Qui talk de même anyway? Building a phenotype for the Canadian code-switcher

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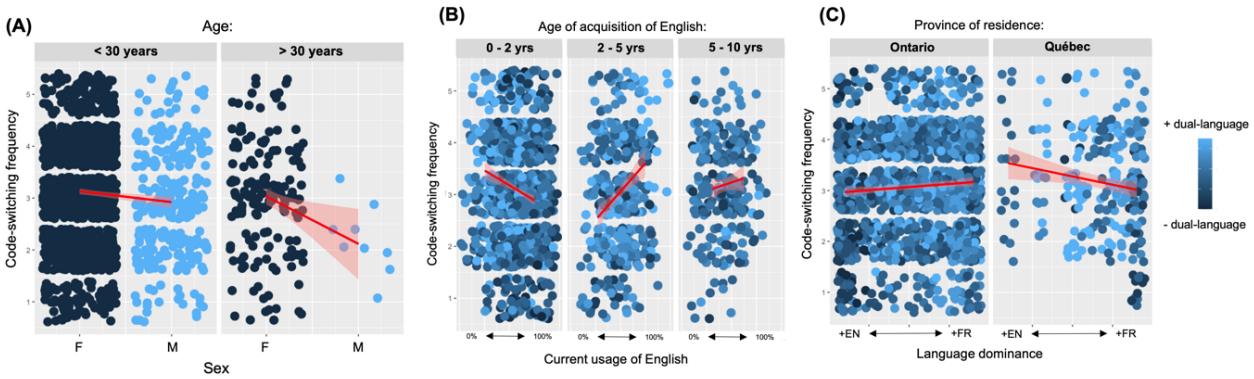
The controversial Bilingual Advantage Hypothesis supposes that bilinguals possess executive functioning benefits, by virtue of 'juggling' more than one language in their day-to-day lives [1]. New evidence points towards the idea that **CODE-SWITCHING** (i.e., the act of alternating between languages within a single speech event) plays a key role in determining bilingual executive functioning benefits [2-6]. For instance, a recent study conducted on Canadian French-English bilinguals demonstrated that code-switchers outperform non-code-switchers during cognitive control tasks [7]. However, it is clear that not all bilinguals code-switch, and that benefits are thus not uniform across a given stratum of bilinguals. This begs the question: In the Canadian context, what 'makes' a code-switcher?

This project revisits the data from [7] in order to examine whether the participants' responses to the Bilingual Switching Questionnaire (BSwQ; [8]) were predicted by their demographic and language background [9]. The final data set included the responses of 209 French-English bilinguals to nine BSwQ items. Participants were instructed to respond to each item (a statement quantifying their code-switching habits) on a scale of 1 to 5 (1=”never”, 5=”always”). Mixed model analyses were conducted on these data, wherein the participants’ response was the dependent variable; random intercepts for subjects and items were also included. A first model was fitted for the demographic predictors of *age, gender, education level, handedness* and *video-game habits*. A second model was fitted for the linguistic predictors of *native language, current province, dominance, proficiency, current usage, age of acquisition,* and the *frequency of dual-language interactions*. Predictors accounting for the least amount of variance were removed in a stepwise fashion. The combination of both final models accounted for 11.4% of the marginal explained variance and 37.3% of the conditional explained variance.

Both sex and age impacted code-switching habits, with younger women reporting the most frequent code-switching (F=3.94, p=.05; (A)). Code-switching was more frequent for those who reported less current usage of English (i.e., more usage of French) and more dual-language usage; however, this interaction was modulated by the participants’ age of acquisition of English: those who had acquired English from birth code-switched less as their current usage of English increased; the opposite effect was observed for bilinguals who acquired English after 2 years of age (F=12.07, p<.001; (B)). Dual-language experiences (and less usage of English) were especially important when it came to bilinguals with skewed dominance (F=17.38, p<.001). Finally, bilinguals were less likely to frequently code-switch as they became more dominant in the majority language of their province (English for Ontario and French for Québec; F=3.86, p=.05; (C)).

These findings allow us to build an image of the prototypical code-switcher in central Canada: a young woman who is a simultaneous bilingual or a native speaker of the minority language, and who maintains this minority language (e.g., high balance) while living in the majority environment. Building this phenotype may help researchers better understand the sociodemographic and linguistic factors may lead to bilingual executive functioning benefits.



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