (produced in a relaxed atmosphere) are not marked off by prosodic markers (contrary to what was maintained by Weinreich, 1968), and that mixed discourse is understood as easily as monolingual discourse. We should add here that spontaneous translation, that is switching to the other language to say what has just been said in the first language, is also a well-known communicative strategy which is used to emphasize or clarify a point. Borrowing is the second way a polyglot can intermix his or her languages. In the sentence, "On a BRUNCHÉ chez eux" (We brunched at their place), the English "brunch" is adapted phonologically and morphologically into the base language and becomes, to all intents and purposes, a French word. Note that these "speech borrowings" are quite different from "language borrowings"; the former are idiosyncratic and not part of the base language lexicon.

Thus, if we take the types of language mixes that Perecman has found in the case studies of polyglot aphasics, we find that most can also occur in normal polyglot speech: words or utterances taken from several languages and mixed in the same conversation may be cases of code switching; words which are combinations of morphemes from different languages, and blends of syllables, may be speech borrowings or interferences, depending on the speech mode; language mixing at the syntactic level, and spontaneous translation, may reflect code switching, etc.

LANGUAGE MIXING IN POLYGLOT APHASICS

Given what is known about language mixing in normal polyglots, we can turn to the polyglot aphasic studies and ask a number of questions. Before doing so, however, it is important to agree with Perecman that certain cases of language mixing in aphasic speech are undoubtedly signs of deficit. Among these we find using the wrong base language with a monolingual interlocutor (thus leading to a breakdown in communication), code-switching with a monolingual (again resulting in non-communication), violating code-switching constraints or rules, mixing during oral reading in front of a monolingual (unless a communicative strategy is involved; see below), failing to switch or translate upon request, overdoing language tagging, etc.

Rare are the case studies, however, that isolate these kinds of exceptional mixes from those that are quite acceptable in both normal and polyglot speech. To do this, one needs to know about the testing situation (who the examiners were, what languages they knew and spoke with the patient, the speech mode(s) the patient was in during testing) and one also needs information about the language knowledge and the language behaviors of the patient before injury. For example, what kind of static, as well as dynamic, interferences occurred in the patient's languages before injury? It could well be that an "error" in pronunciation or the use of a wrong word in a sentence during the testing simply reflected the patient's normal interference behavior before injury. A second, more important question, concerns the speech mode the patient was in when being tested. From Perecman's description of the various case studies, one can infer that a number of polyglot aphasics were probably examined by people who knew some, if not all, of the patients' languages. If that was the case, and the rapport between the patients and the investigators was good, then the aphasics might well have code switched and borrowed voluntarily and consciously during testing. Perecman's own case report clearly indicates that the patient (H.B.) was indeed facing a polyglot investigator who was herself switching languages (see the utterances on page 51). The author actually confirms this when she writes on page 52, "language mixing was particularly pronounced when the investigator shifted from one language to another within the same conversation or task . . ." Why should the patient's language switches be reflecting a deficit, when those of the investigator do not? It is interesting to speculate how much language mixing and spontaneous translation H.B. would have produced had the investigator been monolingual.

Even if one accepts that language mixing in polyglot aphasics is not always a sign of deficit, one may want to fall back on another argument: polyglots, in a bilingual testing situation, code switch, borrow, and translate MORE after injury than before, and it is this increase in mixing and spontaneous translation that reflects the deficit. Even though no case

study can actually prove this point (data on how much normal mixing and spontaneous translation took place before injury do not usually exist), I would like to argue that such a proposal may also be problematic. Instead of being the reflection of a linguistic or conceptual disorder, increased switching and spontaneous translation may simply be reflecting a conscious, deliberate, communicative strategy developed by the patient to ensure communication with the polyglot examiner. The patient is aware of the production problems he or she is having and therefore deliberately adopts a strategy of code switching and simultaneous translation to enhance communication. He or she uses the language that is most available or is easier to produce at a particular point in time (or for a particular topic); the patient may also say something in one language and then translate it immediately into the other language (see Albert and Obler, 1978, for a similar proposal). These communicative strategies aimed at enhancing communication make no sense with a monolingual examiner (and would therefore be true reflections of deficit), but are perfectly valid with a polyglot examiner. We should add yet another reason for switching and translating: the patient may realize that the examiner is not fluent in one of the two languages, and is therefore making sure that the latter understands what is being said. These two reasons—clarifying the output and helping the listener—probably interact with one another, and may sometimes even explain some of the mixing which takes place in reading out loud.

The main point to draw from all this is that language mixes and spontaneous translations in the speech of polyglot aphasics can have many causes. Some reflect the language and conceptual deficits mentioned by Perecman, but others are the result of quite conscious, deliberate communicative strategies on the part of the patient. Unfortunately, most existing case studies do not allow us to disentangle these causes unambiguously.

IMPLICATIONS FOR THE FUTURE STUDIES OF POLYGLOT APHASICS

To better understand the language deficits of bilingual aphasics, one needs a clear, unambiguous description of their language knowledge and use both before and after injury. Substantial work is being done to improve the study of polyglot aphasics (see M. Paradis' current efforts to construct a questionnaire and series of tests to assess bilingual aphasics in 35 different languages), and I will therefore limit myself to a few suggestions. First, in the description of language knowledge and language use before injury, it is important to keep in mind that a polyglot is not the sum of two (or more) monolinguals but is a competent speaker–hearer who has developed competencies in his or her languages (and possibly in some mixed system) to the extent required by internal and

external needs (Grosjean, 1985). With this in mind, and acknowledging the difficulties of preinjury investigation, it is important to attempt to answer questions such as: Which languages did the patient know before injury? How well did he or she know them (as a function of skills, styles, etc.)? What were the languages used for, with whom, for what? What kind of interferences occured in the patient's two languages when in the monolingual speech mode, and were these of a static or a dynamic nature? How much time did the patient spend in a monolingual as opposed to a bilingual speech mode? How much mixing took place in the bilingual speech mode (if and when the patient was in that mode)? What kind of mixing occurred: speech borrowings and/or code switches? Who did the patient code switch and borrow with? How good were the translation abilities of the patient? How often did he or she translate spontaneously when in a bilingual speech mode? etc.

Having assessed the patient's language knowledge and use before injury, it will be important to examine the patient in the speech modes he or she was involved in prior to injury. In the sessions examining the monolingual speech modes (when the patient operated in these modes), it will be important to deactivate the language not being tested. To do this, the patient will have to be tested in each of the languages at different times and by different monolingual examiners. In this way, the patient will clearly understand that, in each case, he or she is facing a monolingual interlocutor and can only use one language. Keeping in mind the knowledge, use, and functions of the languages prior to injury, it will now be possible to assess the impact of injury on each of the languages when used monolingually. Of particular interest will be the amount and kind of interferences that now occur, and whether these are different from those prior to injury. It will also be necessary to determine if the patient can keep his or her two languages separate in these monolingual testing situations; change of base language or actual code switching with a monolingual examiner will be a sure sign that the mechanism (the switch, monitor, or attentional system) that allows polyglots to deactivate one language, when speaking the other, has been affected.

If the patient also operated in the bilingual speech mode before injury, he or she will need to be examined in that particular mode. To do this, a testing situation will need to be set up such that the patient feels comfortable code switching and borrowing during the examination. One way of doing this is to adjoin to a third, polyglot, examiner (the first two were monolingual in languages A and B), some members of the patient's family or close friends with whom the patient code switched and borrowed before injury. In this bilingual mode, one will want to study the appropriateness of language choice (does the patient speak the "wrong" language to a bilingual family member and/or close friend) as well as the ability to code switch and borrow: Are the code switches

grammatically constrained as they were before injury? Are they of the same type (intersentential, intrasentential, single items, tags, etc.)? Are the speech borrowings integrated appropriately into the base language? etc. The ability to translate from one language to the other will also need to be determined.

It is only by means of such careful assessment that we will better understand, and therefore better treat, polyglot aphasia. This in turn will improve our understanding of normal polyglots: their language competencies, their language use, and the mechanisms that allow them to maintain their languages separate in a monolingual speech mode but let them interact in a bilingual speech mode.

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