

Catherine Insel

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ACADEMIC APPOINTMENTS

- 2024— Assistant Professor (incoming)
Department of Psychology, Northwestern University
- 2019—2024 Postdoctoral fellow
Zuckerman Institute, Columbia University
Advisor: Professor Daphna Shohamy

EDUCATION

- 2015—2019 Ph.D. in Psychology, Harvard University
- 2013—2015 M.A. in Psychology, Harvard University
- 2006—2010 B.A. in Psychology, Columbia University

RESEARCH TRAINING

- 2013—2019 Graduate student research fellow
Department of Psychology, Harvard University
Advisor: Professor Leah Somerville
- 2010—2013 Lab manager and research assistant
Department of Psychology, Columbia University
Advisors: Professor Kevin Ochsner and Professor Edward Smith

FELLOWSHIPS & AWARDS

- 2023—present NIMH MOSAIC K99 Fellow
- 2022—2023 Pang Family Postdoctoral Scholar in the Science of Learning
- 2020—2022 National Science Foundation Social, Behavioral, and Economic Sciences Postdoctoral Research Fellowship
- 2019 Flux Society Student Dissertation Award
- 2019 Flux Society Travel Award
- 2016—2017 Sackler Scholar Programme in Psychobiology Stipend Award
- 2013—2016 National Science Foundation Graduate Research Fellowship
- 2015 National Science Foundation Graduate Research Opportunities Worldwide Fellowship

- 2015 Fellow, Summer Institute in Cognitive Neuroscience, UCSB
- 2013 Fellow, Summer Institute for Developmental Neuroscience, WCMC
- 2012 Social and Affective Neuroscience Society Poster Award

RESEARCH FUNDING

- 2023—2028 National Institute of Mental Health, MOSAIC K99-R00
Computational and neurodevelopmental mechanisms of memory-guided decision-making
Role: Principal Investigator
Amount awarded: \$1,008,684
- 2020—2022 National Science Foundation, Social, Behavioral, and Economic Sciences Postdoctoral Research Fellowship
Adolescent neurodevelopment of memory-guided decision-making
Role: Principal Investigator
Amount awarded: \$138,000
- 2019—2021 Pershing Square Fund for Research on the Foundations of Human Behavior Research Award, Harvard University
Charting the computational foundations of goal-directed learning across adolescence
Role: Principal Investigator
Amount awarded: \$5,000
- 2018 Sackler Scholar Programme in Psychobiology Research Award
Neurodevelopmental markers of self-control vulnerabilities during adolescence
Role: Principal Investigator
Amount awarded: \$12,800
- 2018 Talley Fund Research Award, Harvard University
Role: Principal Investigator
Amount awarded: \$3,500
- 2017 Norman Anderson Fund Research Award, Harvard University
Role: Principal Investigator
Amount awarded: \$3,500
- 2015—2016 Harvard Catalyst: Addressing Mental Health in the Second Decade of Life Through Translational Lifecourse Research Pilot Grant
Quantifying reinforcement learning deficits in adolescent depression: A computational imaging study
Role: Co-Principal Investigator (with Leah Somerville)
Amount awarded: \$72,549

2013—2014 Stimson Fund Research Grant, Harvard University
Role: Principal Investigator
Amount awarded: \$1,000

PUBLICATIONS

* denotes equal contribution

Insel, C.*, Tabashneck, S.*, Shen, F. X., Edersheim, J. G., Kinscherff, R. (2022). White Paper on the Science of Late Adolescence: A Guide for Judges, Attorneys, and Policy Makers. Center for Law Brain & Behavior at Massachusetts General Hospital.

Rodman, A., Powers, K., **Insel, C.**, Kastman, E., Kabotyanski, K., Stark, A., Worthington, S., & Somerville, L. (2021). How adolescents and adults translate value to action: Age-related shifts in strategic physical effort exertion for monetary rewards. *Journal of Experimental Psychology: General*, 150(1), 103-113.

Insel, C., Davidow, J. Y., & Somerville, L. H. (2020). Neurodevelopmental processes that shape the emergence of value-guided goal directed behavior. *The Cognitive Neurosciences VI* (Poeppel, Mangun, & Gazzaniga Eds.).

Insel, C., Charifson, M., & Somerville, L. H. (2019). Neurodevelopmental shifts in learned value transfer on cognitive control during adolescence. *Developmental Cognitive Neuroscience*, 100730.

Martin, R.E., Silvers, J.A., Hardi, F., Stephano, T., Helion, C., **Insel, C.**, Franz, P.J., Ninova, E., Lander, J.P., Mischel, W., Casey, B.J., & Ochsner, K.N. (2019). Longitudinal changes in brain structures related to appetitive reactivity and regulation across development. *Developmental Cognitive Neuroscience*, 38, 100675.

Insel, C.*, Glenn, C. R.*, Nock, M. K., & Somerville, L. H. (2019). Aberrant striatal tracking of reward magnitude in youth with current or past-year depression. *Journal of abnormal psychology*, 128(1), 44.

Kearns, J. C.*, Coppersmith, D. D. L.*, Santee, A. C., **Insel, C.**, Pigeon, W. R., & Glenn, C. R. (2018). Sleep problems and suicide risk in youth: A systematic review, developmental framework, and implications for hospital treatment. *General Hospital Psychiatry*.

Insel, C. & Somerville, L. H. (2018). Asymmetric neural tracking of gain and loss magnitude during adolescence. *Social cognitive and affective neuroscience*, 13(8), 785-796.

Davidow, J.*, **Insel, C.***, & Somerville, L. H. (2018). Adolescent development of value-guided goal pursuit. *Trends in Cognitive Sciences*, 22(8), 725-736.

Lee, N. C.*, Weeda, W. D.*, **Insel, C.**, Krabbendam, L., Somerville, L. H., & Huizinga, M. (2018). The influence of emotional cues on cognitive control in high and low risk-taking adolescents. *Developmental Cognitive Neuroscience*, 31, 20-34.

Insel, C., Kastman, E. K., Glenn, C. R., & Somerville, L. H. (2017). Development of corticostriatal connectivity constrains goal directed behavior during adolescence. *Nature Communications*, 8, 1605.

Somerville, L. H., Sasse, S. F., Garrad, M. C., Drysdale, A. T., Akar, N. A., **Insel, C.**, & Wilson, R. C. (2017). Charting the expansion of strategic exploratory behavior during adolescence. *Journal of Experimental Psychology: General*, 146(2), 155.

Silvers, J. A., **Insel, C.**, Powers, A., Franz, P., Helion, C., Weber, J., Casey, B. J., Mischel, W., & Ochsner, K. N. (2016). The transition from childhood to adolescence is marked by a general decrease in amygdala reactivity and an affect-specific ventral-to-dorsal shift in medial prefrontal recruitment. *Developmental Cognitive Neuroscience*, 25, 128-137.

Silvers, J. A., **Insel, C.**, Powers, A., Franz, P., Helion, C., Weber, J., Casey, B. J., Mischel, W., & Ochsner, K. N. (2016). vIPFC-vmPFC-amygdala circuit underlies age-related differences in cognitive regulation of emotion. *Cerebral Cortex* 27(7), 3502-3514.

Silvers, J. A., **Insel, C.**, Powers, A., Franz, P., Weber, J., Casey, B. J., Mischel, W., & Ochsner, K. N. (2014). Curbing craving: Behavioral and brain evidence that children regulate craving when instructed to do so but have higher baseline craving than adults. *Psychological Science*, 25(10), 1932-1942.

Insel, C., Reinen, J., Weber, J., Wager, T. D., Jarskog, L. F., Shohamy, D., & Smith, E. E. (2014). Antipsychotic dose modulates behavioral and neural responses to feedback during reinforcement learning in schizophrenia. *Cognitive, Affective, & Behavioral Neuroscience*, 14(1), 189-201.

Reinen, J., Smith, E. E., **Insel, C.**, Kribs, R., Shohamy, D., Wager, T. D., & Jarskog, L. F. (2014). Patients with schizophrenia are impaired when learning in the context of pursuing rewards. *Schizophrenia Research*, 152(1), 309.

Eich, T. S., Nee, D. E., **Insel, C.**, Malapani, C., & Smith, E. E. (2013). Neural correlates of impaired cognitive control over working memory in schizophrenia. *Biological Psychiatry*, 76(2), 146-153.

MANUSCRIPTS IN PREPARATION

Insel, C. & Somerville, L. H. (in preparation). Value-based prioritization of reinforcement learning during adolescence: brain and behavioral asymmetries emerge with age for gain and loss learning

Davidow, J. Y., **Insel, C.**, Bhui, R., Brandt, A. M., & Somerville, L. H. (in preparation). Attenuated Pavlovian learning biases in adolescence promote better instrumental learning and future flexibility.

Insel, C., Biderman, N., Shehzad, Z., Shohamy, D. (in preparation). Generalization of category knowledge emerges with age during adolescence to promote adaptive decision making.

Insel, C., Biderman, N., Bambardekar, S. Shohamy, D. (in preparation). Adolescents engage counterfactual thinking to infer the value of unchosen options.

Insel, C., Nicholas, J., Shohamy, D. (in preparation). Reward volatility modulates the use of multiple learning systems during adolescence.

INVITED ACADEMIC TALKS

- 2023 Zuckerman Institute Hippocampus Club, Columbia University
- 2023 Department of Psychology Colloquium, Northwestern University
- 2023 Department of Child and Adolescent Psychiatry, New York University Langone
- 2022 Cognitive Sciences Colloquium, University of California, Irvine
- 2021 Empire Memory Meeting, Columbia University, New York, NY
- 2021 Learning and Brain Development Lab, Northeastern University, Boston, MA
- 2021 Zuckerman Institute Postdoctoral Seminar, Columbia University, New York, NY
- 2021 Bakkour Memory and Decision Making Lab, University of Chicago, Chicago, IL
- 2020 Tottenham Lab, Columbia University, New York, NY
- 2019 Special Lecture Series, Columbia University School of Professional Studies, New York, NY
- 2019 Center for Cognitive and Behavioral Brain Imaging, The Ohio State University, Columbus, Ohio
- 2018 Harvard Women in Psychology, Harvard University, Cambridge, MA
- 2018 Learning Lab, Columbia University, New York, NY
- 2018 Hartley Lab, NYU, New York, NY
- 2017 Saxe Lab and Schulz Lab, MIT, Cambridge, MA

2017 Cognition, Brain and Behavior Seminar, Harvard University, Cambridge, MA

2016 Youth Risk and Resilience Lab, University of Rochester, Rochester, NY

2016 Center for Law, Brain, and Behavior, New York, NY

2016 Cognition, Brain and Behavior Seminar, Harvard University, Cambridge, MA

2016 Morality Lab, Boston College, Boston, MA

2015 Brain and Development Lab, Leiden University, Leiden, NL

2015 Nock Lab, Harvard University, Cambridge, MA

CONFERENCE TALKS

Insel, C., Biderman, N., Shehzad, Z., Bambardekar, S., Conner, L., Shohamy, D. (2023). How generalization of reward memories develops during adolescence to support inference. LearnMem: Huntington Beach, CA.

Insel, C., Biderman, N., Shehzad, Z., Bambardekar, S., Conner, L., Shohamy, D. (2022). How adolescents and adults use category knowledge to learn and infer value. Society for Neuroscience: San Diego, CA.

Insel, C. (2022) How adolescents and adults use category memory to learn and infer value. Manhattan Area Memory Meeting: New York, NY.

Insel, C. (2021) Inferring value from semantic knowledge. Trends in Psychology Summit, Harvard University: Cambridge, MA.

Insel, C., Prater Fahey, M., & Somerville, L. H. (2019). Brain and behavioral asymmetries for gain and loss learning emerge with age during adolescence. Flux Society for Developmental Cognitive Neuroscience: New York, NY.

Insel, C. & Somerville, L. H. (2018) Adolescent shifts in high stakes reinforcement learning. New England Researchers in Decision Making: Cambridge, MA.

Insel, C. & Somerville, L. H. (2018) Development of corticostriatal connectivity constrains goal directed behavior during adolescence. *Symposium Chair*. Association for Psychological Science: San Francisco, CA.

Insel, C. & Somerville, L. H. (2017) Developmental Emergence of Corticostriatal Connectivity Mediates Selective Improvements in Cognitive Control Under High Stakes. Society for Research in Child Development: Austin, TX.

Insel, C., Glenn, C. R., Kastman, E. K., Sasse, S. F., Garrad, M. C., Nock, M., & Somerville,

L. H. (2015). High stakes rewards and punishments induce "choking" behavior in adolescent reactive cognitive control: Behavioral evidence and frontostriatal mechanisms. VNOP-ISED-CAS Research Days Conference: Leiden, NL.

CONFERENCE PRESENTATIONS & POSTERS

Insel, C., Biderman, N., Shehzad, Z., Shohamy, D. (2023). How adolescents generalize across rewarding experiences to learn and infer value. FLUX Congress for Developmental Neuroscience: Santa Rosa, CA.

Insel, C., Biderman, N., Shehzad, Z., Bambardekar, S., Conner, L., Shohamy, D. (2022). How adolescents use conceptual knowledge to learn and infer value. FLUX Congress for Developmental Neuroscience: Paris, France.

Durkin, C., **Insel, C.**, van Geen, C., Tedeschi, E., Shohamy, D. (2022). Selective and reflective: adolescents use context to adjust visual exploration. FLUX Congress for Developmental Neuroscience: Paris, France.

Insel, C., Biderman, N., Shehzad, Z., Bambardekar, S., Conner, L., Shohamy, D. (2022). Charting the computational foundations of aberrant decision-making in adolescents. Computational Psychiatry Course: New York, NY.

Bambardekar, S., **Insel, C.**, & Shohamy, D. (2021). Counterfactual inference during adolescence. Trends in Psychology Summit, Harvard University: Cambridge, MA

Insel, C., Nicholas, J., & Shohamy, D. (2021). Reward volatility modulates the use of multiple learning systems during adolescence. Flux Society for Developmental Cognitive Neuroscience: Virtual.

Conner, L., **Insel, C.**, & Shohamy, D. (2021). Adolescent development of working memory performance. NYC Science Research Mentoring Consortium Summer Science Symposium: New York, NY.

Conner, L., **Insel, C.**, & Shohamy, D. (2021). Adolescent development of working memory performance. BRAINYAC Research Symposium: New York, NY.

Bambardekar, S., **Insel, C.**, & Shohamy, D. (2021). Counterfactual inference during adolescence. Barnard College Summer Research Institute Symposium: New York, NY.

Insel, C., Prater Fahey, M., & Somerville, L. H. (2019). Brain and behavioral asymmetries for gain and loss learning emerge with age during adolescence. Flux Society for Developmental Cognitive Neuroscience: New York, NY.

Davidow, J. Y., Bhui, R. B., **Insel, C.**, Brandt, A. M., & Somerville L. H. (2019). Individual differences in Pavlovian interference on reinforcement learning relates to better subsequent inhibitory control. Social & Affective Neuroscience Society: Miami, FL.

Insel, C., Charifson, M., Falcone, G., & Somerville, L. H. (2019). High value reward associations selectively improve subsequent cognitive control: Adolescent emergence of value-based transfer and neurodevelopmental mechanisms. Social & Affective Neuroscience Society: Miami, FL.

Insel, C., Prater Fahey, M., Charifson, M., Falcone, G., & Somerville, L. H. (2018). Asymmetric effects of high stakes on reinforcement learning across adolescence. Flux Society for Developmental Cognitive Neuroscience: Berlin, Germany.

Davidow, J. Y., Bhui, R. B., **Insel, C.**, Brandt, A. M., Stark, A. M., Kabotyanski, K. E., & Somerville L. H. (2018). Attenuated Pavlovian learning biases in adolescence. Talk at Flux Society for Developmental Cognitive Neuroscience: Berlin, Germany.

Insel, C., Charifson, M., Prater Fahey, M., Falcone, G., & Somerville L. H. (2018). When high stakes help: developmental shifts in reinforcement learning from gains and losses. Social & Affective Neuroscience Society: Brooklyn, NY.

Prater Fahey, M., **Insel, C.**, Charifson, M., Falcone, G., & Somerville L. H. (2018). High stakes enhance reinforcement learning. Social & Affective Neuroscience Society: Brooklyn, NY.

Davidow, J. Y., Bhui, R. B., **Insel, C.**, Brandt, A. M., Stark, A. M., Kabotyanski, K. E., & Somerville L. H. (2018). Attenuated pavlovian learning bias in adolescence. Social & Affective Neuroscience Society: Brooklyn, NY.

Insel, C., Kastman, E. K., Glenn, C. R., & Somerville, L. H. (2017). Corticostriatal circuit development constrains goal directed behavior through adolescence. Flux Society for Developmental Cognitive Neuroscience: Portland, OR.

Davidow, J. Y., **Insel, C.**, Romero, M., Zhang, J., & Somerville, L. H. (2017). Twice as nice: Learning benefits from valence and action during adolescence. Flux Society for Developmental Cognitive Neuroscience: Portland, OR.

Lee, N. C., Weeda, W. D., **Insel, C.**, Somerville, L. H., Krabbendam, L., & Huizinga, M. (2017). Neural substrates of the influence of emotional cues on cognitive control in risk-taking adolescents. Organization for Human Brain Mapping Society: Vancouver, Canada.

Insel, C., Charifson, M., Falcone, G., Somerville, L. H. (2017). High stakes accelerate reinforcement learning. Social and Affective Neuroscience Society: Los Angeles, CA.

Helion, C., Silvers, J. A., Powers, A., Dreyfuss, M., **Insel, C.**, Weber, J., Mischel, W., Casey, B. J., & Ochsner, K. N. (2016). The development of cognitive control when regulating and inhibiting responses to negative social stimuli. New York Affective and Social Neuroscience Meeting: New York, NY.

Insel, C., Kastman, E. K., Glenn, C. R., Sasse, S. F., Garrad, M. C., & Somerville L. H. (2016).

Developmental emergence of frontostriatal connectivity mediates flexible upregulation of cognitive control under high stakes. Society for Neuroscience: San Diego, CA.

Insel, C., Glenn, C. R., Kastman, E. K., Garrad, M. C., Sasse, S. F., & Somerville L. H. (2016). Developmental emergence of frontostriatal connectivity mediates flexible upregulation of cognitive control under high stakes. Flux Society for Developmental Cognitive Neuroscience: St. Louis, Missouri.

Garrad, M., Sasse, S. F., Drysdale, A., Abi Akar, N., **Insel, C.**, Wilson, R., & Somerville, L. H. (2016). Exploratory decision making becomes more strategic through adolescence. Flux Society for Developmental Cognitive Neuroscience: St. Louis, Missouri.

Kastman, E. K., Skwara, A. C., **Insel, C.**, Rodman, A. M., Sasse, S. F., & Somerville, L. H. (2016) The effects of uncertainty on concurrent information processing from late childhood to adulthood. Flux Society for Developmental Cognitive Neuroscience: St. Louis, Missouri.

Martin, R. E., Silvers, J. A., Stephano, T., **Insel, C.**, Powers, A., Franz, P., Mischel, W., Casey, B. J., & Ochsner, K. N. (2016). Lateral prefrontal cortical thickness mediates the relationship between age and regulation of craving. Flux Society for Developmental Cognitive Neuroscience: St. Louis, Missouri.

Insel, C., Glenn, C. R., Kastman, E. K., Sasse, S. F., Garrad, M. C., Nock, M., & Somerville, L. H. (2016). Recruitment of prefrontal control regions during high stakes incentives predicts persistent improvements in cognitive control. Social and Affective Neuroscience Society Conference: New York, NY.

Insel, C., Glenn, C. R., Kastman, E. K., Sasse, S. F., Garrad, M. C., Nock, M., & Somerville, L. H. (2015). High stakes rewards and punishments induce "choking" behavior in adolescent reactive cognitive control: Behavioral evidence and frontostriatal mechanisms. Flux Society for Developmental Cognitive Neuroscience: Leiden, The Netherlands.

Rodman, A. M., **Insel, C.**, Skwara, A. C., Kastman, E. K., Sasse, S. F., & Somerville, L. H. (2015). Adolescents show reduced cognitive interference in response to unpredictable cues. Flux Society for Developmental Cognitive Neuroscience: Leiden, The Netherlands.

Insel, C., Glenn, C. R., Kastman, E. K., Garrad, M. C., Sasse, S. F., Nock, M. K., & Somerville, L. H. (2015). Immediate and lasting effects of high reward prospects on cognitive control. Association for Psychological Science: New York, NY.

Rodman, A. M., **Insel, C.**, Skwara, A. C., Kastman, E. K., Sasse, S. F., & Somerville, L. H. (2015). Reduced cognitive interference by temporal uncertainty in adolescence. Association for Psychological Science: New York, NY.

Insel, C., Glenn, C. R., Kastman, E. K., Garrad, M. C., Sasse, S. F., Nock, M. K., & Somerville, L. H. (2015). Immediate and lasting affects of high reward prospects on cognitive control. Social and Affective Neuroscience Society: Boston, MA.

Rodman, A. M., **Insel, C.**, Skwara, A. C., Kastman, E. K., Sasse, S. F., & Somerville, L. H. (2015). Reduced cognitive interference by temporal uncertainty in adolescence. Social and Affective Neuroscience Society: Boston, MA.

Franz, P., Silvers, J. A., **Insel, C.**, Ninova, E. M., Shah, I., Casey, B. J., Mischel, W., & Ochsner, K. (2015). Family income predicts neural correlates of uninstructed emotional responding. Social and Affective Neuroscience Society: Boston, MA.

Franz, P., Silvers, J. A., **Insel, C.**, Powers, A., Casey, B. J., Mischel, W., & Ochsner, K. (2014). Socioeconomic status predicts the neural bases of cognitive regulation of emotion. Society for Neuroscience: Washington, D. C.

Insel, C., Rodman, A. M., Skwara, A. C., Kastman, E. K., Sasse, S. F., & Somerville, L. H. (2014). Adolescents show unique behavioral and neural responses to unpredictable positive cues. Flux Society for Developmental Cognitive Neuroscience: Hollywood, CA.

Franz, P., Silvers, J. A., **Insel, C.**, Dolan, T., Powers, A., Pedersen, G., Dellarco, D., Casey, B. J., Mischel, W., & Ochsner, K. (2014). Fundamental competencies predict the neural bases of emotion regulation in youth. Flux Society for Developmental Cognitive Neuroscience: Hollywood, CA.

Lee, N. C., Weeda, W. D., **Insel, C.**, Versteeg, M., Somerville, L. H., Krabbendam, L., & Huizinga, M. (2014). Approach or avoid? The role of emotional information on cognitive control during adolescence. Flux Society for Developmental Cognitive Neuroscience: Hollywood, CA.

Rodman, A. M., **Insel, C.**, Skwara, A. C., Kastman, E. K., Sasse, S. F., & Somerville, L. H. (2014). Temporal uncertainty differentially impacts concurrent task performance across development. Flux Society for Developmental Cognitive Neuroscience: Hollywood, CA.

Silvers, J. A., **Insel, C.**, Powers, A., Franz, P., Weber, J., Mischel, W., Casey, B. J., & Ochsner, K. N. (2014) Different prefrontal-subcortical circuits support chronic and strategic emotion regulation across development. Flux Society for Developmental Cognitive Neuroscience: Hollywood, CA.

Somerville, L. H., **Insel, C.**, Kastman, E. K., Rodman, A., Sasse, S. F., & Swkara, A. C. (2014) Sustained affective processes: Neural mechanisms and developmental trajectories. Society for Research and Psychopathology: Chicago, IL.

Silvers, J. A., **Insel, C.**, Powers, A., Franz, P., Helion, C., Woo, T. T., Pedersen, G., Dellarco, D., Weber, J., Casey, B. J., Mischel, W., & Ochsner, K. N. (2014) Cognitive regulation of negative affect in childhood, adolescence, and young adulthood. Society for Affective Science: Washington, D. C.

Insel, C., Skwara, A. C., Sasse, S. F., Kastman, E., & Somerville, L. H. (2014). Heightened influence of unpredictability on emotional interference and striatal response to positive

stimuli in adolescents. Social and Affective Neuroscience Society: Denver, CO.

Silvers, J. A., **Insel, C.**, Powers, A., Franz, P., Helion, C., Teslovich Woo, T., Pedersen, G., Dellarco, D., Weber, J., Casey, B. J., Mischel, W., & Ochsner, K. N. (2014) Cognitive regulation of negative affect across childhood, adolescence and young adulthood. Cognitive Neuroscience Society: Boston, MA.

Teslovich Woo, T., Powers, A., Helion, C., **Insel, C.**, Silvers, J. A., Ochsner, K. N., Mischel, W., & Casey, B. J. (2014). Behavioral and neural substrates of self-control. Cognitive Neuroscience Society: Boston, MA.

Insel, C., Silvers, J. A., Powers, A., Helion, C., Teslovich, T., Weber, J., Casey, B. J., Mischel, W., & Ochsner, K. N. (2013). Neural correlates underlying dynamic changes in food craving and the cognitive reappraisal of appetitive cues in children and adolescents. Society for Neuroscience: San Diego, CA.

Silvers, J. A., **Insel, C.**, Powers, A., Teslovich, T., Helion, C., Weber, J., Casey, B. J., Mischel, W., & Ochsner, K. N. (2013). Neural links between the ability to delay gratification and regulation of craving in childhood. Society for Neuroscience: San Diego, CA.

Teslovich, T., Powers, A., Helion, C., **Insel, C.**, Silvers, J. A., Ochsner, K. N., Mischel, W., & Casey, B. J. (2013). Behavioral and neural substrates of self-control. Society for Neuroscience: San Diego, CA.

Reinen, J. M., **Insel, C.**, Wager, T. D., Shohamy, D., & Smith, E. E. (2013). Dissociations in reward-related activation during informative and affective feedback. Reinforcement Learning and Decision Making: Princeton, NJ.

Silvers, J. A., **Insel, C.**, Powers, A., Casey, B. J., Mischel, W., & Ochsner K. N. (2013). Brain and behavior underlying regulation of craving in childhood development. Association for Psychological Science: Washington, DC.

Silvers, J. A., **Insel, C.**, Powers, A., Casey, B. J., Mischel, W., & Ochsner, K. N. (2013). Behavioral and neural bases of regulation of craving for food in childhood and adolescence. Society for Research in Child Development: Seattle, WA.

Reinen, J., **Insel, C.**, Zenisek, S., Wager, T. D., & Shohamy, D. (2013). Dissociations in reward network activation while learning from cognitive versus hedonic feedback. Cognitive Neuroscience Society: San Francisco, CA.

Insel, C., Silvers, J. A., Powers, A., Casey, B. J., Mischel, W., & Ochsner, K. N. (2013). Neural bases of cognitive regulation of food craving during childhood and adolescence. Social and Affective Neuroscience Society: San Francisco, CA.

Reinen, J., **Insel, C.**, Wager, T. D., & Shohamy, D. (2013). Dissociations in reward network activation while learning from cognitive versus affective feedback. Social and Affective

Neuroscience Society: San Francisco, CA.

Insel, C., Silvers, J. A., Powers, A., Mehta, N., Casey, B. J., Mischel, W., & Ochsner, K. N. (2012). Neural correlates underlying cognitive regulation of appetitive responses to food during childhood and adolescence. Society for Neuroscience: New Orleans, LA.

Martin, R.E., Silvers, J. A., **Insel, C.**, Powers, A., Mehta, N., Casey, B. J., Mischel, W., & Ochsner K. N. (2012). Development of ventral lateral and medial prefrontal cortex predicts emotional reactivity and regulation of appetitive food cues. Society for Neuroscience: New Orleans, LA.

Reinen, J. M., Wager, T., Shohamy, D., **Insel, C.**, Daw, N., Jarskog, L. F., & Smith, E. E. (2012). Blunted learning signals in the brain's reward network is related to affective and motivational deficits in patients with schizophrenia. Society for Neuroscience: New Orleans, LA.

Insel, C., Reinen, J. M., Shohamy, D., Wager, T. D., Jarskog, L. F., Weber, J., & Smith, E. E. (2012). Neural correlates underlying the effects of atypical antipsychotic treatment on reinforcement learning in schizophrenia. Society of Biological Psychiatry: Philadelphia, PA.

Reinen, J. M., **Insel, C.**, Zenisek, S. F. M., Close, M. S., Shohamy, D., Jarskog, L. F., Wager, T., & Smith, E. E. (2012). Brain responses during reward anticipation versus receipt in gain and loss learning in Schizophrenia. Society of Biological Psychiatry : Philadelphia, PA.

Insel, C., Silvers, J. A., Porter, N., Shu, J., Powers, A., Mehta, N., Casey, B. J., Mischel, W., & Ochsner, K. N. (2012). Neural correlates of appetitive regulation of food craving across development. Social and Affective Neuroscience Society: New York, NY.

Insel, C., Reinen, J. M., Shohamy, D., Wager, T. D., Jarskog, L. F., Weber, J., Zenisek, S. F. M., & Smith, E. E. (2012). Effects of atypical antipsychotic medication on reward learning in schizophrenia. Cognitive Neuroscience Society: Chicago, IL.

Reinen, J. M., **Insel, C.**, Zenisek, S. F. M., Close, M. S., Shohamy, D., Jarskog, L. F., Wager, T., & Smith, E. E. (2012). Brain responses during anticipation versus outcome in gain and loss learning in schizophrenia. Cognitive Neuroscience Society: Chicago, IL.

Eich, T.S., Nee, D. N., **Insel, C.**, Malapani, C., & Smith, E. E. (2012). Neural correlates of impaired control over working memory in schizophrenia. Cognitive Neuroscience Society: Chicago, IL.

Reinen, J. M., Shohamy, D., Jarskog, L. F., Wager, T. D., **Insel, C.**, Kribs, R. J., Lee., A., & Smith, E. E. (2011). Neural responses to reward anticipation and reward receipt during learning in schizophrenia. Society for Neuroscience: Washington, DC.

Reinen, J. M., Jarskog, L. F., Kribs, R. J., **Insel, C.**, Rosenfeld, A., Wager, T., Shohamy, D., & Smith, E. E. (2011). Anticipation and hedonic reaction to rewards versus losses in

schizophrenia. University of Colorado at Boulder Executive Function and Emotion Conference: Boulder, CO.

Smith, E. E., Reinen, J. M., Kribs, R. J., **Insel, C.**, Rosenfeld, A., Wager, T., Shohamy, D., & Jarskog, L. F. (2011). Anticipation and hedonic reaction to rewards versus losses in schizophrenia. World Congress of Psychiatry: Buenos Aires, Argentina.

Reinen, J. M., Jarskog, L. F., Kribs, R. J., **Insel, C.**, Rosenfeld, A., Wager, T., Shohamy D., & Smith, E. E. (2011). Anticipation and hedonic reaction to rewards versus losses in schizophrenia. Cognitive Neuroscience Society: San Diego, CA.

TEACHING

2021	BRAINYAC Summer High School Program
2021	Guest Lecturer, University of Montana, Neuroscience II
2019	Instructor, Columbia School of Professional Studies Science of Psychology
2019	Guest Lecturer, Columbia School of Professional Studies Mind and Markets: Finance, Economics, and Psychology
2018	Teaching Fellow, Harvard University Introduction to Statistics for the Behavioral Sciences
2016–2018	Statistics Consultant Teaching Fellow, Harvard University Senior Tutorial: Honors Thesis in Psychology
2017–2018	Guest Lecturer, Harvard Law School Law and Neuroscience
2016	Teaching Fellow, Harvard University Social Psychology

MENTORING

2023	Tola Kilian, undergraduate research assistant
2023	Ugo Iroh, undergraduate research assistant
2022 – present	Mariana Henriquez, undergraduate research assistant
2022 – present	Anoush Pogossian, undergraduate research assistant
2021 – present	Lauren Conner, BRAINYAC high school research assistant and Merit Fellowship recipient

2021– 2023	Sydney Bambardekar, Barnard Neuroscience thesis student and Barnard Excellence in Neuroscience Award recipient
2019 – 2020	Gabriel Reyes, graduate student research assistant
2017 –2020	Mahalia Prater Fahey, postbaccalaureate research assistant
2016–2018	Mia Charifson, Harvard Human Evolutionary Biology thesis student
2015–2019	Gina Falcone, graduate student research assistant
2014–2016	Cony Vidal Bustamante, Harvard Psychology thesis student
2013–2015	Chiemka Ezie, undergraduate research assistant and Harvard BLISS fellow
2013–2015	Kristen Osborne, Harvard Psychology thesis student

SCIENTIFIC OUTREACH AND VOLUNTEER ACTIVITIES

2023	Expert Panelist, Neuroscience and Juvenile Justice panel discussion, City as School
2023	TED Ed Expert Consultant, “When are you actually an adult?”
2023	Neuroscience instructor, STEAM Expo, The School at Columbia
2021	BRAINYAC high school program mentor, Columbia University
2021	The Future of Learning and Education, Stavros Niarchos Brain Insights Lecture, Zuckerman Institute, New York, NY
2020	Music and the Brain: Musical Time Traveling, National Jazz Museum in Harlem and Columbia’s Zuckerman Institute
2020	Rhythm and Reason, Arts and Minds and Columbia’s Zuckerman Institute
2020—present	Scientist Q&A, Teacher-Scholar Program, Columbia University
2020	PPREP Mentor, Harvard University
2019–2020	Women in Science at Columbia PhD-Postdoc mentorship program, neuroscience mentor, Columbia University
2019–2020	Girls’ Science Day volunteer, Columbia University

- 2010—present Middle and high school student education: Developed curriculum and led educational workshops for middle and high school students on neuroanatomy and cognitive and affective neuroscience. Conducted multiple workshops with outreach to >300 students across many schools in New York City and Boston.
- 2013—present Teacher education and professional development: Conducted presentations and seminars about adolescent development with >100 teachers from 25 different schools through professional development workshops in Boston.
- 2013 Mentor and 2nd grade science teacher, Science Club for Girls
- 2010—2013 Team leader and mentor for undergraduate students pursuing careers in scientific research, Columbia College Women
- 2010—2012 Volunteer, Neural Connections program on the Neurology unit at New York Presbyterian Hospital/ Weill Cornell Medical Center
- 2009—2010 Health teacher for middle school students, Health Education Awareness League at Columbia University

PROFESSIONAL LEADERSHIP AND SERVICE

- 2022 Manhattan Area Memory Meeting Organizer
- 2022 Flux Society Dissertation Award Committee
- 2022—2023 Columbia Neuroscience Seminar Organizer

PEER REVIEW

- Biological Psychiatry; Biological Psychiatry: Cognitive Neuroscience and Neuroimaging; Brain Imaging and Behavior; Cognitive Affective and Behavioral Neuroscience; Current Directions in Psychological Science; Developmental Cognitive Neuroscience; Developmental Psychobiology; Developmental Science; eLife; Journal of Cognitive Neuroscience; Learning and Memory; Nature Communications; Neuroimage; PNAS; Social Cognitive and Affective Neuroscience; Social Development

PROFESSIONAL MEMBERSHIPS

- Association for Psychological Science; Cognitive Neuroscience Society; Flux Congress for Integrative Developmental Cognitive Neuroscience; LearnMem; Social and Affective Neuroscience Society; Society for Neuroscience

SKILLS

- Data analysis and scripting with Excel, SPSS, Matlab, R, Python
- Experimental design in E-prime, Matlab/PsychToolbox, Psychopy, jsPsych
- Neuroimaging analysis with Freesurfer, FSL, NeuroElf, Nipype (Lyman), SPM
- Cognitive testing and scoring (WASI, WISC)
- Clinical interviewing (SCID, K-SADS, MINI-KID, SANS, SAPS, BPRS)