JohnMark Edward Taylor

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Education

2015-present **Harvard University, Psychology Department, PhD Candidate**
Cognition, Brain and Behavior Track **(3.98/4.00 GPA)**
(Advisors: Yaoda Xu)

2009-2013 **Yale University, Bachelor of Arts**
Cognitive Science Major (**3.90/4.00 GPA**)
Honors: Phi Beta Kappa, Magna cum Laude, distinction in major, Psi Chi
Senior Thesis: *The Phylogeny of Willpower: Ego Depletion in Capuchin Monkeys*
(Advisor: Laurie Santos)

Professional Experience

2021-Present **Postdoctoral Researcher, Visual Inference Lab (P.I. Nikolaus Kriegeskorte)**

2013-2015 **Lab Manager, Yale Human Neuroscience Lab (P.I. Gregory McCarthy)**
Designed, ran, and analyzed fMRI and EEG experiments in addition to managing various logistical issues in the lab

Fellowships and Honors

2020 Foundations of Human Behavior Fellowship ($5000)
2019 Harvard Brain Science Initiative Young Scientist Travel Award ($2000)
2019 Vision Sciences Society Student Travel Award ($500; one of 20 recipients)
2018 Harvard Mind, Brain, and Behavior Graduate Student Fellowship ($10000)
2018 Barbara Ditmars Fellowship ($3500)
2018 Bok Center Certificate for Distinction and Excellence in Teaching
2017 National Science Foundation Graduate Research Fellowship
2015 Recipient of Sosland Family Graduate Fellowship (private, alternative source of financial aid 2015-2016 academic year, received via recommendation of Harvard Psychology Department)
2013 Richard B. Sewall Trophy (awarded to two students in residential college graduating class of 120 students for "Outstanding Scholarly Achievement and Creative Promise")
2012 Winner of Psi Chi Summer Research Fellowship (awarded to 14 students nationally; total value of $5000)

2012 Recipient of Richter Fellowship for Summer Research (total value of $1000)

2012 Recipient of Yale Dean's Fellowship in the Sciences for Summer Research (total value of $4000; declined due to other funding)

2012 Editor-in-Chief of *Yale Review of Undergraduate Research in Psychology*

2011 Invitee to University of Pennsylvania Institute for Research in Cognitive Science Summer Workshop (one of 25 internationally)

2009 National Merit Scholar

Publications

Taylor, J., & Xu, Y. (2021). Joint representation of color and form in convolutional neural networks: A stimulus-rich network perspective. *PLOS One*, *16*(6), e0253442.

Taylor, J., and Xu, Y. (2020). Representation of Color, Shape, and their Conjunction Across the Human Visual Hierarchy. (Under Revision)

Taylor, J., and Xu, Y. (2020). Efficiently Defining the Human Superior Intraparietal Region that Tracks Visual Working Memory Performance. (Manuscript in prep)

Taylor, J. and Xu, Y. (2020). Mixed Selectivity for Task and Stimulus Category in the Human Visual System (Manuscript in prep)

Taylor, J. and Xu, Y. (2020). The relative coding strength of color and form in the human ventral visual pathway and convolutional neural networks (Manuscript in prep)

Shehzad, Z., Taylor, J., & McCarthy, G. (2020). Modular and distributed representations of biographical knowledge for faces. (Under Review)

Vaziri-Pashkam, M., Taylor, J., & Xu, Y. (2018). Spatial Frequency Tolerant Visual Object Representations in the Human Ventral and Dorsal Visual Processing Pathways. *Journal of cognitive neuroscience*, 1-14.

Taylor, J., Shehzad, Z., & McCarthy, G. (2016). Electrophysiological correlates of face-evoked person knowledge. *Biological Psychology*, 118: 136-146.

Presentations

Taylor, J., & Xu, Y. (2021). The relative coding strength of color and form in the human ventral visual pathway and convolutional neural networks. Poster presented at the 21st annual meeting of the Vision Sciences Society Conference. St. Pete Beach, FL.

Taylor, J., & Xu, Y. (2020). Conjunctive Coding of Color and Shape in Convolutional Neural Networks. Poster presented at the 20th annual meeting of the Vision Sciences Society Conference. St. Pete Beach, FL.

Taylor, J., & Xu, Y. (2019). Conjunctive Coding of Color and Shape in Convolutional Neural Networks. Poster presented at the 3rd annual meeting of the Cognitive Computational

Neuroscience Conference. Berlin, DE.

Taylor, J., & Xu, Y. (2019). The Coding of Color, Shape, and their Conjunction Across the Human Ventral Visual System. Talk presented at the 19th annual meeting of the Vision Sciences Society Conference. St. Pete Beach, FL.

Taylor, J., & Xu, Y. (2018). Probing Mixed Selectivity with fMRI Voxel Analysis. Talk presented at the 18th annual meeting of the Vision Sciences Society Conference. St. Pete Beach, FL.

Taylor, J., & Xu, Y. (2017). To bind or not to bind? Neural coding of color and shape. Talk presented at the 47th Annual Meeting of the Society for Neuroscience. Washington D.C.

Taylor, J., Vaziri-Pashkam, M., & Xu, Y. (2017). Effect of task on object category representations across human ventral, dorsal, and frontal brain regions. Poster presented at the 17th annual meeting of the Vision Sciences Society Conference. St. Pete Beach, FL.

Taylor, J., Vaziri-Pashkam, M., & Xu, Y. (2016). Attention to Object Form Modulates Informational Connectivity Between Dorsal and Ventral Visual Streams. Poster presented at the 46th Annual Meeting of the Society for Neuroscience. San Diego, CA.

Shehzad, Z., Taylor, J., & McCarthy, G. (2015). VATL Contributes to Biographical Knowledge of Faces via Feedback to FFA. Poster presented at the 45th Annual Meeting of the Society for Neuroscience. Chicago, IL.

Teaching Experience

2020 Cognition, Brain, and Behavior Proseminar
2019 Psychology Departmental Proseminar
2019 Cognition, Brain, and Behavior Proseminar
2018 Windows Into the Structure of the Mind and Brain
2018 Introduction to Statistics for the Behavioral Sciences (*Bok Center Teaching Award*)

Skills

Programming: Python, R, Matlab, C, Linux, Bash scripting
Analysis Techniques: Support Vector Machines, Generalized Linear Model, Convolutional Neural Networks, PyTorch, Bayesian Statistics
Neuroimaging packages: FSL, Freesurfer