




## Noah Goodman

Associate Professor of Psychology, of Computer Science and, by courtesy, of Linguistics

 Curriculum Vitae available Online

### Bio

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#### ACADEMIC APPOINTMENTS

- Associate Professor, Psychology
- Associate Professor, Computer Science
- Associate Professor (By courtesy), Linguistics
- Faculty Affiliate, Institute for Human-Centered Artificial Intelligence (HAI)
- Member, Wu Tsai Neurosciences Institute

#### ADMINISTRATIVE APPOINTMENTS

- Assistant Professor of Cognitive Psychology, Stanford University, (2010- present)
- Assistant Professor of Linguistics and of Computer Science (by courtesy), Stanford University, (2010- present)
- Research Scientist, Massachusetts Institute of Technology, (2008-2010)
- Post-Doctoral Associate, Massachusetts Institute of Technology, (2005-2008)

#### HONORS AND AWARDS

- Paper prize for computational modeling of language, Cognitive Science Society (2014)
- Roger N. Shepard Distinguished Visiting Scholar, University of Arizona (2013 - 2014)
- Fellow, John Philip Coghlan (2013 - 2014)
- Fellow, John Philip Coghlan (2014 - 2015)
- Paper prize for computational modeling of language, Cognitive Science Society (2012)
- Best poster prize, International Joint Conference on Artificial Intelligence (2011)
- Paper prize for computational modeling of language, Cognitive Science Society (2011)
- Paper prize for computational modeling of higher-level cognition, Cognitive Science Society (2007)
- Paper prize for computational modeling of perception and action, Cognitive Science Society (2007)
- VIGRE Fellowship, National Science Foundation (2001 - 2002)
- Continuing Graduate Study Fellowship, University of Texas (2001 - 2002)
- Bruton Graduate Fellowship, University of Texas (2000)
- Scholarship, National Merit Scholarship Corporation (1994 - 1997)

#### BOARDS, ADVISORY COMMITTEES, PROFESSIONAL ORGANIZATIONS

- Member, Cognitive Science Society

- Member, Psychonomic Society

## PROGRAM AFFILIATIONS

- Symbolic Systems Program

## PROFESSIONAL EDUCATION

- B.A., University of Arizona , Mathematics (1997)
- B.S., University of Arizona , Physics (1997)
- Ph.D., University of Texas at Austin , Mathematics (2003)

## LINKS

- Computation & Cognition Lab: <https://cocolab.stanford.edu/>

## Teaching

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### COURSES

#### 2021-22

- Language and Thought: OSPMADRD 19 (Win)
- Levels of Analysis in Cognitive Science: PHIL 366, PSYCH 296 (Aut)
- Minds and Machines: CS 24, LINGUIST 35, PHIL 99, PSYCH 35, SYMSYS 1, SYMSYS 200 (Win)
- Probabilistic Models of Cognition: Language: CS 428B, LINGUIST 238B, PSYCH 220B (Aut)

#### 2020-21

- Computation and Cognition: The Probabilistic Approach: PSYCH 204 (Spr)
- Minds and Machines: CS 24, LINGUIST 35, PHIL 99, PSYCH 35, SYMSYS 1, SYMSYS 200 (Win)

#### 2019-20

- Language and Thought: OSPMADRD 19 (Win)
- Psychometrics and automated experiment design: PSYCH 241 (Aut)

#### 2018-19

- Computation and Cognition: The Probabilistic Approach: CS 428, PSYCH 204 (Aut)
- Language and Thought: PSYCH 132 (Spr)
- Topics in Natural and Artificial Intelligence: PSYCH 247 (Aut)

### STANFORD ADVISEES

#### Doctoral Dissertation Reader (AC)

Andrew Nam, Chengxu Zhuang

#### Doctoral Dissertation Advisor (AC)

Julia White

#### Master's Program Advisor

Xiyuan Chen, Yanjun Chen, Kaili Huang, Ran Li, David Lim, Benjamin Newman, Ho Kyung Sung, Cara Van Uden

#### Doctoral Dissertation Co-Advisor (AC)

Duligur Ibeling, Ali Malik

## Doctoral (Program)

Lauren Gillespie, Jesse Mu, Gabriel Poesia Reis e Silva, Alex Tamkin, Rose Wang, Mike Wu

## Publications

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### PUBLICATIONS

- **Applying Probabilistic Programming to Affective Computing.** *IEEE transactions on affective computing*  
Ong, D. C., Soh, H., Zaki, J., Goodman, N. D.  
2021; 12 (2): 306-317
- **The Division of Labor in Communication: Speakers Help Listeners Account for Asymmetries in Visual Perspective.** *Cognitive science*  
Hawkins, R. D., Gweon, H., Goodman, N. D.  
2021; 45 (3): e12926
- **Polite Speech Emerges From Competing Social Goals.** *Open mind : discoveries in cognitive science*  
Yoon, E. J., Tessler, M. H., Goodman, N. D., Frank, M. C.  
2020; 4: 71–87
- **When redundancy is useful: A Bayesian approach to "overinformative" referring expressions.** *Psychological review*  
Degen, J., Hawkins, R. D., Graf, C., Kreiss, E., Goodman, N. D.  
2020
- **The Interactions of Rational, Pragmatic Agents Lead to Efficient Language Structure and Use.** *Topics in cognitive science*  
Peloquin, B. N., Goodman, N. D., Frank, M. C.  
2020; 12 (1): 433–45
- **Analyzing Machine-Learned Representations: A Natural Language Case Study.** *Cognitive science*  
Dasgupta, I. n., Guo, D. n., Gershman, S. J., Goodman, N. D.  
2020; 44 (12): e12925
- **Characterizing the Dynamics of Learning in Repeated Reference Games.** *Cognitive science*  
Hawkins, R. D., Frank, M. C., Goodman, N. D.  
2020; 44 (6): e12845
- **Extracting Customer Perceptions of Product Sustainability From Online Reviews**  
El Dehaibi, N., Goodman, N. D., MacDonald, E. F.  
ASME.2019
- **A thousand studies for the price of one: Accelerating psychological science with Pushkin** *BEHAVIOR RESEARCH METHODS*  
Hartshorne, J. K., de Leeuw, J. R., Goodman, N. D., Jennings, M., O'Donnell, T. J.  
2019; 51 (4): 1782–1803
- **The language of generalization.** *Psychological review*  
Tessler, M. H., Goodman, N. D.  
2019
- **A thousand studies for the price of one: Accelerating psychological science with Pushkin.** *Behavior research methods*  
Hartshorne, J. K., de Leeuw, J. R., Goodman, N. D., Jennings, M., O'Donnell, T. J.  
2019
- **Pyro: Deep Universal Probabilistic Programming** *JOURNAL OF MACHINE LEARNING RESEARCH*  
Bingham, E., Chen, J. P., Jankowiak, M., Obermeyer, F., Pradhan, N., Karaletsos, T., Singh, R., Szerlip, P., Horsfall, P., Goodman, N. D.  
2019; 20
- **Shapeplot: Learning Language for Shape Differentiation**  
Achlioptas, P., Fan, J., Hawkins, R., Goodman, N., Guihas, L., IEEE  
IEEE.2019: 8937–46

- **Zero Shot Learning for Code Education: Rubric Sampling with Deep Learning Inference**  
Wu, M., Mosse, M., Goodman, N., Piech, C., AAAI  
ASSOC ADVANCEMENT ARTIFICIAL INTELLIGENCE.2019: 782–90
- **On the grammatical source of adjective ordering preferences** *SEMANTICS & PRAGMATICS*  
Scontras, G., Degen, J., Goodman, N. D.  
2019; 12
- **Learning to Explain: Answering Why-Questions via Rephrasing**  
Nie, A., Bennett, E. D., Goodman, N. D., Assoc Computat Linguist  
ASSOC COMPUTATIONAL LINGUISTICS-ACL.2019: 113–20
- **Differentiable Antithetic Sampling for Variance Reduction in Stochastic Variational Inference**  
Wu, M., Goodman, N., Ermon, S., Chaudhuri, K., Sugiyama, M.  
MICROTOME PUBLISHING.2019
- **Variational Bayesian Optimal Experimental Design**  
Fostert, A., Jankowiak, M., Bingham, E., Horsfall, P., Teh, Y., Rainforth, T., Goodman, N., Wallach, H., Larochelle, H., Beygelzimer, A., d'Alche-Buc, F., Fox, E., Garnett, et al  
NEURAL INFORMATION PROCESSING SYSTEMS (NIPS).2019
- **Learning from omission**  
McDowell, B., Goodman, N. D., ACL, Korhonen, A., Traum, D., Marquez, L.  
ASSOC COMPUTATIONAL LINGUISTICS-ACL.2019: 619–28
- **DisSent: Learning Sentence Representations from Explicit Discourse Relations**  
Nie, A., Bennett, E. D., Goodman, N. D., ACL, Korhonen, A., Traum, D., Marquez, L.  
ASSOC COMPUTATIONAL LINGUISTICS-ACL.2019: 4497–4510
- **Definitely, maybe: A new experimental paradigm for investigating the pragmatics of evidential devices across languages** *JOURNAL OF PRAGMATICS*  
Degen, J., Trotzke, A., Scontras, G., Wittenberg, E., Goodman, N. D.  
2019; 140: 33–48
- **Cake or broccoli? Recency biases children's verbal responses.** *PloS one*  
Sumner, E. n., DeAngelis, E. n., Hyatt, M. n., Goodman, N. n., Kidd, C. n.  
2019; 14 (6): e0217207
- **The Emergence of Social Norms and Conventions.** *Trends in cognitive sciences*  
Hawkins, R. X., Goodman, N. D., Goldstone, R. L.  
2018
- **Beyond Reward Prediction Errors: Human Striatum Updates Rule Values During Learning** *CEREBRAL CORTEX*  
Ballard, I., Miller, E. M., Piantadosi, S. T., Goodman, N. D., McClure, S. M.  
2018; 28 (11): 3965–75
- **Remembrance of inferences past: Amortization in human hypothesis generation** *COGNITION*  
Dasgupta, I., Schulz, E., Goodman, N. D., Gershman, S. J.  
2018; 178: 67–81
- **Learning physical parameters from dynamic scenes** *COGNITIVE PSYCHOLOGY*  
Ullman, T. D., Stuhlmuller, A., Goodman, N. D., Tenenbaum, J. B.  
2018; 104: 57–82
- **Extremely costly intensifiers are stronger than quite costly ones.** *Cognition*  
Bennett, E. D., Goodman, N. D.  
2018; 178: 147–61
- **Empirical evidence for resource-rational anchoring and adjustment** *PSYCHONOMIC BULLETIN & REVIEW*  
Lieder, F., Griffiths, T. L., Huys, Q. M., Goodman, N. D.  
2018; 25 (2): 775–84

- **Happier Than Thou? A Self-Enhancement Bias in Emotion Attribution** *EMOTION*  
Ong, D. C., Goodman, N. D., Zaki, J.  
2018; 18 (1): 116–26
- **The anchoring bias reflects rational use of cognitive resources** *PSYCHONOMIC BULLETIN & REVIEW*  
Lieder, F., Griffiths, T. L., Huys, Q. M., Goodman, N. D.  
2018; 25 (1): 322–49
- **Multimodal Generative Models for Scalable Weakly-Supervised Learning**  
Wu, M., Goodman, N., Bengio, S., Wallach, H., Larochelle, H., Grauman, K., CesaBianchi, N., Garnett, R.  
NEURAL INFORMATION PROCESSING SYSTEMS (NIPS).2018
- **Computational Models of Emotion Inference in Theory of Mind: A Review and Roadmap.** *Topics in cognitive science*  
Ong, D. C., Zaki, J. n., Goodman, N. D.  
2018
- **Bias and Generalization in Deep Generative Models: An Empirical Study**  
Zhao, S., Ren, H., Yuan, A., Song, J., Goodman, N., Ermon, S., Bengio, S., Wallach, H., Larochelle, H., Grauman, K., CesaBianchi, N., Garnett, R.  
NEURAL INFORMATION PROCESSING SYSTEMS (NIPS).2018
- **Eye-Tracking Causality** *PSYCHOLOGICAL SCIENCE*  
Gerstenberg, T., Peterson, M. F., Goodman, N. D., Lagnado, D. A., Tenenbaum, J. B.  
2017; 28 (12): 1731–44
- **Resolving uncertainty in plural predication** *COGNITION*  
Scontras, G., Goodman, N. D.  
2017; 168: 294–311
- **Avoiding frostbite: It helps to learn from others** *BEHAVIORAL AND BRAIN SCIENCES*  
Tessler, M., Goodman, N. D., Frank, M. C.  
2017; 40: e279
- **Learning Disentangled Representations with Semi-Supervised Deep Generative Models**  
Siddharth, N., Paige, B., van de Meent, J., Desmaison, A., Goodman, N. D., Kohli, P., Wood, F., Torr, P. S., Guyon, Luxburg, U. V., Bengio, S., Wallach, H., Fergus, R., et al  
NEURAL INFORMATION PROCESSING SYSTEMS (NIPS).2017
- **Eye-Tracking Causality.** *Psychological science*  
Gerstenberg, T. n., Peterson, M. F., Goodman, N. D., Lagnado, D. A., Tenenbaum, J. B.  
2017; 28 (12): 1731–44
- **Pragmatic Language Interpretation as Probabilistic Inference.** *Trends in cognitive sciences*  
Goodman, N. D., Frank, M. C.  
2016; 20 (11): 818-829
- **The Logical Primitives of Thought: Empirical Foundations for Compositional Cognitive Models** *PSYCHOLOGICAL REVIEW*  
Piantadosi, S. T., Tenenbaum, J. B., Goodman, N. D.  
2016; 123 (4): 392-424
- **A Computational Model of Linguistic Humor in Puns** *COGNITIVE SCIENCE*  
Kao, J. T., Levy, R., Goodman, N. D.  
2016; 40 (5): 1270-1285
- **Affective cognition: Exploring lay theories of emotion** *COGNITION*  
Ong, D. C., Zaki, J., Goodman, N. D.  
2015; 143: 141-162
- **Controlling Procedural Modeling Programs with Stochastically-Ordered Sequential Monte Carlo** *ACM TRANSACTIONS ON GRAPHICS*  
Ritchie, D., Mildenhall, B., Goodman, N. D., Hanrahan, P.  
2015; 34 (4)

- **Generating Design Suggestions under Tight Constraints with Gradient-based Probabilistic Programming** *COMPUTER GRAPHICS FORUM*  
Ritchie, D., Lin, S., Goodman, N. D., Hanrahan, P.  
2015; 34 (2): 515-526
- **Relevant and robust: a response to Marcus and Davis (2013).** *Psychological science*  
Goodman, N. D., Frank, M. C., Griffiths, T. L., Tenenbaum, J. B., Battaglia, P. W., Hamrick, J. B.  
2015; 26 (4): 539-541
- **Rational Use of Cognitive Resources: Levels of Analysis Between the Computational and the Algorithmic** *TOPICS IN COGNITIVE SCIENCE*  
Griffiths, T. L., Lieder, F., Goodman, N. D.  
2015; 7 (2): 217-229
- **The Strategic Use of Noise in Pragmatic Reasoning** *TOPICS IN COGNITIVE SCIENCE*  
Bergen, L., Goodman, N. D.  
2015; 7 (2): 336-350
- **How many kinds of reasoning? Inference, probability, and natural language semantics.** *Cognition*  
Lassiter, D., Goodman, N. D.  
2015; 136: 123-134
- **Inferring word meanings by assuming that speakers are informative.** *Cognitive psychology*  
Frank, M. C., Goodman, N. D.  
2014; 75: 80-96
- **Nonliteral understanding of number words** *PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA*  
Kao, J. T., Wu, J. Y., Bergen, L., Goodman, N. D.  
2014; 111 (33): 12002-12007
- **A rational account of pedagogical reasoning: Teaching by, and learning from, examples** *COGNITIVE PSYCHOLOGY*  
Shafto, P., Goodman, N. D., Griffiths, T. L.  
2014; 71: 55-89
- **One and Done? Optimal Decisions From Very Few Samples** *COGNITIVE SCIENCE*  
Vul, E., Goodman, N., Griffiths, T. L., Tenenbaum, J. B.  
2014; 38 (4): 599-637
- **Some arguments are probably valid: Syllogistic reasoning as communication** *Proceedings of the Thirty-Sixth Annual Conference of the Cognitive Science Society*  
Tessler, M. H., Goodman, N. D.  
2014
- **Uncertainty and denial: a resource-rational model of the value of information.** *PloS one*  
Pierson, E., Goodman, N.  
2014; 9 (11)
- **The strategic use of noise in pragmatic reasoning** *Proceedings of the Thirty-Sixth Annual Conference of the Cognitive Science Society*  
Bergen, L., Goodman, N. D.  
2014
- **Lost your marbles? The puzzle of dependent measures in experimental pragmatics** *Proceedings of the Thirty-Sixth Annual Conference of the Cognitive Science Society*  
Degen, J., Goodman, N. D.  
2014
- **Solve For Standing Ovation: Should AI Researchers Bother Building A TED-Bot?** *Popular Science*  
Goodman, N. D.  
2014
- **Forget the Turing Test: Here's How We Could Actually Measure AI** *WIRED*  
Goodman, N. D.

2014

- **From counterfactual simulation to causal judgment** *Proceedings of the Thirty-Sixth Annual Conference of the Cognitive Science Society*  
Gerstenberg, T., Goodman, N. D., Lagnado, D. A., Tenenbaum, J. B.  
2014
- **Formalizing the pragmatics of metaphor understanding** *Proceedings of the Thirty-Sixth Annual Conference of the Cognitive Science Society*  
Kao, J., Bergen, L., Goodman, N. D.  
2014
- **Generating efficient MCMC kernels from probabilistic programs** *AISTATS 2014*  
Yang, L., Hanrahan, P., Goodman, N. D.  
2014
- **Amortized inference in probabilistic reasoning** *Proceedings of the Thirty-Sixth Annual Conference of the Cognitive Science Society*  
Gershman, S., Goodman, N. D.  
2014
- **Rational reasoning in pedagogical contexts** *Cognitive Psychology*  
Shafto, P., Goodman, N. D., Griffiths, T. L.  
2014
- **The mentalistic basis of core social cognition: experiments in preverbal infants and a computational model** *DEVELOPMENTAL SCIENCE*  
Hamlin, J. K., Ullman, T., Tenenbaum, J., Goodman, N., Baker, C.  
2013; 16 (2): 209-226
- **Did She Jump Because She Was the Big Sister or Because the Trampoline Was Safe? Causal Inference and the Development of Social Attribution** *CHILD DEVELOPMENT*  
Seiver, E., Gopnik, A., Goodman, N. D.  
2013; 84 (2): 443-454
- **The Principles and Practice of Probabilistic Programming** *ACM SIGPLAN NOTICES*  
Goodman, N. D.  
2013; 48 (1): 399-401
- **The mentalistic basis of core social cognition: experiments in preverbal infants and a computational model.** *Developmental science*  
Kiley Hamlin, J. n., Ullman, T. n., Tenenbaum, J. n., Goodman, N. n., Baker, C. n.  
2013; 16 (2): 209–26
- **The Funny Thing About Incongruity: A Computational Model of Humor in Puns** *Proceedings of the Thirty-Fifth Annual Conference of the Cognitive Science Society*  
Kao, J. T., Levy, R., Goodman, N. D.  
2013
- **Learned helplessness and generalization** *Proceedings of the Thirty-Fifth Annual Conference of the Cognitive Science Society*  
Lieder, F., Goodman, N. D., Huys, Q. M.  
2013
- **Reasoning about Reasoning by Nested Conditioning: Modeling Theory of Mind with Probabilistic Programs** *J. Cognitive Systems Research*  
Stuhlmüller, A., Goodman, N. D.  
2013
- **Context, scale structure, and statistics in the interpretation of positive-form adjectives** *SALT23*  
Lassiter, D., Goodman, N. D.  
2013
- **Learning and using language via recursive pragmatic reasoning about other agents** *Advances in Neural Information Processing Systems, 25*  
Smith, N. J., Goodman, N. D., Frank, M. C.  
2013
- **Learning Stochastic Inverses** *Advances in Neural Information Processing Systems, 25*

- Stuhlmüller, A., Taylor, J., Goodman, N. D.  
2013
- **Knowledge and Implicature: Modeling Language Understanding as Social Cognition** *TOPICS IN COGNITIVE SCIENCE*  
Goodman, N. D., Stuhlmüller, A.  
2013; 5 (1): 173-184
  - **Theory learning as stochastic search in the language of thought** *COGNITIVE DEVELOPMENT*  
Ullman, T. D., Goodman, N. D., Tenenbaum, J. B.  
2012; 27 (4): 455-480
  - **Synthesizing Open Worlds with Constraints using Locally Annealed Reversible Jump MCMC** *ACM TRANSACTIONS ON GRAPHICS*  
Yeh, Y., Yang, L., Watson, M., Goodman, N. D., Hanrahan, P.  
2012; 31 (4)
  - **Learning From Others: The Consequences of Psychological Reasoning for Human Learning** *PERSPECTIVES ON PSYCHOLOGICAL SCIENCE*  
Shafto, P., Goodman, N. D., Frank, M. C.  
2012; 7 (4): 341-351
  - **Predicting Pragmatic Reasoning in Language Games** *SCIENCE*  
Frank, M. C., Goodman, N. D.  
2012; 336 (6084): 998-998
  - **Bootstrapping in a language of thought: A formal model of numerical concept learning** *COGNITION*  
Piantadosi, S. T., Tenenbaum, J. B., Goodman, N. D.  
2012; 123 (2): 199-217
  - **Comparing pluralities** *COGNITION*  
Scontras, G., Graff, P., Goodman, N. D.  
2012; 123 (1): 190-197
  - **Learning Design Patterns with Bayesian Grammar Induction** *25th Annual ACM Symposium on User Interface Software and Technology (UIST)*  
Talton, J. O., Yang, L., Kumar, R., Lim, M., Goodman, N., Mech, R.  
ASSOC COMPUTING MACHINERY.2012: 63-73
  - **Learning From Others: The Consequences of Psychological Reasoning for Human Learning.** *Perspectives on psychological science : a journal of the Association for Psychological Science*  
Shafto, P. n., Goodman, N. D., Frank, M. C.  
2012; 7 (4): 341-51
  - **Learning from others: The consequences of social context for human learning** *Perspectives on Psychological Science*  
Shafto, P., Goodman, N. D., Frank, M.  
2012
  - **Did she jump because she was the big sister or because the trampoline was safe? Causal inference and the development of social attribution** *Child Development*  
Seiver, E., Gopnik, A., Goodman, N. D.  
2012
  - **Context is key to making computers better conversationalists** *WIRED.uk*  
Goodman, N. D.  
2012
  - **Artificial Intelligence Could Be on Brink of Passing Turing Test** *WIRED*  
Goodman, N. D.  
2012
  - **How many kinds of reasoning? Inference, probability, and natural language semantics** *Proceedings of the Thirty-Fourth Annual Conference of the Cognitive Science Society*  
Lassiter, D., Goodman, N. D.  
2012



- **A dynamic programming algorithm for inference in recursive probabilistic programs** *Second Statistical Relational AI workshop at UAI 2012*  
Stuhlmüller, A., Goodman, N. D.  
2012
- **Quantifying pragmatic inference in language games** *Science*  
Frank, M. C., Goodman, N. D.  
2012
- **Noisy Newtons: Unifying process and dependency accounts of causal attribution** *Proceedings of the Thirty-Fourth Annual Conference of the Cognitive Science Society*  
Gerstenberg, T., Goodman, N. D., Lagnado, D. A., Tenenbaum, J. B.  
2012
- **Ping Pong in Church: Productive use of concepts in human probabilistic inference** *Proceedings of the Thirty-Fourth Annual Conference of the Cognitive Science Society*  
Gerstenberg, T., Goodman, N. D.  
2012
- **That's what she (could have) said: How alternative utterances affect language use** *Proceedings of the Thirty-Fourth Annual Conference of the Cognitive Science Society*  
Bergen, L., Goodman, N. D., Levy, R.  
2012
- **Knowledge and implicature: Modeling language understanding as social cognition** *Proceedings of the Thirty-Fourth Annual Conference of the Cognitive Science Society*  
Goodman, N. D., Stuhlmüller, A.  
2012
- **Burn-in, bias, and the rationality of anchoring** *Advances in Neural Information Processing Systems, 24*  
Lieder, F., Griffiths, T. L., Goodman, N. D.  
2012
- **Where science starts: Spontaneous experiments in preschoolers' exploratory play** *COGNITION*  
Cook, C., Goodman, N. D., Schulz, L. E.  
2011; 120 (3): 341-349
- **The double-edged sword of pedagogy: Instruction limits spontaneous exploration and discovery** *COGNITION*  
Bonawitz, E., Shafto, P., Gweon, H., Goodman, N. D., Spelke, E., Schulz, L.  
2011; 120 (3): 322-330
- **The imaginary fundamentalists: The unshocking truth about Bayesian cognitive science** *BEHAVIORAL AND BRAIN SCIENCES*  
Chater, N., Goodman, N., Griffiths, T. L., Kemp, C., Oaksford, M., Tenenbaum, J. B.  
2011; 34 (4): 194-?
- **How to Grow a Mind: Statistics, Structure, and Abstraction** *SCIENCE*  
Tenenbaum, J. B., Kemp, C., Griffiths, T. L., Goodman, N. D.  
2011; 331 (6022): 1279-1285
- **Learning and the Language of Thought** *IEEE International Conference on Computer Vision (ICCV)*  
Goodman, N. D.  
IEEE.2011
- **More Than Child's Play: Ability to Think Scientifically Declines as Kids Grow Up** *Scientific American*  
Goodman, N. D.  
2011
- **I, algorithm** *New Scientist*  
Goodman, N. D.  
2011

- **Productivity and reuse in language** *Proceedings of the Thirty-Third Annual Conference of the Cognitive Science Society*  
O'Donnell, T. J., Snedeker, J., Tenenbaum, J. B., Goodman, N. D.  
2011
- **Nonstandard Interpretations of Probabilistic Programs for Efficient Inference** *Advances in Neural Information Processing Systems, 23*  
Wingate, D., Goodman, N. D., Stuhlmüller, A., Siskind, J.  
2011
- **Bayesian Policy Search with Policy Priors** *IJCAI 2011*  
Wingate, D., Kaelbling, L., Roy, D., Goodman, N. D., Tenenbaum, J. B.  
2011
- **Ad-hoc scalar implicature in adults and children** *Proceedings of the Thirty-Third Annual Conference of the Cognitive Science Society*  
Stiller, A., Goodman, N. D., Frank, M. C.  
2011
- **Lightweight Implementations of Probabilistic Programming Languages Via Transformational Compilation** *Artificial Intelligence and Statistics 2011*  
Wingate, D., Stuhlmüller, A., Goodman, N. D.  
2011
- **Learning a Theory of Causality** *PSYCHOLOGICAL REVIEW*  
Goodman, N. D., Ullman, T. D., Tenenbaum, J. B.  
2011; 118 (1): 110-119
- **Optimal habits can develop spontaneously through sensitivity to local cost** *PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA*  
Desrochers, T. M., Jin, D. Z., Goodman, N. D., Graybiel, A. M.  
2010; 107 (47): 20512-20517
- **Learning to Learn Causal Models** *COGNITIVE SCIENCE*  
Kemp, C., Goodman, N. D., Tenenbaum, J. B.  
2010; 34 (7): 1185-1243
- **The Structure and Dynamics of Scientific Theories: A Hierarchical Bayesian Perspective** *PHILOSOPHY OF SCIENCE*  
Henderson, L., Goodman, N. D., Tenenbaum, J. B., Woodward, J. F.  
2010; 77 (2): 172-200
- **Beyond Boolean logic: exploring representation languages for learning complex concepts** *Proceedings of the Thirty-Second Annual Conference of the Cognitive Science Society*  
Piantadosi, S. T., Tenenbaum, J. B., Goodman, N. D.  
2010
- **Help or hinder: Bayesian models of social goal inference** *Advances in Neural Information Processing Systems*  
Ullman, T., Baker, C. L., Macindoe, O., Evans, O., Goodman, N. D., Tenenbaum, J. B.  
2010
- **Learning Structured Generative Concepts** *Proceedings of the Thirty-Second Annual Conference of the Cognitive Science Society*  
Stuhlmüller, A., Tenenbaum, J. B., Goodman, N. D.  
2010
- **Theory learning as stochastic search** *Proceedings of the Thirty-Second Annual Conference of the Cognitive Science Society*  
Ullman, T. D., Goodman, N. D., Tenenbaum, J. B.  
2010
- **Prior expectations in pedagogical situations** *Proceedings of the Thirty-Second Annual Conference of the Cognitive Science Society*  
Shafto, P., Goodman, N. D., Gerstle, B., Ladusaw, F.  
2010
- **Using Speakers' Referential Intentions to Model Early Cross-Situational Word Learning** *PSYCHOLOGICAL SCIENCE*  
Frank, M. C., Goodman, N. D., Tenenbaum, J. B.

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