

## CURRICULUM VITAE

Denise D. Cummins, PhD

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### EDUCATION

PhD, Experimental Psychology, University of Colorado, Boulder

B.S., Psychology, Carroll College, Waukesha, WI

### FELLOWSHIPS, AWARDS, HONORS, AND GRANTS

College of Letters, Arts, and Science James Scholar Honors Credit Instructor Recognition Award, 2010-2011

National Institute of Child Health and Human Development, *Early emerging reasoning strategies*, 2003-2005

Visiting Scientist, Max Planck Institute for Human Development, Berlin, Sep 1999

California State University Research, Scholarship, & Creative Activity Award, 1997-1998

Visiting Associate Professor of Cognitive Studies, Carleton College, MN, 1993

NIMH Biomedical Research Support Grant, 1990-1992

University of Arizona Social and Behavioral Sciences Grant, 1988-1989

Yale University Social Science Research Fund, 1986-1987

University of Colorado Graduate Student Foundation Fund Award, 1984

University of Colorado Fellowship, 1984

National Institute of Mental Health Traineeship, 1981-1984

### PROFESSIONAL SOCIETIES

Association for Psychological Science, Elected Fellow

### PROFESSIONAL SERVICE

Peer reviewer for *Cognition*, *Psychological Review*, *Journal of Experimental Psychology: Learning, Memory, & Cognition*, *Developmental Psychology*, *Child Development*, *Human Behavior and Evolution*, *Quarterly Journal of Experimental Psychology*

Program Co-Chair, Twenty-Fourth Meeting of the Society for Philosophy and Psychology, University of Minnesota, Minneapolis, June, 1998

Program Committee, Tenth Annual Meeting of the Human Behavior and Evolution Society, University of California, Davis, July, 1998

### EMPLOYMENT

2020 - present: Professor Adjunct of Psychology and Neuroscience, University of Colorado-Boulder (Courtesy non-teaching research affiliation)

2005 - 2012 Adjunct Professor of Psychology & Philosophy, University of Illinois at Urbana-Champaign (Retired)

1999 - 2005 Associate Research Psychologist, University of California-Davis

1996 - 1999 Associate Professor of Psychology, California State University, Sacramento

1991- 1996 Cognitive Science Research Scientist, University of Arizona, Tucson

1988 - 1991 Assistant Professor of Psychology and Research Scientist, University of Arizona, Tucson

1986 -1988 Assistant Professor of Psychology, Yale University

1984 -1986 Post-Doctoral Research Associate, University of Colorado

### RESEARCH INTERESTS

My broad research and writing interest is reasoning and decision-making. My experimental investigations focus on causal cognition (how people decide what caused something to occur or what can prevent an event from occurring), social cognition (how perceived relative status impacts fairness in economic transactions), and

moral cognition (which factors influence our decisions to harm or help others). I also write scientific essays summarizing psychological research for popular venues such *Psychology Today*, *Scientific American*, *PBS Newshour*, and the *Chronicle of Higher Education*. My *New Scientist Academy* videorecorded lectures based on my book [\*Good Thinking\*](#) (Cambridge University Press, 2021) can be found here: <https://academy.newscientist.com/courses/how-to-think-rationally-and-creatively>

## BOOKS

- Cummins, D.D. (2021) *Good Thinking: Seven powerful ideas that influence the way we think* (2nd edition). Cambridge, MA: Cambridge University Press.
- Cummins, R.C., & Cummins, D.D. (Eds.) (2000) *Minds, brains, and computers: Foundations of Cognitive Science*. London: Blackwell.
- Cummins, D.D., & Allen, C. (Eds.) (1998) *The evolution of mind*. Oxford University Press.
- Cummins, D.D. (1995) *The other side of psychology: How experimental psychologists find out about the way we think and act*. NY: St. Martin's Press.

## REFEREED ARTICLES AND BOOK CHAPTERS

- Cummins D.D. (2016) Dominance Theory (Cummins). In: Shackelford T., Weekes-Shackelford V. (eds) *Encyclopedia of Evolutionary Psychological Science*. Springer
- Cummins, D.D. (2016). Status and Dominance Hierarchies. In T. K. Shackelford and V. A. Weekes-Shackelford (eds.) *Encyclopedia of Evolutionary Psychological Science*. Springer. doi:10.1007/978-3-319-16999-6\_2968-1
- Cummins, D.D. (2016). Access to Resources. In T. K. Shackelford and V. A. Weekes-Shackelford (eds.) *Encyclopedia of Evolutionary Psychological Science*. Springer. doi:10.1007/978-3-319-16999-6\_2969-1
- Cummins, D.D. (2016). Emergence of Deontic Reasoning. In T. K. Shackelford and V. A. Weekes-Shackelford (eds.) *Encyclopedia of Evolutionary Psychological Science*. Springer. doi:10.1007/978-3-319-16999-6\_2629-1
- Cummins, D.D. (2016). Emergence of Indicative Reasoning. In T. K. Shackelford and V. A. Weekes-Shackelford (eds.) *Encyclopedia of Evolutionary Psychological Science*. Springer. doi:10.1007/978-3-319-16999-6\_2630-1
- Cummins, D.D. (2014). The neural correlates of causal power judgments. *Frontiers in Human Neuroscience*. doi: 10.3389/fnhum.2014.01014
- Spino, J., & Cummins, D.D. (2014). The Ticking Time Bomb: When the use of torture is and is not endorsed. *Review of Philosophy and Psychology*, 5, 543-563. 10.1007/s13164-014-0199-y
- Cummins, D.D. (2014). The impact of disablers on predictive inference. *Journal of Experimental Psychology: Learning, Memory, and Cognition*, 40, 1638-1655. <http://dx.doi.org/10.1037/xlm0000024>.
- Fiddick, L., Cummins, D.D., Janicki, M., Lee, S., & Erlich, N. (2013). A cross-cultural study of noblesse oblige in economic decision-making. *Human Nature*, 24, 318-335. doi:10.1007/s12110-013-9169-9
- Cummins, D.D. (2013). Deontic Reasoning as a Target of Selection: Reply to Astington and Dack (2013). *Journal of Experimental Child Psychology*. <http://dx.doi.org/10.1016/j.jecp.2013.03.005>

- Cummins, D.D. (2013). Deontic and epistemic reasoning in children revisited: Comment on Dack and Astington (2011). *Journal of Experimental Child Psychology*, 116(3), 762–769. <http://dx.doi.org/10.1016/j.jecp.2013.01.003>
- Kundu, P., & Cummins, D.D. (2013). Morality and conformity: The Asch paradigm applied to moral decisions. *Social Influence*, 8, 268–279, <http://dx.doi.org/10.1080/15534510.2012.727767>
- Cummins, D.D., & Cummins, R.C. (2012). Emotion and deliberative reasoning in moral judgment. *Frontiers in Psychology: Emotion Science*, 3, 1-16. doi: 10.3389/fpsyg.2012.00328
- Scott, R.M., He, Z., Baillargeon, R., & Cummins, D.D. (2012). False-belief understanding in 2.5-year-olds: Evidence from a two novel verbal spontaneous-response tasks. *Developmental Science*, 15, 181-193.
- Cummins, D.D. (2010). How memory processes temper causal inferences. In M. Oaksford and N. Chater (eds.) *Cognition and conditionals* (pp. 207-218.) Oxford: Oxford University Press.
- Fiddick, L., & Cummins, D.D. (2007) Are perceptions of fairness relationship specific? The case of noblesse oblige. *Quarter Journal of Experimental Psychology*, 60, 6-31.
- Cummins, D.D. (2005). Dominance, status, and social hierarchies. In D. Buss (ed.), *The evolutionary psychology handbook* (pp. 676-697). New York: Wiley.
- Cummins, D.D. (2004) The evolution of reasoning. In J.P. Leighton and R.J. Sternberg (eds.), *The nature of reasoning* (pp. 339-374). Cambridge: Cambridge University. Press.
- Cummins, R.C., Cummins, D.D., & Poirier, P. (2003) Cognitive evolutionary Psychology without representational natism. *Journal of experimental & theoretical artificial intelligence*, 15, 125-141. (Special Issue: Cognitive Science in the New Millenium: Foundations, Directions, Applications, and Problems). [Reprinted in Cummins, R.C. (2010). *The world in the head*, (pp. 232-256). Oxford: Oxford University Press.]
- Cummins, D.D., & Cummins, R.C. (2003) Innate modules vs innate learning biases. *Cognitive Processing: International Quarterly of Cognitive Processing*, 3-4, 1-11.
- Cummins, D.D. (2002) Adaptive cognitive mechanisms: Reasoning about social norms and other minds. In R.Elio (ed.), *Common Sense, Reasoning and Rationality, Vancouver Studies in Cognitive Science*, vol. 11, (pp. 132-147). Oxford: Oxford University Press.
- Fiddick, L., & Cummins, D.D. (2001) Reciprocity in ranked relationships: Does social structure influence social reasoning? *Journal of Bioeconomics*, 3, 149-170.
- Cummins, D.D. (2001) The impact of the social environment on the evolution of mind. In H. Holcomb (Ed.), *Conceptual challenges in evolutionary psychology: Innovative research strategies*, (pp.85-118). Dordrecht: Kluwer.
- Cummins, D.D. (2000) How the social environment shaped the evolution of mind. *Synthese*, 122, 3-28.
- Cummins, D.D., & Cummins, R.C. (1999) Biological preparedness and evolutionary explanation. *Cognition*, 73, B37-B53. [Reprinted in Cummins, R.C. (2010). *The world in the head*, (pp. 210-231). Oxford: Oxford University Press.]
- Cummins, D.D. (1999) Cheater detection is modified by social rank: The impact of dominance on the evolution of cognitive functions. *Evolution & Human Behavior*, 20, 229-248.
- Cummins, D.D. (1998) Can humans form hierarchically embedded mental representations? Commentary on R.W. Byrne & A.E. Russon "Learning by imitation: A hierarchical approach". *Behavioral and Brain*

- Sciences*, 21, 687-688.
- Cummins, D.D. (1998) Social norms and other minds: The evolutionary roots of higher cognition. In D.D. Cummins & C.A. Allen (eds.), *The evolution of mind* (pp. 30-50). New York: Oxford Univ Press.
- Cummins, D.D. (1997) Rationality: Biological, psychological, and normative theories. *Current Psychology of Cognition*, 16, 78-86.
- Cummins, D.D. (1997) Reply to Fairley and Manktelow's comment on "Naïve theories and causal deduction". *Memory & Cognition*, 25, 415-416.
- Cummins, D.D. (1996) Dominance hierarchies and the evolution of human reasoning. *Minds & Machines*, 6, 463-480.
- Cummins, D.D. (1996) Evidence of deontic reasoning in 3- and 4-year-old children. *Memory & Cognition*, 24, 823-829.
- Cummins, D.D. (1996) Evidence for the innateness of deontic reasoning. *Mind & Language*, 11, 160-190.
- Cummins, D.D. (1996) Human reasoning from an evolutionary perspective. *Proceedings of the 18th annual meeting of the Cognitive Science Society*, 18, 50-51.
- Cummins, D.D. (1995) Naive theories and causal deduction. *Memory & Cognition*, 23, 646-658.
- Cummins, D.D. (1995) Review of Human and Machine Thinking by Philip Johnson-Laird. *Philosophical Psychology*, 4, 408-416.
- Cummins, D.D. (1994) Analogical reasoning. *The Encyclopedia of Human Behavior*. Academic Press.
- Cummins, D.D. (1992) The role of analogical reasoning in the induction of problem categories. *Journal of Experimental Psychology: Learning, Memory, and Cognition*, 18, 1103-1124.
- Cummins, D.D. (1992) Cognition. *Encyclopedia of Science and Technology*. MacGraw-Hill.
- Cummins, D.D., Lubart, T., Alksnis, O., & Rist, R. (1991) Conditional reasoning and causation. *Memory & Cognition*, 19, 274-282.
- Cummins, D.D. (1991) Children's interpretations of arithmetic word problems. *Cognition & Instruction*, 8, 261-289.
- Cummins, D.D., Kintsch, W., Reusser, K., & Weimer, R. (1988) The role of understanding in solving word problems. *Cognitive Psychology*, 20, 405-438.
- Dellarosa, D. (1988) A history of thinking. In R. J. Sternberg & E.E. Smith (Eds.), *The psychology of human thought*. Cambridge: Cambridge University Press.
- Dellarosa, D. (1988) The psychological appeal of connectionism. Commentary on P. Smolensky's "On the proper treatment of connectionism". *The Behavioral and Brain Sciences*, 11, 28-29.
- Dellarosa, D. (1986) A computer simulation of children's arithmetic word-problem solving. *Behavior Research Methods, Instruments, and Computers*, 18, 147-154.
- Dellarosa, D., & Bourne, L.E. (1985) Surface structure and the spacing effect. *Memory and Cognition*, 13, 529-537. 10.3758/BF03198324
- Dellarosa, D., Bourne, L.E. (1984) Decisions and memory: Differential retrievability of consistent and

contradictory evidence. *Journal of Verbal Learning and Verbal Behavior*, 23, 669-682.  
10.1016/S0022-5371(84)90410-9

- Werner, J.S., Kliegl, R., Cicerone, C.M., & Dellarosa, D. (1984) The spectral efficiency of blackness induction. *Journal of Optical Society of America*, 1, 981-986. 10.1364/josaa.1.000981

## OTHER PUBLICATIONS AND INTERVIEWS

Links to articles I have written for *PBS Newshour*, *Scientific American*, *Psychology Today*, and other quality venues as well as links to interviews with the *BBC*, *Illinois Public Radio*, *NPR*, and other quality venues can be found on my professional webpage [www.denisecummins.com](http://www.denisecummins.com)

## INVITED PRESENTATIONS

"Seven Powerful Tools for Critical Thinking", **Association for Informal Logic and Critical Thinking (AILACT)**, October 11, 2024

"Evolution at 150 years". **35th Annual Meeting of the Society for Philosophy and Psychology**, Indiana University, Bloomington, June 12-14, 2009

"The evolution and development of social cognition" **Conference on Cognitive Science in the New Millennium Foundations, Directions, Applications, and Problems**. California State University, Long Beach. April, 2002.

"Why We Need an Evolutionary Psychology" Symposium on Darwinian Evolution Across the Disciplines, **Dartmouth College**, October 29-31, 1999.

"The Evolutionary Roots of Social Reasoning: Evidence from Ethology and Development" **University of St. Andrews**, Fife, Scotland, Oct 1, 1999.

"How the Social Environment Shaped the Evolution of Cognition: Evidence from Ethology and Human Development" **University of Durham**, UK, Oct 8, 1999.

"How The Social Environment Shaped The Evolution Of Mind" **Max Planck Institute for Human Development**, Berlin, Sep 9, 1999.

"Is Human Causal Inference Rational?" **Max Planck Institute for Human Development**, Berlin, Sep 3, 1999.

"Social Norms And Other Minds: The Evolutionary Roots Of Higher Cognition". Eleventh **Annual Vancouver Cognitive Science Conference, Simon Fraser University**, Vancouver, B.C., February, 1998.

"The Evolution Of Cognition". Psychology Department, **Emory University**, October, 1997.

"The Evolutionary Roots Of Intelligent Reasoning." Development and Evolution Group, **University of California, Santa Barbara**, February, 1997.

"Are Pragmatic Reasoning Schemas Innate? Some Evidence". Conference on Epistemology and Evolutionary Psychology, **Rutgers University**, April, 1995.

## OTHER PRESENTATIONS

"Noblesse Oblige: Greater Tolerance For Cheating Among Subordinates In Reciprocal Social Contracts". 13th Annual Meeting of the Human Behavior and Evolution Society, **University College-London**, June

16, 2001.

"Early Emergence Of Cheater Detection In Human Development". 11th Annual Meeting of the Human Behavior and Evolution Society, Salt Lake City, Utah, June 8, 1999.

"Dominance, Cognition, and Politics". Talk presented at the 1998 meeting of the Association for Politics in the Life Sciences, Boston, September, 1998.

"The Pragmatics of Causal Inference". Talk presented at the 1998 meeting of the Cognitive Science Society, University of Wisconsin--Madison, August, 1998.

"Biological Preparedness and Evolutionary Explanation". Talk presented at the 1998 meeting of the Human Behavior and Evolution Society, University of California-Davis, July, 1998.

"Cheater detection is modified by social rank." Paper presented at the meetings of the Human Behavior and Evolution Society, University of Arizona, Tucson, June 1997.

"The evolution of mind". Symposium (with John Tooby and Colin Allen) presented at the meeting of the Cognitive Science Society, University of California, San Diego, July, 1996.

"Dominance Hierarchies and the evolution of reasoning". Presented at the meeting of the Human Behavior and Evolution Society, Northwestern University, June, 1996.

"Dominance hierarchies and the evolution of deontic reasoning". Presented at the meeting of the Society for Philosophy and Psychology, San Francisco State University, May, 1996.

#### **RECENT TEACHING ACCOMPLISHMENTS**

- College of Letters, Arts, and Science James Scholar Honors Credit Instructor Recognition Award, 2010-2011
- Directed Capstone Honors Thesis for Payel Kundu, which was awarded Distinction
- Developed two 300-level courses that enrolled to capacity each year, cross-listed in Psychology and Philosophy (Evolution of Mind and Thinking & Reasoning)
- UIUC Teaching Excellence List five times since 2007
- Cognitive Division Award to Amanda Chang, 2010, for research conducted under my supervision

#### **TEACHING COMPETENCE**

**Graduate level:** Seminars in higher cognition, including reasoning and problem-solving, computational models of higher cognition, historical and philosophical foundations of cognitive science, and evolutionary psychology.

**Undergraduate level:** Learning and memory, elementary statistics, cognitive psychology, reasoning & problem-solving, introductory psychology, developmental psychology, evolutionary psychology

#### **REFERENCES**

Upon request