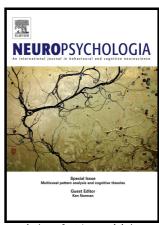
## Author's Accepted Manuscript

Structural brain differences between monolingual and multilingual patients with mild cognitive impairment and Alzheimer disease: Evidence for cognitive reserve

Hilary D. Duncan, Jim Nikelski, Randi Pilon, Jason Steffener, Howard Chertkow, Natalie A. Phillips



www.elsevier.com/locate/neuropsychologia

PII: S0028-3932(17)30510-9

DOI: https://doi.org/10.1016/j.neuropsychologia.2017.12.036

Reference: NSY6627

To appear in: Neuropsychologia

Received date: 30 May 2017 Revised date: 19 October 2017 Accepted date: 22 December 2017

Cite this article as: Hilary D. Duncan, Jim Nikelski, Randi Pilon, Jason Steffener, Howard Chertkow and Natalie A. Phillips, Structural brain differences between monolingual and multilingual patients with mild cognitive impairment and Alzheimer disease: Evidence for cognitive reserve, *Neuropsychologia*, https://doi.org/10.1016/j.neuropsychologia.2017.12.036

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1 2	Structural brain differences between monolingual and multilingual patients with mild cognitive impairment and Alzheimer disease: Evidence for cognitive reserve
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4 5	Hilary D. Duncan <sup>a,b</sup> , Jim Nikelski <sup>c</sup> , Randi Pilon <sup>c</sup> , Jason Steffener <sup>a,d,e</sup> , Howard Chertkow <sup>c,f</sup> , Natalie A. Phillips <sup>a,b,c,g*</sup>
6 7	<sup>a</sup> Department of Psychology, Concordia University, Montréal, QC, Canada
8	<sup>b</sup> Centre for Research in Human Development, Montréal, QC, Canada
9	<sup>c</sup> Lady Davis Institute for Medical Research, Jewish General Hospital, McGill University,
10	Montréal, QC, Canada
11	dFaculty of Health Sciences, University of Ottawa, Ottawa, ON, Canada
12 13	<sup>e</sup> Centre de Recherche de l'Institut Universitaire de Gériatrie de Montréal, Montréal, QC, Canada <sup>f</sup> Department of Neurology and Neurosurgery, McGill University, Montréal, QC, Canada
14	<sup>g</sup> Centre for Research on Brain, Language, and Music, Montréal, QC, Canada
15	Control for Resourch on Brain, Euriguage, and Praste, Promitour, &C, Canada
16	
17	*Corresponding author: Natalie Phillips, PhD, Department of Psychology, Concordia University,
18	7141 Sherbrooke West, Montréal, QC, H4B 1R6, Canada, Tel.: 514-848-2424 Ext. 2218, fax :
19 20	514-848-4537, natalie.phillips@concordia.ca
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23	Abstract:
24	Two independent lines of research provide evidence that speaking more than one language
25	may 1) contribute to increased grey matter in healthy younger and older adults and 2) delay
26	cognitive symptoms in mild cognitive impairment (MCI) or Alzheimer disease (AD). We
27	examined cortical thickness and tissue density in monolingual and multilingual MCI and AD
28	patients matched (within Diagnosis Groups) on demographic and cognitive variables. In medial
29	temporal disease-related (DR) areas, we found higher tissue density in multilingual MCIs versus
30	monolingual MCIs, but similar or lower tissue density in multilingual AD versus monolingual
31	AD, a pattern consistent with cognitive reserve in AD. In areas related to language and cognitive
32	control (LCC), both multilingual MCI and AD patients had thicker cortex than the monolinguals.
33	Results were largely replicated in our native-born Canadian MCI participants, ruling out
34	immigration as a potential confound. Finally, multilingual patients showed a correlation between
35	cortical thickness in LCC regions and performance on episodic memory tasks. Given that

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