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# Aging mind, two languages: What can bilingualism in aging tell us about language and communication

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**Abstract.** Within the landscape of research that has predominantly examined the cognitive effects of bilingualism, it is equally important to investigate how bilingualism shapes language use itself during aging. Ultimately, individuals become bilingual in response to specific communicative or social demands. The languages that bilinguals acquire serve as their primary tools for navigating these needs within their sociocultural contexts. Such motivations can vary: in some cases, bilingualism arises because the surrounding community employs multiple languages in a socially stratified manner; in others, individuals adopt an additional language when their first language does not align with the language used in daily life, for example, due to migration; and in yet other cases, bilingualism emerges through opportunities to acquire new languages, whether for personal enrichment or practical need. Taken together, the contributions to this special issue delineate a coherent and promising line of research on language in aging, aimed at advancing our understanding of linguistic and communicative functioning across the lifespan.
**Keywords.** bilingualism, aging, communication, cognitive linguistics, psycholinguistics, dementia

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## 1 Introduction

As an individual language condition, bilingualism is at least as prevalent as monolingualism worldwide. Currently, more than 7 000 spoken languages and over 300 sign languages are in use across the globe, and it is estimated that more than three billion

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individuals regularly use two or more languages in their daily lives (Grosjean 2021). These figures suggest that bilingual (and, by extension, multilingual) language use characterizes well over half of the world's population (Mendis, Raymont, and Tabet 2021; Rubin and Digard 2025), underscoring the fact that bilingualism is not an exceptional phenomenon, but rather a common mode of human communication.

Given the widespread nature of bilingualism, it stands to reason that a substantial proportion of the world's population is aging bilingual. This trend is unsurprising: over the past decades, the world has seen an increase in life expectancy (Navaneetham and Arunachalam 2025), alongside a growing prevalence of factors that promote individual bilingualism, ranging from migration and professional needs to personal motivation.

Above all, these converging demographic and sociolinguistic trends provide indirect evidence of the increasing prevalence of bilingualism among aging speakers. At the same time, they also underscore the need for systematic scholarly insight into the interaction between aging trajectories and bilingual language use. From an intrinsically linguistic perspective, approaching bilingualism through the lens of aging is especially valuable, not only for refining theoretical models of language representation and processing, but also for advancing our understanding of how language and cognition age together.

## 2 Bilingualism and aging from a cognitive lens

As both a linguistic and cognitive phenomenon, bilingualism has long attracted sustained scientific interest, particularly regarding its development and evolution across the lifespan (Hyltenstam and Obler 1989; Nicoladis and Montanari 2016; Herschensohn 2022; Røyneland and Blackwood 2022, to mention a few referential sources). While a substantial body of research has focused on bilingual language acquisition, linguistic development, and cognitive functioning in childhood and adulthood, increasing attention has also been directed toward bilingualism in later life (De Bot and Makoni 2005; Goral 2012; Bialystok and Sullivan 2017; De Bot, Plejert, and Simonsen 2020, among others). Truly indeed, the special interest towards bilingualism in aging cannot be underestimated. The contributions of this field of study are far from negligible, particularly if one considers that understanding how bilingualism is maintained, transformed, and expressed in older adulthood is essential to elucidate the dynamics of language across the lifespan in fullness.

Up until now, one of the most prominent lines of research in bilingual aging has focused on examining the role of bilingualism in the build-up of cognitive reserve. Given that aging is often accompanied by gradual cognitive decline (Park, O'Connell, and Thomson 2003; Harada, Love, and Triebel 2013), investigating whether bilingualism functions as a protective, compensatory, or masking factor has become a matter of substantial theoretical and clinical significance across multiple scientific disciplines. This research trajectory spans Psychology and Neuroscience and extends to Linguistics, where bilingual language experience has emerged as a crucial factor in understanding both linguistic and cognitive functioning across the lifespan. Moreover, by integrating evidence from behavioral, neuroimaging, and longitudinal studies, this body of work provides insights into how lifelong bilingual experience may contribute to resilience against age-related cognitive decline, highlighting its relevance not only for

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theoretical models of cognition but also for public health and educational strategies aimed at promoting cognitive well-being in older adults.

From this perspective, bilingualism has been recognized as an important factor in mitigating age-related cognitive decline, independently of a range of biosocial, educational, and geographical variables, including socioeconomic status, migration background, and gender (Bak et al. 2014). Although the protective effects of bilingualism are not always consistently robust and may interact with other contributing factors (for a detailed discussion, see Borsa et al. 2018; Pot, Porkert, and Keijzer 2019), it is widely acknowledged that regular use of two languages exerts a positive influence on cognitive functioning in older adulthood. Sustained bilingual engagement has been shown to enhance functional connectivity within key neurocognitive networks — such as those supporting executive control (Grady et al. 2015; Grant, Dennis, and Li 2014) — thereby conferring improvements in various cognitive tasks through structural and functional reorganization (Ardila and Ramos 2010; Bialystok et al. 2004; Rossi and Diaz 2016). In sum, in an increasingly multilingual world, investigating the potential contribution of bilingual experience to cognitive resilience in later life has become both timely and significant. This is particularly relevant given evidence suggesting that bilingualism may play a meaningful role in delaying the onset of dementia-related symptoms (Bialystok et al. 2016).

## 3 Bilingualism and aging from a linguistic lens

Within the landscape of research that has predominantly examined the cognitive effects of bilingualism, it is equally important to investigate how bilingualism shapes language use itself during aging. Deep down, individuals become bilingual in response to specific communicative or social demands. The languages that bilinguals acquire serve as their primary tools for navigating these needs within their sociocultural contexts. Such motivations can vary: in some cases, bilingualism arises because the surrounding community employs multiple languages in a socially stratified manner; in others, individuals adopt an additional language when their first language does not align with the language used in daily life, for example, due to migration; and in yet other cases, bilingualism emerges through opportunities to acquire new languages, whether for personal enrichment or practical need.

In this context, aging bilingualism represents a rich and invaluable resource for understanding not only cognition from a linguistic perspective, but also the structure and functioning of the language itself (cf. Reifegerste 2021). Because language abilities typically deteriorate progressively with age even in monolingual speakers (Ivanova 2025), examining how similar processes unfold in individuals who use two languages is crucial for elucidating both the cognitive architecture of bilingualism and the organization of linguistic competence.

Bilingualism is a dynamic cognitive phenomenon, characterized by continuous interaction and competition between the two languages, as well as by their ongoing mutual adaptation (Kroll, Bobb, and Hoshino 2014). Accordingly, processes and dimensions that are unique to bilingualism — for example, code-switching — offer especially valuable insights into how languages are organized and managed within the speaker's cognitive system.

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## 4 Bilingualism and aging in this Issue

Building on this body of research, the aim of this special issue of the *Journal of Language and Aging Research* is to offer a linguistic perspective on bilingualism in aging. To this end, it brings together four empirical studies and one review article that collectively shed light on the organization and use of languages in older bilingual speakers. Collectively, these contributions address two linguistic phenomena of central importance in the study of bilingualism in aging, namely, *code-switching* and *language perception and learning*.

Code-switching is addressed by Varela Suárez and Ogneva, and Mollenhauer and Mollenhauer.

Varela Suárez and Ogneva ("Code-switching as a compensatory strategy in the discourse of Galician-Spanish bilinguals") provide insight into the ways in which code-switching may function as a discursive strategy in bilingual speakers with dementia. Drawing on interview data from older adults diagnosed with different types of dementia, the authors demonstrate that code-switching can serve a compensatory role in pathological aging. Importantly, their findings also highlight the influence of language background on both the frequency and functional deployment of code-switching in this population.

Code-switching is also examined by Mollenhauer and Mollenhauer ("Beyond language choice: Code-switching and bilingual care conversations in the context of cultural diversity and dementia"), but from a distinctly social perspective. Drawing on naturalistic interactional data, the authors investigate how code-switching facilitates interactions between aging bilinguals and their caregivers, extending beyond mere language choice to encompass processes of social integration, the co-construction of well-being, and collaborative problem-solving.

*Linguistic perception and learning*, for its part, is addressed by Rasmussen et al., and Cardaio and Keijzer.

Rasmussen, Villumsen, Poulsen, and Bohn ("Perceptual flexibility at an advanced age: Training seniors to perceive a nonnative voicing contrast") report findings from a perceptual study demonstrating that older adults can perform comparably to younger speakers in the acquisition of nonnative speech sounds. In line with recent trends in the literature on foreign and second language learning in later life, their results help delineate directions for the design of educational approaches and instructional materials tailored to older learners.

Finally, Cardaio and Keijzer's systematic review ("Comparing the impact of lifelong multilingualism and later-life language learning on cognitive and brain reserve in older adults with cognitive decline due to Alzheimer's disease") examines whether language learning initiated in later life can confer levels of cognitive reserve comparable to those associated with lifelong multilingualism. Although the review identifies differences in the effects of these experiences on specific cognitive functions, the authors conclude that language learning in later adulthood yields overall cognitive benefits in the context of aging.

To conclude, Machado's review examines the construction of linguistic and communicative interaction in dementia, both in light of the issues discussed in this volume and beyond, with particular attention to the book *Dementia and language: The lived experience in interaction* (Muntigl, Plejert, and Jones 2024).

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Taken together, the five contributions delineate a coherent and promising line of research on language in aging, aimed at advancing our understanding of linguistic and communicative functioning across the lifespan. It is our hope that this special issue will serve as a source of inspiration for readers and stimulate future research in the field of language and aging.

## Conflict of interest

The author has no conflict of interest to declare.

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