

White Matter Disconnection is Related to Age-Related Phonological Deficits

Sara B.W.Troutman¹ and Michele T. Diaz¹

¹Pennsylvania State University, University Park, PA, USA, 16802

Journal: Brain Imaging and Behavior

Corresponding author:

Michele T. Diaz, PhD

Department of Psychology

Pennsylvania State University

365 Moore Building, University Park, PA, USA, 16802

Tel: +1 814 863 1726

Fax: + 1 814 863 7002

e-mail: mtd143@psu.edu

ORCID: 0000-0001-7263-1694

	Control Tract	Semantic Tracts		Phonological Tracts	
	frontal striatal tract (FS)	inferior longitudinal fasciculus (ILF)	middle longitudinal fasciculus (MDLF)	frontal aslant tract (FAT)	superior longitudinal fasciculus (SLF) III /arcuate fasciculus (AF)
Seed	dorsolateral prefrontal cortex as defined as a 8mm sphere centered at X=22 Y=87 Z=38	temporal pole as defined by the Harvard Oxford Cortical Atlas thresholded at 25%	angular gyrus as defined by the Harvard Oxford Cortical Atlas thresholded at 25%	supplementary motor cortex (SMA) and pre-SMA as defined by the Harvard Oxford Cortical Atlas thresholded at 25%	inferior frontal gyrus pars operculus, as defined by Harvard Oxford Cortical Atlas thresholded at 25%
Target	caudate defined by the Harvard Oxford Atlas thresholded at 25%	temporo-occipital portion of the inferior temporal gyrus defined by the Harvard Oxford Cortical Atlas thresholded at 25%	temporal pole defined by the Harvard Oxford Cortical Atlas thresholded at 25%	inferior frontal gyrus pars operculus and pars triangulares as defined by the Harvard Oxford Cortical Atlas thresholded at 25%	superior temporal gyrus defined by Harvard Oxford Cortical Atlas thresholded at 25%