

Greg Jensen

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Education

- B.A. Psychology, Reed College, May 2003.
- M.A. Psychology, Columbia University, October 2011.
- M.Phil. Psychology, Columbia University, May 2013.
- Ph.D. Psychology, Columbia University, May 2014.

Employment

- Columbia University (Neuroscience: Adjunct Associate Research Scientist) 2017–Present.
- Reed College (Psychology: Visiting Assistant Professor) 2019–2020, Spring 2021.
- Columbia University (Psychology: Lecturer In Discipline) 2016–2017.
- Columbia University Medical Center (Neuroscience: Postdoctoral Research Scientist) 2014–2016.
- Columbia University (Psychology: Part Time Lecturer) 2014–2016.
- Reed College (Psychology: Lab Manager) 2004–2009.

Teaching Experience

Instructor (Reed College)

- Comparative Cognition (Fall 2019).
- Statistical Modeling for Applied Research (Fall 2019).
- Learning (Spring 2020).
- Psychological Science Lab: Learning & Comparative Methods (Spring 2020).
- Psychological Science Lab: Applied Measurement (Spring 2021).

Instructor (Columbia University)

- Science of Psychology (Fall 2016/Spring 2017).
- Introduction to Statistics for Behavioral Scientists (Fall 2014, Fall 2015/Spring 2016, Fall 2016/Spring 2017).
- Animal Behavior (Spring 2017).
- Advanced Statistical Inference (Fall 2016).

- Summer Statistics Workshop (Summer 2015).

Lab Instructor (Columbia University)

- Introduction to Statistics for Behavioral Scientists (Fall 2013).
- Experimental Psychology: Human Behavior (Fall 2011).

Publications

Journal Articles & Book Chapters

- **Jensen G**, Muñoz F, Meaney A, Terrace HS, Ferrera VP. (In Press). Transitive inference after minimal training in rhesus macaques (*Macaca mulatta*). *Journal of Experimental Psychology: Animal Learning and Cognition*. doi: 10.31234/osf.io/ep92d
- Wan H, Kirkman C, **Jensen G**, Hackenberg TD. (In Press). Failure to find altruistic food sharing in rats. *Frontiers in Psychology*. doi: 10.31234/osf.io/pmbnh
- Porges EC, **Jensen G**, Foster BM, Edden RAE, Puts NAJ. (2021). The trajectory of cortical GABA levels across the lifespan: An individual participant data meta-analysis of edited MRS studies. *eLife*, 13, e62575. doi: 10.7554/eLife.62575
- **Jensen G**, Kao T, Michaelcheck C, Borge SS, Ferrera VP, Terrace HS. (2021). Category learning in a transitive inference paradigm. *Memory & Cognition*. doi: 10.3758/s13421-020-01136-z
- Muñoz F, **Jensen G**, Kennedy BC, Alkan Y, Terrace HS, Ferrera VP. (2020). Learned representation of implied serial order in posterior parietal cortex. *Scientific Reports*, 10, Article 9386. doi: 10.1038/s41598-020-65838-9
- Kao T, **Jensen G**, Michaelcheck C, Ferrera VP, Terrace HS. (2020). Absolute and relative knowledge of ordinal position on implied lists. *Journal of Experimental Psychology: Learning, Memory, and Cognition*. doi: 10.1037/xlmo000783
- **Jensen G**, Terrace HS, Ferrera VP. (2019). Discovering implied serial order through model-free and model-based learning. *Frontiers in Neuroscience*, 13, Article 878. doi: 10.3389/fnins.2019.00878
- **Jensen G**, Alkan Y, Ferrera VP, Terrace HS. (2019). Reward associations do not explain transitive inference performance in monkeys. *Science Advances*, 5, eaaw2089. doi: 10.1126/sciadv.aaw2089
- **Jensen G**. (2019). Instrumental variable estimation of reinforcer effects. *Journal of the Experimental Analysis of Behavior*, 111, 358-368. doi: 10.1002/jeab.498
- **Jensen G**. (2018). Behavioral stochasticity. In Vonk J, Shackelford T (Eds), *Encyclopedia of Animal Cognition and Behavior*. Springer. doi: 10.1007/978-3-319-47829-6_1520-1
- Altschul D, **Jensen G**, Terrace HS. (2017). Perceptual category learning of photographic and painterly stimuli in rhesus macaques (*Macaca mulatta*) and humans. *PLoS ONE*, 12, e0185576. doi: 10.1371/journal.pone.0185576
- **Jensen G**. (2017). Herbert Terrace. In Vonk J, Shackelford T (Eds), *Encyclopedia of Animal Cognition and Behavior*. Springer. doi: 10.1007/978-3-319-47829-6_927-1
- **Jensen G**. (2017). Serial learning. In Call J, Burghardt GM, Pepperberg IM, Snowdon CT, Zentall T (Eds), *The APA Handbook of Comparative Psychology, Vol. 2* (pp. 385-409). American Psychological Association. doi: 10.1037/0000012-018

- **Jensen G**, Alkan Y, Muñoz F, Ferrera VP, Terrace HS. (2017). Transitive inference in humans (*Homo sapiens*) and rhesus macaques (*Macaca mulatta*) after massed training of the last two list items. *Journal of Comparative Psychology*, doi: 10.1037/com0000065
- Tanner N, **Jensen G**, Ferrera VP, Terrace HS. (2017). Inferential learning of serial order of perceptual categories by rhesus monkeys (*Macaca mulatta*). *Journal of Neuroscience*, 37, 6268-6276. doi: 10.1523/JNEUROSCI.0263-17.2017
- Avlar B, Kahn J, **Jensen G**, Kandel E, Simpson E, Balsam P. (2015). Improving temporal cognition by enhancing motivation. *Behavioral Neuroscience*, 129, 576-588. doi: 10.1037/bne0000083
- Bailey MR, **Jensen G**, Taylor K, Mezas C, Williamson C, Silver R, Simpson EH, & Balsam PD. (2015). A novel strategy for dissecting goal-directed action and arousal components of motivated behavior. *Behavioral Neuroscience*, 129, 269-280. doi: 10.1037/bne0000060
- **Jensen G**, Altschul D. (2015) Two perils of binary categorization: Why the study of concepts can't afford true/false testing. *Frontiers in Psychology*, 6, Article 168. doi: 10.3389/fpsyg.2015.00168
- **Jensen G**, Muñoz F, Alkan Y, Ferrera VP, Terrace HS. (2015). Implicit value updating explains transitive inference performance: The betasort model. *PLOS Computational Biology*, 11, e1004523. doi: 10.1371/journal.pcbi.1004523
- Avdagic E, **Jensen G**, Altschul D, Terrace HS. (2014). Rapid cognitive flexibility of rhesus macaques performing psychophysical task-switching. *Animal Cognition*, 17, 619-631. doi: 10.1007/s10071-013-0693-0
- **Jensen G**. (2014). Compositions and their application to the analysis of choice. *Journal of the Experimental Analysis of Behavior*, 102, 1-25. doi: 10.1002/jeab.89
- **Jensen G**, Stokes PD, Paterniti A, Balsam PD. (2014). Unexpected downshift in reward magnitude induces variation in human behavior. *Psychonomic Bulletin & Review*, 21, 436-444. doi: 10.3758/s13423-013-0490-4
- Morè L, **Jensen G**. (2014). Acquisition of conditioned responding in a multiple schedule depends on the reinforcement's temporal contingency with each stimulus. *Learning & Memory*, 21, 258-262. doi: 10.1101/lm.034231.113
- **Jensen G**, Altschul D, Danly E, Terrace HS. (2013). Transfer of a serial representation between two distinct tasks by Rhesus macaques. *PLOS ONE*, 8, e70285. doi: 10.1371/journal.pone.0070285
- **Jensen G**, Altschul D, Terrace HS. (2013). Monkeys would rather see *and* do: Preference for agentic control in Rhesus macaques. *Experimental Brain Research*, 3, 429-442. doi: 10.1007/s00221-013-3402-y
- **Jensen G**, Ward RD, Balsam PD. (2013). Information: Theory, Brain, and Behavior. *Journal of the Experimental Analysis of Behavior*, 100, 408-431. doi: 10.1002/jeab.49
- Neuringer A, **Jensen G**. (2013). Operant variability. In GJ Madden (Ed) *The APA Handbook of Behavior Analysis* (Vol. 1., pp. 513-546). American Psychological Association. doi: 10.1037/13937-022
- **Jensen G**, Miller C, Neuringer A. (2012). Truly random operant responding: Results and reasons. In T Zentall & E Wasserman (Eds), *The Oxford Handbook of Comparative Cognition* (2nd ed., pp. 652-673). Oxford University Press. doi: 10.1093/oxfordhob/9780195392661.013.0033
- Neuringer A, **Jensen G**. (2012). The predictably unpredictable operant. *Comparative Cognition & Behavior Reviews*, 7, 55-84. doi: 10.3819/ccbr.2012.70004

- Ward RD, Gallistel CR, **Jensen G**, Richards VL, Fairhurst S, Balsam PD. (2012). Conditioned stimulus informativeness governs conditioned stimulus-unconditioned stimulus associability. *Journal of Experimental Psychology: Animal Behavior Processes*, 38, 217-232. doi: 10.1037/a0027621
- Neuringer A, **Jensen G**. (2010). Operant variability and voluntary action. *Psychological Review*, 117(3), 972-993. doi: 10.1037/a0019499
- **Jensen G**, Neuringer A. (2009). Barycentric extension of generalized matching. *Journal of the Experimental Analysis of Behavior*, 92(2), 139-159. doi: 10.1901/jeab.2009.92-139
- **Jensen G**, Neuringer A. (2008). Choice as a function of reinforcer “hold”: From probability learning to concurrent reinforcement. *Journal of Experimental Psychology: Animal Behavior Processes*, 34(4), 437-460. doi: 10.1037/0097-7403.34.4.437
- Rothstein J, **Jensen G**, Neuringer A. (2008). Human choice among five alternatives when reinforcers decay. *Behavioural Processes*, 78, 231-239. doi: 10.1016/j.beproc.2008.02.016
- **Jensen G**, Neuringer A, Piff P. (2007). Stochastic matching and the voluntary nature of choice. *Journal of the Experimental Analysis of Behavior*, 88(1), 1-28. doi: 10.1901/jeab.2007.65-06

Theses

- **Jensen G**. (2014). *Beyond dichotomy: Dynamics of choice in compositional space*. Columbia University, ProQuest, UMI Dissertations Publishing, 3620884. doi: 10.7916/D8NC5ZC4
- **Jensen GG**. (2003). *Mechanisms and variables involved in aptitude for random generation*. Reed College Digital Collections, OCLC# 268896558.

Work In Progress

- **Jensen G**, Ferrera VP, Terrace HS. (2020). Positional inference in rhesus macaques. *PsyArXiv*. doi: 10.31234/osf.io/pe5rm
- **Jensen G**, Freestone D. (2018). Computational Prometheus: How Reinforcement was stolen, and how to steal it back. *PsyArXiv*, doi: 10.31234/osf.io/4mtns
- **Jensen G**. (2018). Choice under conditions of uncertainty: Methods for analyzing the structure of behavior. *PsyArXiv*, doi: 10.31234/osf.io/579p8
- **Jensen G**, Muñoz F, Ferrera VP. (2016). Learning in spike trains: Estimating within-session changes in firing rate using weighted interpolation. *bioRxiv*, doi: 10.1101/041301
- **Jensen G**. (2015). Kernel Probability Estimation For Binomial And Multinomial Data. *PeerJ PrePrints*, 3, e1406.
- **Jensen G**. (2013). Closed-form estimation of multiple change-point models. *PeerJ PrePrints*, 1, e90v3.

Addresses & Colloquia

- Altschul D, **Jensen G**, Terrace HS. (Projected July 2021). “Learning ecological and artificial visual categories: rhesus macaques, humans, and machines.” At the CogSci, Vienna.
- Ferhat A-T, **Jensen G**, Terrace H, Ferrera VP. (October 26th, 2020). “Reward-biased transitive inference in rhesus macaques.” At Neuromatch, Online.

- **Jensen G.** (October 7th, 2019). "Stan and deliver: How a Bayesian approach to stats changed the way I do research." At Reed College.
- Pouliopoulos A, Kwon N, **Jensen G**, Meany A, Burgess M, Muñoz F, Ji R, Ferrera V, Konofagou E. (October 7th, 2019). "Inflammatory response and cognitive function following focused ultrasound-mediated blood-brain barrier opening in non-human primates." At the IEEE International Ultrasonics Symposium, Glasgow.
- **Jensen G.** (Sept. 10th, 2019). "Who ordered this? A cognitive take on serial learning." At Synapsistic, Portland.
- **Jensen G.** (March 1st, 2019). "Who ordered this? A cognitive take on serial learning." At Reed College.
- **Jensen G**, Freestone D. (July 6th, 2017). "How 'reinforcement' was stolen, and how to steal it back." At the University of Nebraska Medical Center, Omaha.
- **Jensen G**, Freestone D. (August 5th, 2016). "Computational Prometheus: Stealing 'reinforcement' back from computer science." At the American Psychological Association, New York.
- **Jensen G.** (February 29, 2016). "Serial learning: A cognitive take on preference and expected value." At the Department of Psychology Monday Seminar, Columbia University.
- Terrace HS, **Jensen G.** (April 18, 2015). "Concept learning of ecological and artificial stimuli in rhesus macaques." At the Society of Experimental Psychologists, Charlottesville.
- Neuringer A, **Jensen G.** (May 24, 2014). "Similarity of choices under concurrent and operant-variability schedules of reinforcement." At the Association for Behavior Analysis International, Chicago.
- **Jensen G.** (March 15, 2014). "Unifying choice and preference models within the compositional sample space." At the Eastern Psychological Association, Boston.
- Bailey M, **Jensen G**, Taylor K, Simpson E, Mezas C, Williamson C, Silver R, Balsam P. (March 14, 2014). "Differentiating goal-directed motivation from arousal with a novel progressive hold down (PHD) task." At the Eastern Psychological Association, Boston.
- **Jensen G.** (February 17, 2014). "Compositions: Modeling the dynamics of repeated choice." At the Department of Psychology Monday Seminar, Columbia University.
- **Jensen G**, Balsam P. (March 2, 2013). "Matching with more than two alternatives: Adding options increases sensitivity to rewards." At the Eastern Psychological Association, New York.
- **Jensen G**, Neuringer A. (May 22, 2009). "Extending generalized matching." At the Society for Quantitative Analyses of Behavior, Phoenix.
- Neuringer A, **Jensen G.** (May 25, 2008). "Voluntary choice is characterized by functional combinations of stochasticity and predictability." At the Society for Quantitative Analyses of Behavior, Chicago.
- Neuringer A, **Jensen G**, Piff P. (May 26, 2006). "Operant variability theory of voluntary action." At the Society for Quantitative Analyses of Behavior, Atlanta.
- Neuringer A, Miller C, **Jensen G.** (May 28, 2004). "Reasons to respond randomly." At the Society for Quantitative Analyses of Behavior, Boston.

Research Reports & Posters

- **Jensen G**, Ferrera VP, Terrace HS. (2019). Model-free algorithms are inadequate to explain transitive inference performance in monkeys. At the Society for Neuroscience, October 2019 Chicago.
- Ferrera VP, **Jensen G**, Meaney A, Alkan Y, Muñoz F, Terrace HS. (2019). What is the least training a monkey needs to perform an abstract cognitive task? At the Society for Neuroscience, October 2019 Chicago.
- Kao T, Michaelcheck CE, Ferrera VP, Terrace HS, **Jensen G**. (2019). Participants rely on both absolute and relative position when making inferences about ordered lists. At the Society for Neuroscience, October 2019 Chicago.
- Porges EC, **Jensen G**, Bharadwaj PK, Franchetti MK, Sims SA, Rezaei RF, Forbes MA, Merritt S, Jessup CJ, Raichlen DA, Geldmacher D, Hishaw GA, Alperin N, Trouard TP, Wadley VG, Levin BE, Woods AJ, Rundek T, Visscher KM, Cohen RA, Alexander GE, Foster BM, Puts NAJ. (2019). Age related decreases in cortical GABA concentrations slow in cognitively intact adults over 85 years of age. At the Society for Neuroscience, October 2019 Chicago.
- Pouliopoulos A, Kwon N, **Jensen G**, Meaney A, Burgess M, Munoz F, Ji R, Ferrera V, Konofagou E. (2019). Inflammatory response and cognitive function following focused ultrasound-mediated blood-brain barrier opening in non-human primates . At the IEEE International Ultrasonics Symposium, October 2019 Glasgow.
- Kao T, Michaelcheck CE, Ferrera VP, Terrace HS, **Jensen G**. (2018). Participants rely on both absolute and relative position when making inferences about ordered lists. At the Psychonomic Society, November 2018 New Orleans.
- **Jensen G**, Alkan Y, Ferrera VP, Terrace HS. (2018). Monkeys' performance on a transitive inference task requires a cognitive representation in addition to reward prediction. At the Psychonomic Society, November 2018 New Orleans.
- Ferrera VP, **Jensen G**, Alkan Y, Terrace HS. (2018). Reward associations do not explain performance on transitive inference tasks in monkeys. At the Society for Neuroscience, November 2018 San Diego.
- Kao T, Journey B, Michaelcheck CE, Ferrera VP, Terrace HS, **Jensen G**. (2017). Knowledge of ordinal position across lists following transitive inference training. At the Society for Neuroscience, November 2017 Washington D.C.
- Muñoz F, **Jensen G**, Ferrera VP. (2017). Gaussian process regression for inferring the temporal evolution of neuronal activity during within-session learning in monkeys. At the Society for Neuroscience, November 2017 Washington D.C.
- Muñoz F, **Jensen G**, Kennedy BC, Ferrera VP, Terrace HS. (2015). Tracking changes in spike rates as a function of task covariates within a single session. At the Society for Neuroscience, October 2015 Chicago.
- **Jensen G**, Muñoz F, Alkan Y, Ferrera VP, Terrace HS. (2015). Betasort: A computational model for serial learning. At the Society for Neuroscience, October 2015 Chicago.
- **Jensen G**, Joiner J, Kennedy BC, Muñoz F, Krishnan S, Ferrera VP, Terrace HS. (2014). Implicit learning of serial order in humans and monkeys. At the Society for Neuroscience, November 2014 Washington D.C.
- **Jensen G**, Joiner J, Kennedy BC, Muñoz F, Krishnan S, Ferrera VP, Terrace HS. (2014). Implicit learning of serial order in humans and monkeys. At the Society for Neuroscience, November 2014 Washington D.C.

- Kennedy BC, **Jensen G**, Joiner J, Muñoz F, Terrace HS, Ferrera VP. (2014). Neural correlates of implicit serial learning in posterior parietal cortex in monkeys. At the Society for Neuroscience, November 2014 Washington D.C.
- Bailey MR, **Jensen G**, Taylor K, Mezas C, Williamson C, Simpson EH, Balsam PD. (2014). Improving how we measure motivation: Dissociating goal-directed responding from arousal-induced responding with a novel progressive hold down task. At the Society for Neuroscience, November 2014 Washington D.C.
- **Jensen G**, Taylor KM, Balsam P. (2012). Using response stereotypy to detect the emergence of a habit and persistence during extinction. At the Pavlovian Society, September 2012 Jersey City.
- **Jensen G**, Taylor KM, Balsam P. (2012). Using response stereotypy to detect the emergence of habit. At the Society for Quantitative Analyses of Behavior, May 2012 Denver.
- **Jensen G**, Balsam P, Gallistel CR, Taylor KM, Yohe Moore E. (2011). Choice-by-choice matching. At the Society for Quantitative Analyses of Behavior, May 2011, Denver.
- Cannizzaro DL, Taylor KM, Gallistel CR, Yohe Moore E, **Jensen G**, Balsam P. (2011). Timing and inhibitory learning. At the Society for Quantitative Analyses of Behavior, May 2011, Denver.
- **Jensen G**, Neuringer A. (2010). Effects of feedback. At the Society for Quantitative Analyses of Behavior, May 2010, Austin.
- **Jensen G**, Neuringer A. (2008). Quantifying bias. At the Society for Quantitative Analyses of Behavior, May 2008, Chicago.
- **Jensen G**, Rothstein J, Neuringer A. (2007). Effects of temporary availability of reinforcers under concurrent schedules of reinforcement. At the Society for Quantitative Analyses of Behavior, May 2007, San Diego.
- Rothstein J, **Jensen G**, Neuringer A. (2007). A real-time procedure for the study of human choice. At the Society for Quantitative Analyses of Behavior, May 2007, San Diego.
- **Jensen G**, Neuringer A. (2006). Choice by pigeons under concurrent schedule when reinforcement availability and disappearance are both probabilistically controlled by responses. At the Society for Quantitative Analyses of Behavior, May 2006, Atlanta.

Miscellaneous

Honors & Awards

- Columbia University Presidential Teaching Award For Faculty (2017) Finalist (top 1% of nominees)
- B. F. Skinner New Researcher Award for Basic Research (2016).

Open Science Profiles

- ResearchGate profile (Preprints & reprints).
- figshare profile (Publicly available figures, files, & data).
- GitHub profile (Source code & website).
- Publons profile (Record of peer review activity).

Editorial

- **Associate Editor**, *Journal of the Experimental Analysis of Behavior* (Special Issue on Statistical Methods).
- **Editorial Board Member**, *Journal of the Experimental Analysis of Behavior* (2014-2020), *Frontiers in Comparative Psychology* (2021-Present).
- **Ad Hoc Reviewer**, *Adaptive Behavior*, *Animal Behaviour*, *Animal Cognition*, *Behavior Research Methods*, *Behavioural Processes*, *Cognition*, *Educational Psychology Review*, *Journal of Applied Behavior Analysis*, *Journal of Experimental Psychology: Animal Learning & Cognition*, *Learning & Behavior*, *Physiology & Behavior*, *PLOS ONE*, *PNAS*, *Primates*, *Psychonomic Bulletin & Review*, *The Psychological Record*. Details on peer review activity described in Publons profile.
- **Textbook Reviewer**, Routledge, Taylor & Francis, W. W. Norton & Co.

Numerical

- **Erdős Number**: 6 (Erdős→Lam→Fang→Li→Chen→Porges→Jensen).
- **Bacon Number**: 6 (Bacon→Murray→Hershlag→Boas→Carey→Gallistel→Jensen).

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