Optimization in bilingual language use*

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Pieter Muysken's keynote paper, "Language contact outcomes as a result of bilingual optimization strategies", undertakes an ambitious project to theoretically unify different empirical outcomes of language contact, for instance, SLA, pidgins and Creoles, and code-switching. Muysken has dedicated a life-time to researching, rather successfully, various sub-fields of language contact, so I am very pleased to see him develop a synergistic model that reduces the complexities of different bilingual contact phenomena to four optimization strategies, the specific permutations of which yield the different, linguistically significant, generalizations. Such attempts are necessary, certainly, if the field of language contact has to make progress, theoretically. The success of such a theoretical unification, however, depends to a large extent on (i) the empirical mileage such unification receives; (ii) how well the assumptions underlying the logic of unification are theoretically motivated, to yield precise predictions about the orderliness of bilingual behavior; and (iii) the conceptual clarity required to understand the various links among the outcomes of language contact. On all these counts, Muysken's paper comes close to achieving success, though one notices several areas of fuzziness that need to be addressed for a competent model to fully emerge. In this short essay, I will point out two areas that need theoretical attention so that subsequent revisions of the present version of the model can address them. I will restrict my comments to code-switching, an extremely productive area of language contact, with which I am most familiar.

1. Factors and outcomes

In Muysken's model, social factors, such as power relations or political competition, impact the bilingual strategies in a significant way. So, in scenarios where there appears a clear power-asymmetry between languages in contact, Muysken makes the following theoretical claim:

> Highly unequal POWER RELATIONS between the languages lead to insertion ... Thus both (post-)colonial settings, in which there is a (often European) prestige language, and settings involving immigrant minority languages and a dominant national language, typically show insertional code-switching patterns. (Section 2.1)

This is, clearly, an observationally adequate statement (following Myers-Scotton 1993) – that asymmetric power-relations between languages in contact trigger insertional code-switching. This, however, begs the following theoretical question: why should power-asymmetries between languages in contact lead typically to insertional code-switching, and not to other types of switching? In other words, if empirically supported, a theory of language contact is obligated to explain from what theoretical principles (where in the theory) does this high correlation (between power-asymmetries and insertional code-switching) follow. A fully developed theory of language contact has to provide answer to these fundamental questions – why do certain correlations appear the way they do? More to the point: why does insertional code-switching correlate highly with asymmetric scenarios of language contact? I do not, unfortunately, see an attempt by Muysken to probe into these deeper theoretical questions.

Leaving aside the issue of theoretical rigor noted above, it appears that the empirical coverage is also not unproblematic, i.e., the predictions in (i) are not empirically supported when closely scrutinized against data in post-colonial settings (India, for example) and in an immigrant minority language situation (Kashmiri in Diaspora, for example). To illustrate my point, I begin with Extract 1 below – an eleven-second extract of a narrative of an upper-middle-class Kashmiri woman, a member of the Kashmiri community living in New Delhi, India, justifying why she did not speak Kashmiri to her three children when they were young (see Bhatt & Bolonyai 2011, p. 534). In this extract, the diacritic "#" marks the intonation boundary; Hindi is set in normal font, Kashmiri is *italicized*, and English underlined.

Extract 1. Hindi–English– *Kashmiri* code-switching

mai jab chotii Thii # jab meri shaadi hui
   when I was little when I got married
 # mujhe bhii yahii lagtaa Thaa
   I also used to think/feel

ki myaanyan shuryan gos na kashmiri accent
   that my.kids should not.get the Kashmiri accent
 gasun
so, I spoke to them in English mainly # [pause]
bas yahii hai
well that is.it

This extract is typical of a competent multilingual's discourse: there are three, not two, languages on 'display', as it were – English is the post-colonial language, Hindi the national language and the dominant local lingua franca, and *Kashmiri* is the ethnic mother-tongue of the speaker. The different indexicalities of these languages in contact are transparent, and stable: English is the power code, Kashmiri is the affective code, and Hindi, the second, dominant language of most Kashmiri speakers in Delhi, is the "M(atrix) L(anguage)". Additionally, in this scenario of contact, we witness both the post-colonial setting (English – local languages) and a setting involving an immigrant minority language (Kashmiri in Diaspora) and a dominant national language (Hindi). Given these contact factors, the expectation under Muysken's quadrangle typology, his claim (i) above, is the "insertional" code-switching strategy as the optimal outcome, which is clearly not the case in Extract 1. What we notice instead in Extract 1 is a simultaneous mobilization of all four optimization strategies by the multilingual speaker: massive BACKFLAGGING (to Kashmiri, which carries clear ethnic connotations) and CONGRUENT LEXICALIZATION (since the syntactic structure of the finite complement clauses in Hindi and Kashmiri [and English] is the same), ALTERNATION (between English and Kashmiri), and INSERTION (the English expression, Kashmiri accent, in a Kashmiri clause).

Now it is quite possible to argue that "Linguistic factors", typological and lexical distance between languages, may have a larger role (than social factors) in this context. English is a head-initial (SVO) language, Hindi is a head-final (SOV) language, and Kashmiri is a Verb-Second (like German, Dutch and Yiddish) language; i.e., the participating languages are typologically distant. Within Muysken's model, the prediction for bilingual outcome in such typologically distant languages is either insertion OR alternation – clearly it is not one OR the other, it is both; and, in fact, depending on how we read his quadrangle, the switch to Kashmiri can easily get a backflagging construal. Thus, linguistic factors do not help in the determination of the choice of a specific strategy/outcome.

With respect to cognitive factors, proficiency, Muysken notes that high proficiency in the languages involved generally leads to congruent lexicalization or alternation, while lower proficiency in one of the languages leads to insertion. The empirical problem with this particular cognitive factor is that we notice highly proficient/competent bilinguals frequently use, for principled reasons (see Bhatt & Bolonyai 2011, p. 526), insertional code-switching, as shown in Extract 2.

Extract 2. English–*Hindi* code-switching
    There have been several analyses of this phenomenon.
    First, there is the "religious angle" which is to do with

Indian society. In India a man feels guilty when fantasising about another man's wife, unlike in the west. The *saat pheras* ["seven circumnavigations"] around the *agni* ["fire"] serves as *a lakshman rekha* ["line one doesn't cross"].

Extract 2 illustrates a typical instantiation of the competent multilingual speaker's optimization strategy of insertional code-switching, but given that low proficiency, not high proficiency, correlates with insertional code-switching, we are led to an analytic cul-de-sac.

2. Optimization and outcomes

The key to understanding patterns of code-switching across different communities is OPTIMIZATION: the process by which conflicts in (linguistic-syntactic) form and (social-indexical) functions of languages in contact are resolved. The studies that have focused on form are numerous, most of them successful within the range of empirical domain that was covered. The problem with these proposals was their generalizability, leading some to ponder whether there are syntactic constraints on code-switching. Along came Optimality Theory (OT), with the radical idea that linguistic constraints are not categorical, but defeasible in appropriate contexts. These soft, violable constraints when ranked with respect to each other in a particular order yield one grammar while shifts in their ordering yield others. Thus, cross-linguistic variation could be captured in terms of different rankings of these violable constraints. The observable linguistic output was indeed an optimal outcome from all the possible, competing output candidates. Under this view, then, constraints are violable, constraints are ranked, and the output candidate with least serious violations is the optimal, grammatical output. This theory was successfully used in Bhatt (1997) to test the cross-linguistic differences in the morpho-syntax of code-switching between Spanish and English, Hindi and English, and Swahili and English. Extending the OT view to the functional grammar of code-switching, Bhatt and Bolonyai (2011) were able to show that the functional differences in different bilingual communities were reducible to the different rankings of five meta-pragmatic constraints.

Much along the same lines, Muysken offers a model of language contact that is also predicated on the notion of optimization. The problem one notices immediately with his application of OT is the conceptual fuzziness. He follows an Optimality Theory outlined in five pages of a dissertation, without any comparisons with OT employed in previous works on phonology, syntax, and code-switching (Bhatt, 1997, 2000; Bhatt & Bolonyai, 2011; Prince & Smolensky, 2004). What are the assumptions that motivate his particular choice of OT? The optimality constraints offered by Muysken, without motivating them

– FAITHFEAT, SL1, SL2, and *CSL – are poorly defined, leaving the reader wondering about its efficacy. For instance, what motivates constraints such as SL1 and SL2 (other than the fact that Muysken needs them to differentiate between insertional code-switching and backflagging, which makes the argument circular)? What is the empirical coverage of the proposed constraints in other domains of language contact? The constraint FAITHFEAT is FAITH in Bhatt and Bolonyai (2011) discussion, where they show clearly how it works in the derivation of optimal outputs in bilingual language use. Muysken presents Tableaux 1–4 to illustrate how each of the four bilingual outcomes – insertion, congruent lexicalization, alternation, and backflagging – result from different rankings of the constraints he has proposed. But here is the theoretical problem: Since, according to Muysken, FAITHFEAT is un-dominated, and is violated in all instances of non-switch outputs – as all his four tableaux show – under the assumption that bilingual speakers want to convey a meaning in terms of words from different languages, the constraint *CSL, that forbids switching between separate languages, either in the lexicon or in the grammar, will always be in conflict with it (FAITHFEAT). If so, then there is a clear prediction that switches between separate languages should be an option – simply because FAITHFEAT always outranks *CSL in Muysken's proposal. This prediction, however, does not follow from any of his quadrangle outcomes, although we see its empirical presence in what Myers-Scotton (1993) calls EL-islands (or Embedding Language Islands), or in the cases that I have discussed elsewhere (Bhatt, 1997, p. 242), reproduced below in Extract 3. In Extract 3, the entire DP-object switches to Hindi (as the order of its elements shows: Poss Pronoun–Quantifier–Noun) while the Poss Pronoun appears in English, for principled reasons (see Bhatt 1997). In other words, the switch happens regardless of the fact that the two separate languages, Hindi and English, are typologically and lexically distant, and have different DP-structures.

Extract 3. English–*Hindi* code-switching
 . . . and he gave [Hindi-DP his *sarii jaydaad*]
                                                  all   fortune
to his youngest son, . . .

Additionally, it is not clear how Muysken's speaker optimization strategy handles variation, as in Extract 1, given that all of the social, cognitive and linguistic factors are held constant. It becomes impossible to account for the data in Extracts 1, 2, and 3, discussed above, given Tableaux 1–4. In other words, how does Muysken's version of OT account for the adoption of more than one bilingual optimization strategy by speakers in the same contact scenario?

The discussion of OT, such as it is, does not improve in the remainder of the article, and in the discussion of code-switching there is little to show how social, linguistic, and cognitive factors, discussed earlier in the article, interact with optimality constraints the author has proposed to yield the different outcomes of insertion, congruent lexicalization, alternation and backflagging. Rearranging the constraints to yield particular code-switching outcomes amounts to very little in terms of explaining why certain outcomes and not others become possible. The theory has to show how interaction and optimal satisfaction of the (often competing and conflicting) constraints yield the desired outcome – the conflict and its resolution has to be clearly shown for Muysken's brand of OT to be successful.

3. Conclusions

The field of code-switching needs serious re-thinking, inviting new perspectives, and Muysken's paper is a step in the right direction. He has identified some generalities in a sea of descriptive statements, and proposed to theoretically encode those generalizations in a unified framework. Optimization as the key theoretical construct in explaining different outcomes is certainly insightful, and the correct way forward in the project of unification. There is, however, a lot more work that needs to be done to be able to present a restrictive theory of language contact, one that uses clearly defined theoretical categories and precise engineering to yield observable facts. It might be useful, perhaps, to begin with a rich set of linguistically significant generalizations obtained from contexts where multilingualism is the norm, not an exception, where navigating super-diversity is routine, not a recent incursion.

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