

Bilingualism over the lifespan

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It's a scene that plays out every day in Montreal. On the bus, in schools, in the office and at home, conversations weave seamlessly back and forth between French and English, or one of the many other languages represented on this multicultural island. It's increasingly common to hear not two, but three different languages spoken in one short conversation.

It's a unique socio-cultural phenomenon and a stunning neurocognitive feat—one that McGill researchers have studied since the nineteen sixties, when Dr. Wallace Lambert, in the McGill Department of Psychology, conducted his seminal studies in bilingualism. Lambert was one of the first researchers to demonstrate that bilingualism may confer cognitive advantages. It was a revolutionary idea at a time when bilingualism was more often considered an impediment to learning than a boon.

The study of bilingualism remains a strong focus of McGill faculty, many of whom belong to the Centre for Research on Brain, Language and Music (CRBLM). In a special edition of *Applied Psycholinguistics*, several members share their expertise in a broad discussion of bilingualism and its cognitive benefits throughout the lifespan. The discussion is anchored by the keynote article, "Moving toward a neuroplasticity view of bilingualism, executive control and aging," co-authored by Drs. Shari Baum and Debra Titone.

In the article, Baum and Titone highlight the most striking findings about bilingualism, from the last decade. They discuss recent research, such as that by Ellen Bialystok and colleagues at York University, supporting

Lambert's findings that bilingualism improves behavioural performance. They introduce imaging studies from the literature showing that bilingualism is correlated with structural and connective changes in the brain, similar to those observed for other highly specialized skills, such as expert musicianship. Finally, they discuss the "protection" that bilingualism may confer, citing the correlation between bilingualism and later onset of neurological diseases, such as Alzheimer's Disease.

Baum and Titone also address a significant challenge in current bilingualism research, the variability in study outcomes. They argue that this variability rests on an implicit, and erroneous, assumption that all bilinguals (or monolinguals for that matter) are the same. Instead, Baum and Titone call for a change in perspective and paradigm, to capture the complexities of individual bilingual behavior, to put greater emphasis on differences among bilingual speakers and the real-world contexts in which they communicate, for example, here in Montreal.

The special edition includes public commentary from several world experts in the field, including Drs. Ellen Bialystok, Judith Kroll, and David Green, and CRBLM members, Drs. Fred Genesee, Denise Klein, Krista Byers-Heinlein and Natalie Phillips. The authors further the discussion, raising key points about other neural and developmental factors influencing bilingualism, as well as the methodological complexities of evaluating its impact on general cognition.

Wallace Lambert began to change the perspective on bilingualism in the nineteen sixties. The commentaries in the special edition on [bilingualism](#) suggest that there is much more to learn about its impact on cognition, and that it is time for new paradigms and new ways of understanding this unique human endowment. Given the rich bilingual scene in Montreal, ongoing research conducted by Centre members will undoubtedly shed more light on these questions in the near future.

More information: *Applied Psycholinguistics*,
[journals.cambridge.org/action/ ... sueId=05&iid=9319999](https://journals.cambridge.org/action/...sueId=05&iid=9319999)

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