

Laëtitia Mwilambwe-Tshilobo

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RESEARCH INTERESTS	Loneliness and Social Connection • Naturalistic Social Interaction • Social Cognition Individual Differences • Brain Network Dynamics • Healthy Aging	
EDUCATION	Ph.D. in Neuroscience 2022 McGill University , Montréal, QC, CA Dissertation: A network neuroscience perspective on the neural correlates of state and trait loneliness across the adult lifespan Committee: Dr. R. Nathan Spreng, Dr. Bratislav Misic & Dr. Laurette Dubé	
	M.A. in Developmental Psychology 2017 Cornell University , Ithaca, NY, USA	
	M.Sc. in Biology/Neuroscience 2012 University of Hartford , Hartford, CT, USA	
	B.A. in Neuroscience 2010 The College of Wooster , Wooster, OH, USA	
ACADEMIC POSITIONS	Diane and Howard Deshong Postdoctoral Fellow 2025–present Supervisor: Dr. Emily Falk <i>University of Pennsylvania, Annenberg Public Policy Center</i>	
	Presidential Postdoctoral Research Fellow 2023–2025 Supervisor: Dr. Diana Tamir <i>Princeton University, Department of Psychology</i>	
	Postdoctoral Researcher 2022–2023 Supervisor: Dr. Emily Falk <i>University of Pennsylvania, Annenberg School for Communication</i>	
	Research Technician 2012–2015 Supervisor: Dr. Maria Geffen <i>University of Pennsylvania, Department of Otorhinolaryngology:HNS</i>	
	Research Assistant 2011–2012 Supervisor: Dr. Lisa Conti <i>University of Connecticut Health Center, Department of Psychiatry</i>	

PUBLICATIONS

Burns, S.M., Tsoi, L., Falk, E.B., Speer, S., **Mwilambwe-Tshilobo, L.**, Tamir, D. (2025). *Interdependent minds: Quantifying the dynamics of successful social interaction. Current Directions in Psychological Science*.0,(0)

Speer, S., **Mwilambwe-Tshilobo, L.**, Tsoi, L., Burns, S.M., Falk, E.B., Tamir, D. (2024). 15(1), 7781. *Hyperscanning shows friends explore and strangers converge in conversation. Nature Communications.*

Hughes, C., Setton, R., **Mwilambwe-Tshilobo, L.**, Baracchini, G., Turner, G.R., Spreng, R.N. (2024). *Precision mapping of the default network reveals common and distinct (inter) activity for autobiographical memory and theory of mind. Journal of Neurophysiology.* 132, 375-388.

Snytte, J., Setton, R., **Mwilambwe-Tshilobo, L.**, Natasha Rajah, M., Sheldon, S., Turner, G. R., Spreng, R. N. (2024). *Structure-function interactions in the hippocampus and prefrontal cortex are associated with episodic memory in healthy aging. eNeuro*, 11(3), ENEURO.0418-23.2023.

Kang, Y., Ahn, J., Cosme, D., **Mwilambwe-Tshilobo, L.**, McGowan, A., Zhou, D., Boyd, Z. M., Jovanova, M., Stanoi, O., Mucha, P. J., Ochsner, K. N., Bassett, D. S., Lydon-Staley, D., Falk, E. B. (2023). *Frontoparietal functional connectivity moderates the link between time spent on social media and subsequent negative affect in daily life. Scientific reports*, 13(1), 20501.

Mwilambwe-Tshilobo, L., Setton, R., Bzdok, D., Turner, G. R., Spreng, R. N. (2023). *Age differences in functional brain networks associated with loneliness and empathy. Network neuroscience*, 7(2), 496–521.

Sassenberg, T. A., Burton, P. C., **Mwilambwe-Tshilobo, L.**, Jung, R. E., Rustichini, A., Spreng, R. N., DeYoung, C. G. (2023). *Conscientiousness associated with efficiency of the salience/ventral attention network: Replication in three samples using individualized parcellation. NeuroImage*, 272, 120081.

Setton, R., **Mwilambwe-Tshilobo, L.**, Sheldon, S., Turner, G. R., Spreng, R. N. (2022). *Hippocampus and temporal pole functional connectivity is associated with age and individual differences in autobiographical memory. Proceedings of the National Academy of Sciences*, 119(41), e2203039119.

Spreng, R. N., Setton, R., Alter, U., Cassidy, B. N., Darboh, B., DuPre, E., Kantarovich, K., Lockrow, A. W., **Mwilambwe-Tshilobo, L.**, Luh, W. M., Kundu, P., Turner, G. R. (2022). *Neurocognitive aging data release with behavioral, structural and multi-echo functional MRI measures. Scientific data*, 9(1), 119.

Mwilambwe-Tshilobo, L.*, Setton, R.*, Girn, M., Lockrow, A. W., Baracchini, G., Hughes, C., Lowe, A. J., Cassidy, B. N., Li, J., Luh, W. M., Bzdok, D., Leahy, R. M., Ge, T., Margulies, D. S., Misic, B., Bernhardt, B. C., Stevens, W. D., De Brigard, F., Kundu, P., Turner, G. R., Spreng, R. N. (2022). *Age differences in the functional architecture of the human brain. Cerebral cortex*, 33(1), 114–134.

*Co-first authorship

Kantarovich, K., **Mwilambwe-Tshilobo, L.**, Fernández-Cabello, S., Setton, R., Baracchini, G., Lockrow, A. W., Spreng, R. N., Turner, G. R. (2022). *White matter lesion load is associated with lower within- and greater between- network connectivity across older age. Neurobiology of aging*, 112, 170–180.

Huang, S., Faul, L., Sevinc, G., **Mwilambwe-Tshilobo, L.**, Setton, R., Lockrow, A. W., Ebner, N. C., Turner, G. R., Spreng, R. N., De Brigard, F. (2021). *Age differences in intuitive moral decision-making: Associations with inter-network neural connectivity*. *Psychology and aging*, 36(8), 902–916.

Baracchini, G., Mišić, B., Setton, R., **Mwilambwe-Tshilobo, L.**, Girn, M., Nomi, J. S., Uddin, L. Q., Turner, G. R., Spreng, R. N. (2021). *Inter-regional BOLD signal variability is an organizational feature of functional brain networks*. *NeuroImage*, 237, 118149.

Mwilambwe-Tshilobo, L., Spreng, R. N. (2021). *Social exclusion reliably engages the default network: A meta-analysis of Cyberball*. *NeuroImage*, 227, 117666.

Spreng, R. N., Dimas, E., **Mwilambwe-Tshilobo, L.**, Dagher, A., Koellinger, P., Nave, G., Ong, A., Kernbach, J. M., Wiecki, T. V., Ge, T., Li, Y., Holmes, A. J., Yeo, B. T. T., Turner, G. R., Dunbar, R. I. M., Bzdok, D. (2020). *The default network of the human brain is associated with perceived social isolation*. *Nature communications*, 11(1), 6393.

Mwilambwe-Tshilobo, L., Ge, T., Chong, M., Ferguson, M. A., Misic, B., Burrow, A. L., Leahy, R. M., Spreng, R. N. (2019). *Loneliness and meaning in life are reflected in the intrinsic network architecture of the brain*. *Social cognitive and affective neuroscience*, 14(4), 423–433.

Natan, R. G., Carruthers, I. M., **Mwilambwe-Tshilobo, L.**, Geffen, M. N. (2017). *Gain control in the auditory cortex evoked by changing temporal correlation of sounds*. *Cerebral cortex*, 27(3), 2385–2402.

Aizenberg, M., **Mwilambwe-Tshilobo, L.**, Briguglio, J. J., Natan, R. G., Geffen, M. N. (2015). *Bidirectional regulation of innate and learned behaviors that rely on frequency discrimination by cortical inhibitory neurons*. *PLoS biology*, 13(12), e1002308.

Natan, R. G., Briguglio, J. J., **Mwilambwe-Tshilobo, L.**, Jones, S. I., Aizenberg, M., Goldberg, E. M., Geffen, M. N. (2015). *Complementary control of sensory adaptation by two types of cortical interneurons*. *eLife*, 4, e09868.

Mwilambwe-Tshilobo, L., Davis, A. J., Aizenberg, M., Geffen, M. N. (2015). *Selective impairment in frequency discrimination in a mouse model of tinnitus*. *PLoS one*, 10(9), e0137749.

Carruthers, I. M., Laplagne, D. A., Jaegle, A., Briguglio, J. J., **Mwilambwe-Tshilobo, L.**, Natan, R. G., Geffen, M. N. (2015). *Emergence of invariant representation of vocalizations in the auditory cortex*. *Journal of neurophysiology*, 114(5), 2726–2740.

O'Keefe, L. M., Doran, S. J., **Mwilambwe-Tshilobo, L.**, Conti, L. H., Venna, V. R., McCullough, L. D. (2014). *Social isolation after stroke leads to depressive-like behavior and decreased BDNF levels in mice*. *Behavioural brain research*, 260, 162–170.

UNDER REVIEW
OR REVISION

Mwilambwe-Tshilobo, L.*, Tsoi, L. *, Speer, S., Zada, Z., Burns, S., Falk, E. B., Tamir, D. (2025). *fMRI hyperscanning reveals widespread neural coupling during natural conversations*. *PsyArXiv*.

*Co-first authorship

Zada, Z., Nastase, S., Speer, S., **Mwilambwe-Tshilobo, L.**, Tsoi, L., Speer, S., Burns, S., Tamir, D. (2025). *Mapping cortical language representation during real-time natural dialogues*. *BioRxiv*.

Speer, S., Sened, H., **Mwilambwe-Tshilobo, L.**, Falk, E.B. Tsoi, L., Burns, S.M., Tamir, D. (2024). *Levels of representation in a deep learning model of categorization*. *BioRxiv*.

MANUSCRIPTS IN PREP

Mwilambwe-Tshilobo, L., Ahn, J., Kang, Y., Cosme, D., Stanoi, O., Pei, R., Speer, S., Boyd, Z., Bassett, D., Ochner, K.S., Lydon-Staley, D.M., Mucha, P.J., Tamir, D., Falk, E.B. (2025). *A generalizable neural signature of perceived loneliness*. *PsyArXiv*.

Spreng, R.N., **Mwilambwe-Tshilobo, L.**, Turner, G. T. (in prep). The impact of loneliness on functional brain network organization across the lifespan. *Ann NY Acad Sci: Special Issue on Loneliness*.

Johnson, D. G.‡, **Mwilambwe-Tshilobo, L.**, Mattan, B.D., Carreras-Tartak, J., Falk, E.B. (in prep). The psychological underpinnings of code switching: An observational study of black americans' code switching tendency.

‡Advisee

Johnson, D. G.‡, Lydon-Staley, D., **Mwilambwe-Tshilobo, L.**, Carreras-Tartak, J., Falk, E.B. (in prep). Assessing day-to-day fluctuations in code switching tendency in association with discrimination, vigilance, and negative affect among black american employee.

‡Advisee

Ahn, J.‡, **Mwilambwe-Tshilobo, L.**, Kang, Y., Stanoi, Cosme, D., S., Bassett, D., Boyd, Z., Lydon-Staley, D.M., Mucha, P.J., Ochner, K.S., Falk, E.B. (in prep). Connectome-based predictive modeling of loneliness during COVID-19.

‡Advisee

Ahn, J.‡, **Mwilambwe-Tshilobo, L.**, Kang, Y., Stanoi, Cosme, D., S., Bassett, D., Boyd, Z., Lydon-Staley, D.M., Mucha, P.J., Ochner, K.S., Falk, E.B. (in prep). Inaccurate self-evaluations, well-being, and mentalizing activity in the brain.

‡Advisee

Girn, M., Bzdok, D., Setton, R., **Mwilambwe-Tshilobo, L.**, Turner, G. T., Spreng, R.N. (in prep). Individual differences in default network-behavior relations reveal multifaceted patterns of associations across subsystems.

INVITED TALKS & PANELS

Wharton Neuroscience Summit

Nov 2024

University of Pennsylvania Philadelphia, PA

- Panel: *Loss and Emotions: Impact on Decision Making*
- Co-panellists: Pablo Egaña del Sol, James Pawelski, Elizabeth Phelps, Dolores Albarracín
- Organiser: Michael Platt

Princeton Social Research Seminar

Nov 2023

Princeton Department of Psychology Princeton, NJ

- Talk: *From Loneliness to Connection: Exploring the Impact of Brain Dynamics on Social Connection*

Constellation Energy

Sept 2021

Virtual

- Talk: *How we connect: What the brain can tell us about human social connection.*
- Constellation Energy STEM Scholarship Program

20th Annual Neuropsychology Day and Brenda Milner Lecture

April 2019

The Neuro Montreal, QC, Canada

- Talk: *Age-related differences in the neural correlates of loneliness and social isolation in young and older adults.*
- Awarded Best Platform Presentation

AWARDS & FELLOWSHIPS

Presidential Postdoctoral Research Fellow—Princeton University	2023–2025
Inaugural Diversity Award—Social and Affective Neuroscience Society	2021
Healthy Brains, Healthy Lives—McGill University	2020
Shuk-Tak Liang Fellowship—McGill University, Faculty of Medicine	2019
Alice Chan-Yip & Graduate Excellence Fellowship—McGill University	2018
Tom Gevas Student Travel Award—McGill University, Faculty of Medicine	2017
Graduate Fellowship—Cornell University, Human Ecology	2016
Graduate Fellowship—Cornell University	2015
Henry J. Copland Fund—College of Wooster, Independent Study Award	2009

CONFERENCE TALKS

Society for Neuroscience 2024 Chicago, IL	Oct 2024
• Nanosymposium Talk: <i>Neural alignment during real-time conversation among friends and strangers.</i>	
Social and Affective Neuroscience Conference 2024 Toronto, Canada	April 2024
• Symposium Talk: <i>Neural alignment during real-time conversation among friends and strangers.</i>	
Social and Affective Neuroscience Conference 2023 Santa Barbara, CA	April 2023
• Symposium Talk: <i>Loneliness and functional brain connectivity through the lens of social networks.</i>	
Society for Neuroscience 2017 Washington D.C.	Nov 2017
• Symposium Talk: <i>Loneliness is reflected in the intrinsic architecture of attention and executive control networks..</i> • Awarded Hot Topic Abstract Selection	

POSTERS &
CONFERENCE
PROCEEDINGS

- L. Mwilambwe-Tshilobo**, L. Tsoi, S. Speer, S. Burns, E. Falk, D. Tamir. (2025). Conversations with friends reduce the neural expression of loneliness. Social Affective Neuroscience Society, Chicago, IL.
- M. Kussman, **L. Mwilambwe-Tshilobo**, L. Huelskamp, S. Gwei, T. Ngyuen, S. Xue, D. Tamir. (2025). Linguistic signatures of empathic strategies predict social outcomes. Society for Personality and Social Psychology, Denver, CO.
- M. Taza, T. W. Schmitz, R. Setton, **L. Mwilambwe-Tshilobo**, G. R. Turner, R. N. Spreng. (2023). Age-related differences in the relationship between the basal fore-brain volume, functional connectivity, and cognition. Organization for Human Brain Mapping, Montréal, Canada.
- M. Jovanova, Z. Boyd, A. Schwarze, T. Christensen, D. Cosme, K., Katch, J. Ahn, A. Resnick, N. Cooper, X. He. Y. Kang, S. Lomax, A. McGowan, **L. Mwilambwe-Tshilobo**, O. Stanoi, P. Srivastava, K. Ochsner, D. Bassett, D. Lydon-Staley, E. Falk, P. Mucha.(2023). Integrating multimodal data and machine learning to predict individual differences in health behavior change. Annual International Communication Association Conference, Toronto, Canada.
- J. Ahn, Y. Kang, **L. Mwilambwe-Tshilobo**, D. Bassett, Z. Boyd, D. Lydon-Staley, P. Mucha, K. Ochsner, E. Falk. (2023). Neural responses to peers' faces predict vulnerability to loneliness during COVID-19 (2023). Annual International Communication Association Conference, Toronto, Canada.
- Y. Kang, **L. Mwilambwe-Tshilobo**, D. Zhou, M. Jovanova, O. Stanoi, P. Mucha, K. Ochsner, D. Bassett, D. Lydon-Staley, E. Falk. Frontoparietal system functional connectivity moderates the within-day associations between increases in time spent on social media and subsequent negative affect. (2023). Annual International Communication Association Conference, Toronto, Canada (May 2023).
- R. N. Spreng, **L. Mwilambwe-Tshilobo**. (2022). The impact of loneliness on functional brain network organization across the lifespan. International Society for Behavioural Neuroscience, Newfoundland, Canada.
- L. Mwilambwe-Tshilobo**, R. Setton, D. Bzdok, G. Turner, R. N. Spreng. (2022). Age-related differences in brain network functional connectivity related to loneliness and empathy. Organization for Human Brain Mapping, Glasgow, Scotland
- R. Setton, **L. Mwilambwe-Tshilobo**, S. Sheldon, G. Turner, R. N. Spreng. (2022). Age and individual differences in autobiographical memory relate to default network connectivity. Organization for Human Brain Mapping, Glasgow, Scotland
- Hughes, R., R. Setton, **L. Mwilambwe-Tshilobo**, G. Baracchini, G. Turner, R. N. Spreng. (2022). Precision mapping of default network (inter)activity during self-generated thought. Organization for Human Brain Mapping, Glasgow, Scotland
- R. Setton, **L. Mwilambwe-Tshilobo**, M. girn, A. Lockrow, G. Baracchini, A. Lowem B. Cassidy, J., Li, Wm-M. Luh, D. Bzdok, R. Leahy, T. Ge, D. Margulies, B. Misic, W. Stevens, F. DeBrigard, P. Kundu, G. Turner, R. N. Spreng. (2021). Functional architecture of the aging brain. Organization for Human Brain Mapping, Glasgow, Scotland
- L. Mwilambwe-Tshilobo**, R. N. Spreng. (2021). Social exclusion reliably engages the default network, excludes dorsal anterior cingulate: A meta-analysis of Cyberball. Social Affective Neuroscience Society, (*Virtual Conference*)

- S. Huang, L. Faul, G. Sevinc, **L. Mwilambwe-Tshilobo**, R. Setton, A. W. Lockrow, N. Ebner, G. R. Turner, R. Spreng, F. De Brigard. (2021). Inter-network neural connectivity mediates intuitive moral decision-making between younger and older adults. Cognitive Neuroscience Society (*Virtual Conference*).
- K. Kantarovich, **L. Mwilambwe-Tshilobo**, S. Fernandez-Cabello, A. Lockrow, G. Turner, R. Spreng. (2020). Investigating white matter lesion load, intrinsic functional connectivity, and cognition in aging. Organization for Human Brain Mapping (*Virtual Conference*).
- G. Baracchini, **L. Mwilambwe-Tshilobo**, M. Girn, R. Setton, B. Misic, G. Turner, R. Spreng. (2020). Investigating white matter lesion load, intrinsic functional connectivity, and cognition in aging. Organization for Human Brain Mapping (*Virtual Conference*).
- R. Setton, **L. Mwilambwe-Tshilobo**, G. Baracchini, M. Girn, A. Lockrow, P. Kundu, J. Li, T. Ge, R. Leahy, G. Turner, R. Spreng. (2020). ME-fMRI connectivity associations with behavior using group and individualized parcellation schemes. Organization for Human Brain Mapping (*Virtual Conference*).
- M. Girn, A. Lowe, A. Lockrow, R. Setton, **L. Mwilambwe-Tshilobo**, D. Margulies, B. Bernhardt, G. R. Turner, R. N. Spreng. (2019). Age-related differences in the principal gradient of macroscale cortical organization. Society for Neuroscience, Chicago, IL.
- L. Mwilambwe-Tshilobo**, A. Lockrow, R. Setton, S. Fernández-Cabello, G. R. Turner, R. N. Spreng. (2019). Age-related differences in the neural correlates of loneliness and social isolation in young and older adults. Social and Affective Neuroscience Society Annual Meeting, Miami, FL.
- R. Natan, J. Briguglio, **L. Mwilambwe-Tshilobo**, E. . Goldberg, M. N. Geffen. (2015). Multiple mechanisms for stimulus-specific adaptation in the primary auditory cortex. Computational and Systems Neuroscience Annual Meeting, Salt Lake City, UT
- R. Natan, **L. Mwilambwe-Tshilobo**, M. N. Geffen. (2015). The role of local inhibitory interneurons in stimuli-specific adaptation in primary auditory cortex. Computational and Systems Neuroscience Annual Meeting, Salt Lake City, UT
- M. Aizenberg, **L. Mwilambwe-Tshilobo**, M. N. Geffen. (2014). Cortical inhibition regulates frequency discrimination acuity and specialization of emotional learning. Society for Neuroscience Annual Meeting, Washington, D.C.
- J. Briguglio, R. Natan, **L. Mwilambwe-Tshilobo**, M. N. Geffen. (2014). Effects of local inhibition on stimulus adaptation across laminae of primary auditory cortex. Society for Neuroscience Annual Meeting, Washington, D.C.
- L. Mwilambwe-Tshilobo**, A. J. Davis, M. N. Geffen. (2014). Effects of noise-induced tinnitus on frequency discrimination acuity in mice. Society for Neuroscience Annual Meeting, Washington, D.C.
- R. Natan, **L. Mwilambwe-Tshilobo**, M. N. Geffen. (2013). Cellular and laminar specificity of stimulus specific adaptation in the primary auditory cortex. Society for Neuroscience Annual Meeting, San Diego, CA.

Guest Lecture

Readings in Psychology Graduate Seminar 2023
Rutgers University Camden
Guest Lecture

Seminar in Collective Psychology 2023
Pomona College
Guest Lecture

The Human Brain and Mind: An Introduction to Cognitive Neuroscience 2016
Cornell University
Guest Lecture

MENTORSHIP

Penn's Diversity & Equity Initiative in the Mind Sciences 2024–present

- Alecia Zellous, B.S. in Psychology

PhD Candidate, University of Pennsylvania 2022–2024

- Darin Johnson, Ph.D. candidate in Communication
- Jeeseung Anh, Ph.D. candidate in Psychology

Honors Thesis, Princeton University 2022–2023

- Elle Freire, B.A. in Psychology

Student Research Assistant, McGill University

- Jessie Khalil, B.A. in Neuroscience (honors thesis mentee) 2019–2021
- Cai Li, B.A. in Neuroscience 2018

Student Research Assistant, Cornell University 2016–2017

- Rachel Romaine, B.A. in Human Development
- Sung Hun Choi, B.A. in Human Development

TECHNICAL SKILLS

Programming language experience

Python, MATLAB, R

Neuroimaging Analysis

fMRIPrep, Freesurfer, Nilearn, SPM, Nilearn, FSL, GingerALE

Data Visualization

Seaborn/Matplotlib, Plotly, ggplot, Adobe Illustrator, Inkscape

Data Analysis

Statsmodels, Scikit-learn, Lme4

TRAINING

NVIDIA- Fundamentals of Deep Learning Oct 2022
Princeton University

Neurohackademy July 2020

Virtual Workshop

Software Carpentry Workshop-INCF
George Washington University

Nov 2017

AFNI Bootcamp
National Institutes of Health

Feb 2016

MEMBERSHIPS

- Black in Neuro
- Social and Affective Neuroscience Society
- Women in Network Science (WiNS)
- Society for Neuroscience

ACADEMIC SERVICES

Committee Involvement (planning)

- WiNS Methods in Network Science Workshop
- 22nd Brenda Milner Neuropsychology Day

2021-2022

2020-2021

Journals (ad hoc reviewing)

- Scientific Reports
- Social Neuroscience
- Social Cognitive and Affective Neuroscience

PRESS & MEDIA

"Why loneliness is bad for your health". (2024). Nature.

Feeling lonely? Your brain may process the world differently, [NPR Short Wave](#).

REFERENCES

Dr. Diana Tamir, *Postdoctoral Supervisor*

- Email: dtamir@princeton.edu
- Job title: Professor of Psychology
- Affiliations: Department of Psychology, Princeton University
- Website: psnlab.princeton.edu

Dr. Emily Falk, *Postdoctoral Supervisor*

- Email: efalk@falklab.org
- Job title: Professor of Communication
- Affiliations: Annenberg School for Communication, University of Pennsylvania
- Website: [communication-neuroscience-lab](https://communication-neuroscience-lab.org)

Dr. R. Nathan Spreng, *M.A. & Ph.D. Supervisor*

- Email: nathan.spreng@mcgill.ca
- Job title: Professor of Neurology and Neurosurgery
- Affiliation: Department of Neurology and Neurosurgery, McGill University
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