

ETHAN M. MCCORMICK

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 Website ◊  @McCormickNeuro ◊  McCormickNeuro ◊  OSF

EDUCATION

University of North Carolina at Chapel Hill 2020

Ph.D. in Developmental and Quantitative Neuroscience

Supervisors: Dr. Eva Telzer, Dr. Patrick Curran, Dr. Kathleen Gates

Dissertation Title: *Neural Network Plasticity in Response to Experience: Contributions of Learning and Development*

University of Illinois at Urbana-Champaign 2016

M.A. in Developmental Psychology

Supervisor: Dr. Eva Telzer

University of Arkansas 2013

B.S. (Honors) in Biochemistry and Biology

POSITIONS

Postdoctoral Fellow 2021 - present

Lifespan Cognitive Dynamics Lab

Donders Institute for Brain, Cognition, and Behaviour

Radboud University, Nijmegen, NL

Consultant 2020 - present

CenterStat

Courses: *Multilevel Modeling, Structural Equation Modeling, Longitudinal Structural Equation Modeling, Network Analysis, Mixture Modeling, Measurement Modeling, Machine Learning, Causal Inference*

Postdoctoral Fellow 2020 - 2021

Cole Neurocognition Laboratory

Center for Molecular and Behavioral Neuroscience

Rutgers University, Newark, USA

GRANTS AND AWARDS

Graduate Student Consultant 2020

Neurobiological susceptibility to peer influence and drug use in adolescence.

NIDA: R01 DA051127

Mitch Prinstein, Kristen Lindquist, & Eva Telzer, PIs

University of North Carolina at Chapel Hill

Co-Investigator 2020

Modeling Developmental Change in the ABCD Study: Longitudinal Analyses for Clinical Outcomes.

NIMH: 1R25MH125545-01

Kathryn Mills, PI

University of Oregon





Stanford PRISM Fellow 2019

ABCD Summer Workshop Travel Award (\$500) 2019

Dashiell Departmental Travel Award, UNC (\$1000) 2018

Dashiell Dissertation Startup Award, UNC (\$1000)	2017 - 2018
Ernest C. Davenport Award for Outstanding Research by a Student Who Enhances Diversity, UNC (\$200)	2017 - 2018
Social Affective Neuroscience Society Travel Grant (\$250)	2015
Rhymer's Fellowship, UIUC	2014 - 2015

SOFTWARE

gimme (R-package)   Group Iterative Multiple Model Estimation	contributor
SEM, interrupted (Shiny app)  SEM-based Mediation Analysis and Diagnostics	creator
SEMinterrupted (R-package)  SEM-based Mediation Analysis and Diagnostics	creator

PREPRINTS (TITLES LINK TO OPEN-ACCESS PDFS)

3. McCormick, E.M., Cam-CAN, & Kievit, R.A. (*preprint*). Poorer white matter microstructure predicts slower and more variable reaction time performance: evidence for the neural noise hypothesis in a large lifespan cohort. <https://doi.org/10.31234/osf.io/8xf53>

Key Contribution

2. McCormick, E.M., Byrne, M.L., Flournoy, J.C., Mills, K.L., & Pfeifer, J.H. (*preprint*). The Hitchhiker's Guide to Longitudinal Models: A Primer on Model Selection for Repeated-Measures Methods. <https://doi.org/10.31234/osf.io/ga4qz>
[Codebook Companion](#)

1. Metherell, T.E., Ghai, S., **McCormick, E.M.,** Ford T.J., & Orben, A. (*preprint*). Digital exclusion predicts worse mental health among adolescents during COVID-19. <https://doi.org/10.1101/2021.11.25.21266853>

PUBLICATIONS (TITLES LINK TO OPEN-ACCESS PDFS)

Key Contribution

28. McCormick, E.M., Arnemann, K.L., Ito, T., Hanson, S.J., & Cole, M.W. (*in press*). Latent functional connectivity underlying multiple brain states. *Network Neuroscience*. Accepted January 2022. [Preprint](#)

27. Kievit, R.A, **McCormick, E.M.***, Fuhrmann, D.*, Deserno, M.*, & Orben, A*. (2022). Using large, publically available datasets to study adolescent development: Opportunities and challenges. *Current Opinion in Psychology*, 44, 303-308. *denotes equal contribution [Preprint](#)

Key Contribution

26. McCormick, E.M. (2021). Multi-Level Multi-Growth Models: New opportunities for addressing developmental theory using advanced longitudinal designs with planned missingness. *Developmental Cognitive Neuroscience*, 51, 101001. [Preprint](#)

Key Contribution

25. McCormick, E.M., Peters, S., Crone, E.A., & Telzer, E.H. (2021). Longitudinal Network Re-organization Across Learning and Development. *NeuroImage*, 229, 117784. [Preprint](#)

- 24.** Duell, N., van Hoorn, J., **McCormick, E.M.,** Prinstein, M.J., & Telzer, E.H. (2021). Hormonal and neural correlates of prosocial conformity in adolescents. *Developmental Cognitive Neuroscience*, 48, 100936.
- 23.** Kwon, S-J., Do, K.T., **McCormick, E.M.,** & Telzer, E.H. (2020). Neural correlates of conflicting social influence on adolescent risk-taking. *Journal of Research on Adolescence*, 31(1), 139-152.
- 22.** Do, K.T., **McCormick, E.M.,** & Telzer, E.H. (2020). Neural sensitivity to conflicting attitudes supports greater conformity toward positive over negative influence in early adolescence. *Developmental Cognitive Neuroscience*, 45, 100837.
- 21.** Van Hoorn, J., **McCormick, E.M.,** Perino, M.T., Rogers, C.R., & Telzer, E.H. (2020). Differential behavioral and neural profiles in high-risk youth with conduct problems during risky decision-making. *Journal of Research on Adolescence*, 30(3), 599-615.
- 20.** Chen, X., **McCormick, E.M.,** Ravindran, N., Telzer, E.H., & McElwain, N.L. (2020). Maternal emotion socialization in early childhood predicts adolescents' amygdala-vmPFC functional connectivity to emotion faces. *Developmental Psychology*, 56(3), 503-515.
- 19.** Perino, M.T., Guassi Moreira, J., **McCormick, E.M.,** & Telzer, E.H. (2019). Apples to apples? Neural correlates of emotion regulation differences between high and low risk adolescents. *Social Cognitive and Affective Neuroscience*, 14(8), 827-836.
- 18.** Kwon, S-J., Ivory, S.L., **McCormick, E.M.,** & Telzer, E.H. (2019). Behavioral and neural dysregulation to social reward and links to internalizing symptoms in adolescents. *Frontiers in Behavioral Neuroscience*, 13, 158.
- 17.** **McCormick, E.M.,** McElwain, N.L., & Telzer, E.H. (2019). Alterations in adolescent dopaminergic systems as a function of early mother-toddler attachment: a prospective longitudinal examination. *International Journal of Developmental Neuroscience*, 78, 122-129.
- 16.** Do, K.T, **McCormick, E.M.,** & Telzer, E.H. (2019). The neural development of prosocial behavior from childhood to adolescence. *Social Cognitive and Affective Neuroscience*, 14, 129-139.
- 15.** **McCormick, E.M.,** Gates, K.M., & Telzer, E.H. (2019). Model-based network discovery of developmental and performance-related differences during risky decision-making. *NeuroImage*, 188, 456-464.
- 14.** **McCormick, E.M.,** & Telzer, E.H. (2018b). Contributions of default mode network stability and deactivation to adolescent task engagement. *Scientific Reports*, 8(1), 18049.
- 13.** Van Hoorn, J., **McCormick, E.M.,** Rogers, C.R., Ivory, S.L., & Telzer, E.H. (2018). Differential effects of parent and peer presence on neural correlates of risk taking in adolescence. *Social Cognitive and Affective Neuroscience*, 13(9), 945-955.
- 12.** **McCormick, E.M.,** Van Hoorn, J., Cohen, J.R., & Telzer, E.H. (2018). Functional connectivity in the social brain across childhood and adolescence. *Social Cognitive and Affective Neuroscience*, 13(8), 819-830.
- 11.** Rogers, C.R., **McCormick, E.M.,** Van Hoorn, J., & Telzer, E.H. (2018). Neural correlates of sibling closeness and association with externalizing behavior in adolescence. *Social Cognitive and Affective Neuroscience*, 13(9), 977-988.

10. Muscatell, K.A., **McCormick, E.M.**, & Telzer, E.H. (2018). Subjective social status and neural processing of race in Mexican American adolescents. *Development and Psychopathology*, 1-12.
9. Van Hoorn, J., **McCormick, E.M.**, & Telzer, E.H. (2018). Moderate social sensitivity in a risky context supports adaptive decision-making in adolescence: Evidence from brain and behavior. *Social Cognitive and Affective Neuroscience*, 13(5), 546-556.
8. Telzer, E.H., **McCormick, E.M.**, Peters, S., Cosme, D., Pfeifer, J.H., & van Duijvenvoorde, A.C.K. (2018). Methodological considerations for developmental longitudinal fMRI research. *Developmental Cognitive Neuroscience*, 33, 149-160.
7. **McCormick, E.M.**, Perino, M.T., & Telzer, E.H. (2018). Not just social sensitivity: Selective adolescent suppression of social feedback during risk taking. *Developmental Cognitive Neuroscience*, 30, 134-141.
6. **McCormick, E.M.**, & Telzer, E.H. (2018a). Not doomed to repeat: Enhanced neural tracking of errors promotes adaptive task performance during adolescence. *Journal of Cognitive Neuroscience*, 30(3), 281-289.
5. Qu, Y., Pomerantz, E.M., **McCormick, E.M.**, & Telzer, E.H. (2018). Youth's conceptions of adolescence predict longitudinal changes in prefrontal cortex activation and risk taking. *Child Development*, 89(3), 773-783.
4. **McCormick, E.M.**, Qu, Y., & Telzer, E.H. (2017). Activation in context: Differential conclusions drawn from cross-sectional and longitudinal analyses of adolescents' cognitive control-related neural activity. *Frontiers in Human Neuroscience*, 11, 141.
3. **McCormick, E.M.**, & Telzer, E.H. (2017b). Failure to retreat: Blunted sensitivity to negative feedback supports risky behavior in adolescents. *NeuroImage*, 147, 381-389.
2. **McCormick, E.M.**, & Telzer, E.H. (2017a). Adaptive adolescent flexibility: Neurodevelopment of decision-making and learning in a risky context. *Journal of Cognitive Neuroscience*, 29, 413-423.
1. **McCormick, E.M.**, Qu, Y., & Telzer, E.H. (2016). Adolescent neurodevelopment of cognitive control and risk-taking in negative family contexts. *NeuroImage*, 124, 989-996.

BOOK CHAPTERS

1. Curran, P.J., Strauss, C., **McCormick, E.M.**, & McGinley, J.S. (*in press*). A multivariate growth curve model for three-level data. In H. Cooper (Ed.) *APA Handbook of Research Methods in Psychology*, Second Edition. Washington, DC: American Psychological Association.

MANUSCRIPTS UNDER REVIEW

6. Jorgensen, N.A., Muscatell, K.A., **McCormick, E.M.**, Prinstein, M.J., Lindquist, K.A., & Telzer, E.H. (*revise and resubmit*). Neighborhood Disadvantage, Race, and Neural Sensitivity to Social Threat and Reward among Adolescents. *Social Cognitive and Affective Neuroscience*
5. **McCormick, E.M.**, Byrne, M.L., Flournoy, J.C., Mills, K.L., & Pfeifer, J.H. (*invited submission*). The Hitchhiker's Guide to Longitudinal Models: A Primer on Model Selection for Repeated-Measures Methods. *Developmental Cognitive Neuroscience*
4. **McCormick, E.M.**, Cam-CAN, & Kievit, R.A. (*under review*). Poorer white matter microstructure predicts slower and more variable reaction time performance: evidence for the neural noise hypothesis in a large lifespan cohort. *Journal of Neuroscience*
3. Metherell, T.E., Ghai, S., **McCormick, E.M.**, Ford T.J., & Orben, A. (*under review*). Digital exclusion predicts worse mental health among adolescents during COVID-19. *Journal of Child Psychology and Psychiatry*

2. Leshin, J., **McCormick, E.M.**, Doyle, C.M., Nam, C.S., & Lindquist, K.A. (*under review*). Social and Cultural Context Modulate the Brain Representations of Emotion Experience: An fMRI Study. *Emotion*

1. Do, K.T, **McCormick, E.M.**, Lindquist, K.A., Prinstein, M.J., & Telzer, E.H. (*revise and re-submit*). Differential susceptibility to peer influence in adolescence: The role of intrinsic functional connectivity within social-affective brain networks. *Scientific Reports*

MANUSCRIPTS IN PREPARATION

2. **McCormick, E.M.**, Borgeest, G.S., Fried, E.I., Rhemtulla, M., & Kievit, R.A. (*in prep*). SEM, interrupted: disconnected causal chains in mediation models using composites.

1. **McCormick, E.M.**, Curran, P.J., & Hancock, G.R. (*in prep*). Latent Growth Factors as Predictors of Distal Outcomes: Completing the Triad

INVITED TALK PRESENTATIONS

13. **McCormick, E.M.**, (March 2022). Using quantitative methods to support novel developmental research. Talk presented to the Cognitive Neuroscience Section at the Donders Institute for Brain, Cognition, and Behaviour, Nijmegen, NL

12. **McCormick, E.M.**, (March 2022). Selecting the right model for analyzing already-collected longitudinal data. Practical presented to the Fetal, Infant, & Toddler Neuroimaging Group (FIT'NG) Trainee Committee (remotely). <https://vimeo.com/691030727/2fdbfdcf2f>

11. **McCormick, E.M.**, (February 2022). Linking brain structure and behavioral variability in dynamic structural equation models. Talk presented as a part of the Mellenbergh Lecture Series for the Psychological Methods group at the University of Amsterdam, Amsterdam, NL (remotely). <https://sites.google.com/view/mellenberghlectures/lectures>

10. **McCormick, E.M.**, (January 2022). Bringing dynamic structural equation models to bear to model inter-individual differences in intra-individual performance variability. Talk presented at the Radoud University Medical Center's Neurodevelopmental Disorders Group Meeting, Nijmegen, NL.

9. **McCormick, E.M.**, (December 2020). Multi-level, multi-growth models: new opportunities for addressing developmental theory. Talk presented at the University of Melbourne, AU (remotely).

8. **McCormick, E.M.**, (November 2020). Multi-level, multi-growth models: new opportunities for addressing developmental theory. Talks presented at Cambridge University, UK and the University of Oregon, OR, USA (remotely).

7. **McCormick, E.M.**, (August 2019). Constructing model-based networks. Talk presented at the ABCD Workshop on Brain Development and Mental Health, Portland, OR, USA.

6. **McCormick, E.M.**, (November 2018). Measuring Neural Change: Short and long-term plasticity in neural networks. Talk presented at the University of Pennsylvania, PA, USA.

5. **McCormick, E.M.**, (May 2018). Plasticity during adolescence: neural systems which support flexible behavior. Talk presented at the University of Leiden, Leiden, NL.

4. **McCormick, E.M.**, (March 2018). Neural Plasticity: Change in Response to Experience and Development. Talk presented at the University of North Carolina, Chapel Hill Developmental Lunch, Chapel Hill, NC, USA.

3. **McCormick, E.M.**, (February 2017). Neural Markers of Adaptive Flexibility in Adolescence. Talk presented at the University of North Carolina, Chapel Hill Developmental Lunch, Chapel Hill, NC, USA.

2. McCormick, E.M., (April 2016). fMRI Study of Cognitive Control in Teens – Implications of cross-sectional vs. longitudinal analyses. Talk presented at the Modeling Longitudinal Data Meeting, Eugene, OR, USA.

1. McCormick, E.M., (April 2015). Longitudinal Links between Neural Development and Behavior in Early Adolescence. Talk presented at the University of Illinois, Urbana-Champaign Developmental Brownbag, Champaign, IL, USA.

CONFERENCE TALK PRESENTATIONS

11. McCormick, E.M. (September 2022). Advanced Modeling of Longitudinal Data in Developmental Cognitive Neuroscience. Pre-conference Workshop to be presented at the 2022 Flux Congress Annual Meeting, Paris, FR.

10. McCormick, E.M. (September 2021). Leveraging missing data to model simultaneous growth processes. Talk presented at the 2021 Flux Congress Annual Meeting, Remote.

9. McElwain, N.L., Chen, X., Ravindran, N., McCormick, E.M., & Telzer, E.H. (March 2019). Maternal Sensitivity during Toddlerhood Predicts Amygdala-PFC Functional Connectivity During Early Adolescence. Talk presented at the 2019 Biennial Meeting of the Society for Research in Child Development, Baltimore, MD.

8. Telzer., E.H., Ivory, S., & McCormick, E.M. (March 2019). Altered neural connectivity and cognitive control to peer faces: Links to internalizing symptoms in adolescence. Talk presented at the 2019 Biennial Meeting of the Society for Research in Child Development, Baltimore, MD.

7. Telzer, E.H., McCormick, E.M., McElwain, N.L. & Qu. Y. (March 2019). Family relationship quality and adolescent neural processing of risk taking. Talk presented at the 2019 Biennial Meeting of the Society for Research in Child Development, Baltimore, MD.

6. Van Hoorn, J., McCormick, E.M., Rogers, C.R., & Telzer, E.H. (April 2018). Risk taking and peer effects in high-risk youth with externalizing behavior: Perspectives from brain and behavior. Talk presented at the 2018 Society for Research on Adolescence Biennial Meeting, Minneapolis, MN.

5. Rogers, C.R., McCormick, E.M., van Hoorn, J., & Telzer, E.H. (April 2018). Siblings and the teenage brain: sibling closeness and birth order modulate adolescent neural activity during safe decision-making. Talk presented at 2018 Society for Research on Adolescence Biennial Meeting, Minneapolis, MN.

4. Rogers, C.R., McCormick, E.M., van Hoorn, J., & Telzer, E.H. (September 2017). No, don't do it!" Neural correlates of sibling closeness during risky decision-making. Talk presented at the 2017 Flux Congress Annual Meeting, Portland, OR.

3. McCormick, E.M., & Telzer, E.H. (April 2017). Adaptive adolescent flexibility: neurodevelopment of decision-making and learning in a risky context. Talk presented at the Biennial Meeting of the Society for Research in Child Development, Austin, TX.

2. McCormick, E.M., & Telzer, E.H. (March 2016). Activation in context: Cross-Sectional and longitudinal analyses of adolescents' cognitive-control related neural activity. Talk presented at the Society for Research on Adolescence Biennial Meeting, Baltimore, MD.

1. Telzer, E.H., & McCormick, E.M. (November, 2015). Differential conclusions drawn for cross-sectional longitudinal analyses of adolescents' cognitive-control related neural activity: best practices fore examining brain behavior associations? Talk presented at the Conference on Longitudinal fMRI Analysis, Stockholm, SE.

TECHNICAL STRENGTHS

Programming Languages R, Python, MATLAB, Bash

Analysis Techniques ANOVA, Regression, Mediation, Moderation, Multi-Level Modeling, Structural Equation Modeling, Latent Curve Modeling, Dynamic Structure Equation Modeling, Timeseries Analysis, Computational Modeling, Neural Network Analyses, Data Simulation, CART Analysis, Latent Class Analysis, Latent Profile Analysis, Mixture Models, Growth Mixture Models

Statistical Software R, Python, MPlus, SAS, MATLAB, SPSS

INSTITUTIONAL SERVICE

Flux Diversity Working Group Member	2022 - present
Flux Diversity Session Planning Committee	2022
Flux LGBTQIA+ Affinity Group Coordinator	2021 - present
Flux Programme Committee Member	2022
Neuroscience Club Graduate School Panel, UNC	2019
fMRI Methodology & Coding Summer Seminar, UNC	2018
NeuroGrads Organizer, UNC	2018
Diversity Admissions Committee, UNC	2017 - 2018
Developmental Seminar Planning Committee, UNC	2017 - 2018
fMRI Methodology & Coding Summer Seminar, UNC	2017
fMRI Methodology & Coding Summer Seminar, UNC	2016
Graduate Student Recruitment Organizer, UIUC	2015 - 2016
fMRI Methodology Summer Seminar, UNC	2015

PROFESSIONAL AFFILIATIONS

Flux Society for Developmental Cognitive Neuroscience	Member
Social and Affective Neuroscience Society	Member
Society for Research on Child Development	Member
Society for Multivariate Experimental Psychology	Invited Guest
Psychometric Society	Member

AD HOC REVIEWER

Developmental Cognitive Neuroscience
NeuroImage
Nature Neuroscience
Journal of Neuroscience
Trends in Cognitive Science
Psychological Science
Human Brain Mapping
Biological Psychiatry
Cognitive, Behavioral, and Affective Neuroscience
Frontiers in Human Neuroscience
Social Cognitive and Affective Neuroscience

TEACHING EXPERIENCE

Instructor , <i>Introduction to Statistics</i> University of North Carolina at Chapel Hill	Summer 2020
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Graduate Student Consultant, *Clinical Research - Design, Analyze, Disseminate* *Fall 2019*
 Instructor: Dr. Desiree Griffen
 University of North Carolina at Chapel Hill

Teaching Assistant, *Introduction to Neuroscience* *Fall 2019*
 Instructor: Dr. Sabrina Robertson
 University of North Carolina at Chapel Hill

Teaching Assistant, *Introduction to Statistics* *Spring 2019*
 Instructor: Dr. Viji Sathy
 University of North Carolina at Chapel Hill

Teaching Assistant, *Child Development* *Fall 2017*
 Instructor: Dr. Jean-Louis Gariépy
 University of North Carolina at Chapel Hill

Teaching Assistant, *Psychology of the Infant* *Spring 2016*
 Instructor: Dr. Lisa Travis
 University of Illinois at Urbana-Champaign

Teaching Assistant, *Developmental Psychopathology* *Fall 2015*
 Instructor: Dr. Karen Rudolph
 University of Illinois at Urbana-Champaign

Undergraduate Teaching Assistant, *Behavioral Neuroscience* *Spring 2014*
 Instructor: Dr. Nathan Parks
 University of Arkansas