

# Kate Nussenbaum

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## Education

- 2017 - present: **Ph.D.**, Psychology (Cognition and Perception), *New York University*
- 2015 - 2017: **M.Sc. by Research**, Experimental Psychology, *University of Oxford*
- 2011 - 2015: **Sc.B.**, Cognitive Neuroscience (honors); Science & Society, *Brown University*

## Awards and Honors

- 2020: **Katzell Summer Fellowship**, NYU Department of Psychology
- 2018, 2019: **Dean's Student Travel Grant**, NYU Graduate School of Arts & Sciences
- 2018 - 2021: **NDSEG Fellowship**, U.S. Department of Defense
- 2017: **Travel Award**, Flux Society for Developmental Cognitive Neuroscience
- 2017: **Engberg Award for an Outstanding Entering Graduate Student**,  
NYU Department of Psychology
- 2017: **Grindley Grant**, Experimental Psychology Society
- 2016, 2017: **Murray Speight Research Grant**, Rhodes Trust
- 2016: **Editor's Choice Award for Best 2016 Paper**, *Journal of Cognition and Development*
- 2015 - 2017: **Rhodes Scholarship**
- 2015 - 2017: **Marshall Scholarship** (*declined*)
- 2015: **Whalen Award for Undergraduate Research Excellence in Neuroscience**, Brown University
- 2015: **Research at Brown Travel Award**, Brown University
- 2015: Elected to **Sigma Xi**
- 2014: **Undergraduate Teaching and Research Award**, Brown University
- 2014: Elected to **Phi Beta Kappa** (*early election as a junior*)
- 2013 - 2014: **Teaching-Research-Impact Lab Student Fellowship**,  
Brown University Swearer Center for Public Service
- 2013: **Solsberry Summer Research Fellowship**,  
Brown University Center for the Study of Human Development
- 2011: **National Merit Scholarship**
- 2011: **Presidential Scholar Award** (*1 of 2 from Massachusetts*),  
U.S. Department of Education

## Publications

Trainees working under my mentorship are underlined. The \* denotes equal author contribution.

### Journal Articles

9. **Nussenbaum, K.**, Scheuplein, M., Phaneuf, C.V., Evans, M.D. & Hartley, C.A. (*in press*). Moving developmental research online: comparing in-lab and web-based studies of model-based reinforcement learning. *Collabra: Psychology*. [[preprint](#)] [[data & code](#)]
8. Cohen, A.O.\*, **Nussenbaum, K.\***, Dorfman, H.M., Gershman, S.J., & Hartley, C.A. (*in press*). The rational use of causal inference to guide reinforcement learning strengthens with age. *npj Science of Learning*. [[preprint](#)] [[data & code](#)]
7. **Nussenbaum, K.\***, Cohen, A.O.\*, Davis, Z.J., Halpern, D.J., Gureckis, T.M., & Hartley, C.A. (2020). Causal information-seeking strategies change across childhood and adolescence. *Cognitive Science*. 44(8), e12888. [[pdf](#)] [[data & code](#)]
6. **Nussenbaum, K.**, Prentis, E., & Hartley C.A. (2020). Memory's reflection of learned information value increases across development. *Journal of Experimental Psychology: General*. [[pdf](#)] [[data & code](#)]
5. **Nussenbaum, K.** & Hartley, C.A. (2019). Reinforcement learning across development: What insights can we draw from a decade of research? *Developmental Cognitive Neuroscience*, 40, 100733. [[pdf](#)]
4. **Nussenbaum, K.**, Scerif, G.\*, & Nobre, A.C.\* (2019). Differential effects of salient visual events on memory-guided attention in adults and children. *Child Development*, 90(4), 1369 - 1388. [[pdf](#)] [[data & code](#)]
3. **Nussenbaum, K.**, Amso, D., & Markant, J. (2017). When increasing distraction helps learning: Distractor number and content interact in their effects on memory. *Attention, Perception, & Psychophysics*, 79(8), 2606-2619. [[pdf](#)] [[data](#)]
2. Markant, J., Ackerman, L., **Nussenbaum, K.**, & Amso, D. (2016). Selective attention neutralizes the adverse effects of low socioeconomic status on memory in 9-month-old infants. *Developmental Cognitive Neuroscience*, 18, 26-33. [[pdf](#)]
1. **Nussenbaum, K.** & Amso, D. (2016). An attentional Goldilocks effect: An optimal amount of social interactivity promotes word learning from video. *Journal of Cognition and Development*, 17(1), 30-40. [[pdf](#)]  
**Received Editor's Choice Award for journal's best 2016 article.**

### Conference Proceedings

2. **Nussenbaum, K.** & Hartley, C.A. (2020). Prefrontal-striatal circuitry supports adaptive memory prioritization across development. In: *Proceedings of the 42nd Annual Meeting of the Cognitive Science Society*. [[pdf](#)]
1. **Nussenbaum, K.\***, Cohen, A.O.\*, Davis, Z.J., Halpern, D., Gureckis, T.M., & Hartley, C.A. (2019). Causal intervention strategies change across adolescence. In: *Proceedings of the 41st Annual Meeting of the Cognitive Science Society*. [[pdf](#)] [[data & code](#)]

## Presentations

### Invited Talks

- 2020: Affective Brain Lab, University College London (virtually)  
*Developmental change in learning and using causal knowledge*
- 2020: Developmental Affective Neuroscience Lab, Columbia University (virtually)  
*Developmental change in learning and using causal knowledge*
- 2020: Developing Brains in Context Lab, University of Oregon (virtually)  
*Developmental change in learning and using causal knowledge*
- 2020: Learning and Brain Development Lab, Tulane University (virtually)  
*Moving developmental research online*
- 2019: Department of Psychology Miniconvention, NYU  
*Neural mechanisms underlying the use of information value to guide memory across development*
- 2019: Concepts and Categories Seminar, NYU  
*Causal information-seeking strategies change across childhood and adolescence*
- 2018: Department of Psychology Miniconvention, NYU  
*Developing the ability to remember useful information*

### Conference Talks

- Nussenbaum, K.**, Valencia, D., Greer, J., Keathley, N., & Hartley, C.A. (2020). Prefrontal-striatal circuitry supports adaptive memory prioritization across development. Flash talk presented at the Flux Congress for Developmental Cognitive Neuroscience, virtual meeting.
- Nussenbaum, K.** & Hartley, C.A. (2020). Prefrontal-striatal circuitry supports adaptive memory prioritization across development. Talk presented at the the 42nd Annual Meeting of the Cognitive Science Society, virtual meeting.
- Nussenbaum, K.**, Cohen, A.O., Davis, Z.J., Halpern, D., Gureckis, T.M. & Hartley, C.A. (2019). Changes in causal intervention strategies across adolescence. Lightning talk presented at the Workshop on Curiosity, Exploration, and Explanation, Princeton University, Princeton, NJ.
- Nussenbaum, K.**, Prentis, E., Valencia, D., & Hartley, C.A. (2019). The use of past experience to guide memory increases across development. Talk presented at the Manhattan Area Memory Meeting, Princeton University, Princeton, NJ.

### Conference Posters

- Scheuplein, M., **Nussenbaum, K.**, Phaneuf, C.V., Evans, M.D., & Hartley, C.A. (2020). Developmental differences in model-based learning and abstract reasoning: an online replication study. Poster presented at the Flux Congress for Developmental Cognitive Neuroscience, virtual meeting.
- Nussenbaum, K.**, Valencia, D., Greer, J., Keathley, N., & Hartley, C.A. (2020). Prefrontal-striatal circuitry supports adaptive memory prioritization across development. Poster presented at the Flux Congress for Developmental Cognitive Neuroscience, virtual meeting.

**Nussenbaum, K., Valencia, D., Greer, J., Keathley, N., & Hartley, C.A. (2020).** Neural mechanisms underlying the use of learned value to guide memory across development. Poster presented at the Context and Episodic Memory Symposium, virtual meeting.

**Nussenbaum, K., Valencia, D., Greer, J., Keathley, N., & Hartley, C.A. (2020).** Neural mechanisms underlying the use of learned value to guide memory across development. Poster presented at the Cognitive Neuroscience Society, virtual meeting.

**Nussenbaum, K., Cohen, A.O., Davis, Z.J., Halpern, D., Glover, M., Valencia, D., Shen, X., Gureckis, T.M., & Hartley, C.A. (2019).** Causal information-seeking strategies change through adolescence. Poster presented at the Flux Congress for Developmental Cognitive Neuroscience, New York, NY.

Cohen, A.O., **Nussenbaum, K.**, Dorfman, H., Glover, M., Valencia, D., Shen, X., Gershman, S.J., & Hartley, C.A. (2019). Developmental change in the influence of causal judgments on reinforcement learning. Poster presented at the Flux Congress for Developmental Cognitive Neuroscience, New York, NY.

**Nussenbaum, K., Cohen, A.O., Davis, Z.J., Halpern, D., Gureckis, T.M., & Hartley, C.A. (2019).** Causal intervention strategies change across adolescence. Poster presented at the Cognitive Science Society, Montreal, Canada.

**Nussenbaum, K., Cohen, A.O., Dorfman, H., Glover, M., Valencia, D., Shen, X., Gershman, S.J., & Hartley, C.A. (2019).** Developmental change in the use of causal inference to guide reinforcement learning. Poster presented at the conference on Reinforcement Learning and Decision Making, Montreal, Canada.

Cohen, A.O., **Nussenbaum, K.**, Dorfman, H., Shen, X., Sardar, H., Valencia, D., Glover, M., Gershman, S.J., & Hartley, C.A. (2019). Age-related change in the effects of causal judgments on learning from reinforcement. Poster presented at the Social and Affective Neuroscience Society, Miami, FL.

**Nussenbaum, K., Prentis, E., & Hartley, C.A. (2018).** Strategic encoding of useful information across development. Poster presented at the Society for Neuroeconomics, Philadelphia, PA.

**Nussenbaum, K., Prentis, E., Ocampo, J.D., & Hartley, C.A. (2018).** Developmental changes in the use of environmental statistics to strategically modulate memory. Poster presented at the Flux Congress for Developmental Cognitive Neuroscience, Berlin, Germany.

**Nussenbaum, K. & Hartley, C.A. (2018).** Developing the ability to remember information with high future reward. Poster presented at the Social and Affective Neuroscience Society, New York, NY.

**Nussenbaum, K. & Hartley, C.A. (2018).** Developing the ability to remember useful information. Poster presented at the UC Irvine International Conference on Learning and Memory, Irvine, CA.

**Nussenbaum, K., Nobre, A.C., & Scerif, G. (2017).** Salient visual events disrupt memory-guided attention in adults but not children. Poster presented at the Flux Congress for Developmental Cognitive Neuroscience, Portland, OR.

**Nussenbaum, K., Nobre, A.C., & Scerif, G. (2017).** Memories and exogenous cues interact differently across age groups to influence attentional orienting. Poster presented at the Society for Research in Child Development, Austin, TX.

**Nussenbaum, K., Myers, N., Nobre, A.C., & Scerif, G. (2016).** Developmental changes in memory-guided and exogenously cued attention. Poster presented at the Autumn School in Cognitive Neuroscience, Oxford, UK.

**Nussenbaum, K., Markant, J., & Amso, D. (2016).** Increasing distractor set size reduces conceptual interference during target encoding. Poster presented at the Cognitive Neuroscience Society, New York, NY.

**Nussenbaum, K.** & Amso, D. (2015). An attentional Goldilocks effect for childrens word-learning from digital media. Poster presented at the Society for Research in Child Development, Philadelphia, PA.

## Teaching

Spring 2020: **Teaching Assistant**, Developmental Psychology, NYU (Dr. Karen Adolph)

Spring 2015: **Teaching Assistant**, Human Cognition, Brown University (Dr. Joe Austerweil)

## Mentoring

Sept. 2020 - present: **Juan Velez**, NYU '23

Sept. 2020 - present: **Hannah Hamling**, NYU '22

Sept. 2020 - present: **Bradli (Lia) Washington**, NYU '22

Sept. 2018 - May 2020: **Daphne Valencia**, NYU MA '19  
*Masters thesis, MA Student Research Conference Honorable Mention*

Jan. 2018 - May 2019: **Euan Prentis**, NYU '19  
*Honors thesis, Doris Aaronson Award for outstanding departmental research, Dean's Undergraduate Research Fund grant recipient (x2)*

June - Aug. 2019: **Nora Keathley**, Emory University '20

June - Aug. 2019: **Jamie Greer**, Vassar College '20

Jan. - May 2019: **Michael Parola**, NYU '22

June - Aug. 2018: **Dhiraj Patel**, University of Chicago '21

July - Aug. 2018: **Sree Panuganti**, NYU GSTEM program participant

Jan. - May 2018: **Daryl Ocampo**, NYU '18

## Service

### Volunteer positions

2020 - present: *Marshall, Mitchell, and Rhodes Scholarship Nominations Committee*, Brown University

2018 - 2020: *Trainee Committee co-chair*, Flux Society for Developmental Cognitive Neuroscience

2020: *Doctoral Admissions Working Group*, NYU Psychology Department

2020: *Expenses and Reimbursement Working Group*, NYU Psychology Department

2020: *Organizing Committee*, NYU Psychology Department virtual summer research internship

2017 - 2020: *Volunteer at science outreach events*, braiNY

2019 - 2020: *Social activities co-chair*, Cognition & Perception Graduate Program, NYU

2017 - 2018: *Volunteer*, Scientist Action and Advocacy Network, NYU

2016 - 2017: *Speakers committee*, Global Scholars Symposium, Cambridge, UK

2015 - 2016: *Logistics committee*, Global Scholars Symposium, Oxford, UK

2013 - 2014: *Co-organizer*, Healthy Early Childhood Development Symposium, Providence, RI

### **Science Communication**

- 2018: Article: [Equation invasion! How math can explain how the brain learns](#). *Frontiers for Young Minds*.
- 2018: Policy brief: [Scientific support for a developmentally informed approach to Miranda rights](#).
- 2014: Policy brief: [Supporting the Development of Executive Functions in Young Children](#).

### **Ad-hoc Peer Review** (independently)

*Annual Meeting of the Cognitive Science Society (x4)*  
*Child Development*  
*Clinical Psychological Science*  
*Current Opinion in Behavioral Sciences*  
*Journal of Experimental Psychology: Learning, Memory, and Cognition*  
*Neurobiology of Aging*  
*Psychology of Popular Media*  
*Psychonomic Bulletin & Review*

### **Other Training**

- 2019: Methods in Neuroscience at Dartmouth
- 2018: NYU Science Communication Workshop
- 2016 - 2017: Oxford Center for Functional Magnetic Resonance Imaging Graduate Training Programme