Robin D. Hanson

Associate Professor of Economics, George Mason University
Fairfax, VA 22030 rhanson@gmu.edu 703-993-2326
Research Associate, Future of Humanity Institute at Oxford University

Education

Seminars on Social Science & Health, American Medical Care System, 1997, U.C. Berkeley.

PhD 1998, California Institute of Technology,

Advisors: J. Ledyard, R. McKelvey, T. Palfrey, S. Wilkie.

Dissertation: Four Puzzles in Information and Politics: Product Bans, Informed Voters, Social Insurance, & Persistent Disagreement.

MS, MA (physics, philosophy of science) 1984, University of Chicago.

BS (physics) 1981, University of California at Irvine.

Experience

George Mason University, Associate Professor of Economics, 1999-present.

Taught undergraduate: Microeconomics, Health Econ., Law & Econ., Enviro. Econ., Urban Econ.

Taught graduate: Microeconomics, Industrial Organization

<u>University of California - Berkeley, RWJF Scholar in Health Policy Research, 1997-1999.</u>

California Institute of Technology,

T.A. to <u>C. Plott</u>, I. Lee, economics principles, to <u>R. Kiewiet</u>, political science principles, 1995-1996. R.A. to J. Ledyard & D. Porter, institution design and experiments for FCC & NASA, 1993-1995.

NASA Ames Research Center, research in Bayesian statistics, 1989-1993.

Xanadu Inc., consultant on hypertext publishing design, 1988-1991.

<u>Lockheed Artificial Intelligence Center</u>, research in machine learning, 1984-1989.

Honors

Associate Editor, Journal of Economic Behavior and Organization, 2009+.

Associate Editor, Journal of Prediction Market, 2007+.

Alfred P. Sloan Dissertation Fellowship, 1996.

Global IdeaBank Web Social Innovations Award, 1996.

Prix Ars Electronica Golden Nica, World Wide Web, 1995.

Institute for Humane Studies Fellowship, 1993.

NASA Space Act Award, ARC-12799-1, 1992.

Honorable Mention, NSF Fellowship, 1982.

Peer Reviewed Publications

Social Science Journal Articles

<u>Are Disagreements Honest?</u>, with Tyler Cowen, *Journal of Economic Methodology*, to appear.

<u>Shall We Vote on Values, But Bet on Beliefs?</u>, *Journal of Political Philosophy*, to appear.

<u>Gaming Prediction Markets: Equilibrium Strategies with a Market Maker</u>, with Yiling Chen, Stan Dimitrov, Rahul Sami, Daniel Reeves, David Pennock, Lance Fortnow, Rica Gonen, *Algorithmica*, to appear.

On Market Maker Functions, Journal of Prediction Markets 3(1):61-63, April 2009.

A Manipulator Can Aid Prediction Market Accuracy, with Ryan Oprea, Economica, 76(302):304-314, April, 2009.

<u>An Experimental Test of Combinatorial Information Markets</u>, with John Ledyard, Takashi Ishikida, <u>Journal of Economic Behavior and Organization</u> 69:182-189, 2009.

<u>Insider Trading and Prediction Markets</u>, *Journal of Law, Economics, and Policy* 4(2):449-463, Spring 2008.

<u>The Promise of Prediction Markets</u>, with Kenneth J. Arrow, Robert Forsythe, Michael Gorham, Robert Hahn, John O. Ledyard, Saul Levmore, Robert Litan, Paul Milgrom, Forrest D. Nelson, George R. Neumann, Marco Ottaviani, Thomas C. Schelling, Robert J. Shiller, Vernon L. Smith, Erik Snowberg, Cass R. Sunstein, Paul C. Tetlock, Philip E. Tetlock, Hal R. Varian, Justin Wolfers, and Eric Zitzewitz, *Science* 320(5878):877-8878, May 16, 2008.

Making Sense of Medical Paternalism, Medical Hypotheses 70(5):910-913, 2008.

Showing That You Care; The Evolution of Health Altruism, Medical Hypotheses 70(4):724-742, 2008.

The Policy Analysis Market: A Thwarted Experiment in the Use of Prediction Markest for Public Policy, *Innovations* 2(3):73-88, Summer 2007.

<u>The Hanson-Hughes Debate on "The Crack of a Future Dawn"</u>, with James Hughes, *Journal of Evolution and Technology* 16(1):99-126, June 2007.

<u>Logarithmic Market Scoring Rules for Modular Combinatorial Information Aggregation</u>, *Journal of Prediction Markets* 1(1):3-15, February, 2007.

<u>Uncommon Priors Require Origin Disputes</u>. <u>Theory and Decision</u> 61(4):318-328, December 2006.

<u>Information Aggregation and Manipulation in an Experimental Market</u>. with <u>Ryan Oprea</u>, David Porter, <u>Journal of Economic Behavior and Organization</u> 60(4):449-459, August 2006.

<u>Designing Real Terrorism Futures</u>, *Public Choice* 128(1-2):257-274, July 2006. Also to appear in ed. Charles Rowley, *The Political Economy of Terrorism*, 2007, and ed. William Hancock, *Business Continuity and Homeland Security*, Edward Elgar, 2007.

Adverse Selection in Group Insurance: The Virtues of Failing to Represent Voters. *Economics of Governance* 6(2):139-157, July 2005. Version in Ph.D. thesis, 1997.

Warning Labels as Cheap Talk: Why Regulators Ban Drugs. *Journal of Public Economics* 87(9-10):2013-2029, September 2003. Version in Ph.D. thesis, 1997.

For Bayesian Wannabes, Are Disagreements Not About Information? *Theory and Decision* 54(2):105-123, March 2003. Version in Ph.D. thesis, 1997.

Combinatorial Information Market Design. *Information Systems Frontiers* 5(1):105-119, January 2003.

Disagreement Is Unpredictable. *Economics Letters* 77(3):365-369, November 2002.

Why Health Is Not Special: Errors in Evolved Bioethics Intuitions. *Social Philosophy & Policy* 19(2):153-179, Summer 2002. Reprinted in *Bioethics*, ed. E.F. Paul, F.D. Miller, & J. Paul, Cambridge University Press, 153-179, 2002.

How To Live In A Simulation. *Journal of Evolution and Technology* 7, September 2001. Reprinted in *Folha de S.Paulo* (a Brazilian newspaper) October 21, 2001. Covered in 10 press articles.

<u>Decision Markets</u>. <u>IEEE Intelligent Systems</u> 14(3):16-19, May/June, 1999. Reprinted in <u>Entrepreneurial Economics</u>, ed. Alexander Tabarrok, Oxford University Press, 79-85, 2002.

Consensus By Identifying Extremists. *Theory and Decision* 44(3):293-301, 1998.

Is A Singularity Just Around The Corner? Journal of Evolution and Technology 2, June 1998.

Correction to McKelvey and Page, "Public and Private Information: An Experimental Study of Information Pooling". *Econometrica* 64(5):1223-1224, 1996.

Could Gambling Save Science? Encouraging an Honest Consensus. Social Epistemology 9(1):3-33, 1995. First appeared in Gambling and Commercial Gaming: Essays in Business, Economics, Philosophy, and Science 399-440, ed. W. Eadington & J. Cornelius, 1992. (Is proceedings of August 1990 conference.) Summary published, Russ Ray, Idea Futures A Free-Market Approach to Academic Research. Futures Research Quarterly 12(2):81-91. Summer, 1996.

<u>Comparing Peer Review to Information Prizes</u>. <u>Social Epistemology</u> 9(1):49-55, 1995. See also <u>Reply to Comments</u>. 9(1):45-48 1995.

Buy Health, Not Health Care. Cato Journal 14(1):135-141, Summer 1994.

<u>Can Wiretaps Remain Cost-Effective? Communications of the Association of Computing Machinery</u> 37(12):13-15, December 1994. First appeared in *The Third CPSR Cryptography and Privacy Conference Sourcebook* 357-363, ed. David Banisar and Marc Rotenberg, June, 1993. Reprinted in *The Electronic Privacy Papers: Documents on the Battle for Privacy in the Age of Surveillance* 19-25, ed. B. Schneier & <u>D. Banisar, John Wiley and Sons</u>, 1997.

Comment on the scientific status of econometrics. Social Epistemology 7(3):255-256, 1993.

<u>Idea Futures: Encouraging an Honest Consensus, Extropy</u> 3(2):7-17, Winter, 1992; See also <u>If</u> <u>Uploads Come First</u>. 6(2):10-15 1994. <u>Nanarchy</u>. 6(1):32-36, 1994. <u>Wormhole Warfare</u>. 6(1):38-39, 1994. <u>Lilliputian Uploads</u>. 7(1):30-31, 1995. <u>Great Idea Seeks Champion</u>. 16:8, 1995. <u>A Critical Discussion of Vinge's Singularity Concept</u>. Editor & Discussant, October 1998.

Market-Based Foresight. Foresight Update 10:1,3-4, October 30, 1990. See also Reply. 11:11, March 15, 1991. Has Penrose Disproved A.I.? 12:4-5, August 1, 1991.

Other Journal Articles

<u>Drift-Diffusion in Mangled Worlds Quantum Mechanics</u>, *Proceedings of the Royal Society A: Mathematical*, *Physical and Engineering Sciences* 462(2069):1619-1627, May 8, 2006.

When Worlds Collide: Quantum Probability From Observer Selection? *Foundations of Physics* 33(7):1129-1150, July 2003.

Bayesian classification scheme. with John Stutz, Peter Cheeseman, Will Taylor, and Matthew Self, *Applied Optics* 31(27):5763 (in NASA Patter), September 20, 1992.

Toward Hypertext Publishing, Issues and Choices in Database Design. ACM SIGIR Forum 22(1-2):9-26, Winter 1988.

Book Chapters

Enhancing Our Truth Orientation. *Human Enhancement*, ed. Julian Savulescu and Nick Bostrom, Oxford University Press, March 2009.

<u>Catastrophe, Social Collapse, and Human Extinction, Global Catastrophic Risks</u>, pp. 363-377, ed. Martin Rees, Nick Bostrom, and Milan Cirkovic, Oxford University Press, July 17, 2008.

<u>The Rapacious Hardscrapple Frontier</u>, <u>Year Million: Science at the Far Edge of Knowledge</u>, pp. 168-192, ed. Damien Broderick, Atlas Books, May 19, 2008.

<u>Decision Markets for Policy Advice</u>. Promoting the General Welfare: American Democracy and the Political Economy of Government Performance, 151-173, ed. Eric Patashnik and Alan Gerber, Brookings Institution Press, November 2006.

Foul Play in Information Markets. Information Markets: A New Way of Making Decisions in the Public and Private Sectors 126-141, ed. Bob Hahn and Paul Tetlock, AEI Spring Press, May 2006.

Fear of Death and Muddled Thinking -- It Is So Much Worse Than You Think. Death And Anti-Death,

Volume 3: Fifty Years After Einstein, One Hundred Fifty Years After Kierkegaard, ed. Charles Tandy, Ria University Press, December 2005.

Game Theory in Public Choice. *The Encyclopedia of Public Choice* II:258-261, eds. Charles Rowley and Friedrich Schneider, Kluwer Academic Publishers, 2004.

Was Cypher Right? (Part I): Why We Stay In Our Matrix. Taking the Red Pill: Science, Philosophy and Religion in the Matrix 23-32, ed. Glenn Yeffeth, BenBella Books, 2003. (Reviews: 1, 2, 3.)

Published Conference Proceedings

Economics of Brain Emulations, Unnatrual Selection - The Challenges of Engineering Tomorrow's People, pp.150-158, ed. Peter Healey and Steve Rayner, EarthScan, London, December, 2008.

<u>Accept Interdependence</u>, <u>Ci'num - The Digital Civilizations Forum 2006</u>, p.36, Acquitaine Europe Communications. 2006.

Five Nanotech Social Scenarios. *Nanotechnology: Societal Implications II, Individual Perspectives*, ed. Mihail C. Roco and William S. Bainbridge, Springer, 109-113, November 2006.

The policy analysis market: an electronic commerce application of a combinatorial information market. with Charles Polk, John Ledyard, Takashi Ishikida. *Proceedings of the ACM Conference on Electronic Commerce* 2003: 272-273. See also poster.

<u>The Story</u> of Idea Futures. with <u>Mark James</u>, <u>Sean Morgan</u>, <u>Prix Ars Electronica 95</u>, International Compendium of the Computer Arts, ed. H. Leopoldseder, C. Schopf, 54-59, 1995.

<u>Super-Resolved Surface Reconstruction From Multiple Images</u>. with <u>P. Cheeseman</u>, <u>B. Kanefsky</u>, <u>R. Kraft</u>, <u>J. Stutz</u>, *Maximum Entropy and Bayesian Methods* 293-308, ed. G.R. Heidbreder, <u>Kluwer</u>, 1996. Version of NASA Ames Tech Report FIA-93-02, February, 1993.

Reversible Agents: Need Robots Waste Bits to See, Talk, and Achieve? *Proceedings of Workshop on Physics and Computation: PhysComp* '92, 284-288. IEEE Computer Society Press, 1992.

<u>Bayesian Classification with Correlation and Inheritance</u>. with <u>J. Stutz</u>, <u>P. Cheeseman</u>, <u>Proceedings</u> of the 12th <u>International Joint Conference on Artificial Intelligence</u> 2:692-698. Morgan Kaufmann, 1991. Version of NASA Ames Tech Report FIA-90-12-7-01, May, 1991.

Research Patronage and Distributing A.I. Agents: Similar Problems with Similar Solutions? *AAAI Fall Symposium on Knowledge and Action at Social and Organizational Levels* 68-69, 1991.

Even Adversarial Agents Should Appear to Agree, Proceedings IJCAI-91 Workshop On Reasoning In Adversarial Domains, 1991.

Working Papers

Requested Revisions

Eliciting Objective Probabilities via Lottery Insurance Games, revising for Theory and Decision.

<u>Long-Term Growth As A Sequence of Exponential Modes</u>, revising for <u>Journal of Economic Behavior</u> & <u>Organization</u>.

Patterns of Patronage -- Why Grants Won Over Prizes in Science, revising for Economic Inquiry.

Burning the Cosmic Commons: Evolutionary Strategies of Interstellar Colonization, revising for *Icarus*.

Must Early Life Be Easy? The Rhythm of Major Evolutionary Transitions, revising for Origins of Life.

Economic Growth Given Machine Intelligence, revising for Journal of Artificial Intelligence Research.

Under Review

Price Elasticity of Demand in Employer-Provided Self-Insured Health Plans, with Iwona Kicinger

The Determinants of the Quantity of Health Insurance: Evidence from Self-Insured and Not Self-Insured Employer-Based Health Plans, with Iwona Kicinger

<u>Can Manipulators Mislead Prediction Market Observers?</u>, with Ryan Oprea, David Porter, Chris Hibbert, and Dorina Tila.

Choosing Between Health and Wealth - A Survey, with Robert F. Graboyes and James W. Monks.

The Informed Press Favored the Policy Analysis Market.

He Who Pays The Piper Must Know The Tune.

Location Discrimination in Circular City, Torus Town, and Beyond.

On Voter Incentives To Become Informed. Version in Ph.D. thesis, 1997. Version as Caltech Social Science Working Paper 968, September 1996.

In Preparation

When Do Extraordinary Claims Give Extraordinary Evidence?

Causes of Confidence in Conflict.

Book Orders for Market Scoring Rules.

Priors Over Indexicals.

An Experimental Test of Agreeing to Disagree, with William Nelson.

Is Fairness About Clear Fitness Signals?

World Peace, Thanks To Old Men?

The Great Filter - Are We Almost Past It?

Rational Bar Bets

Shared Secrets Come Cheap

Should Privately Enforced Laws Fix Punishment or Restitution?

Other Publications

Open-Source Government: How can we fix our political system?, BBC Focus 206:21, August 2009.

LHC forecasts: better than horoscopes?, Symmetry 5(5):32, November 2008.

Economics of the Singularity, *IEEE Spectrum*, 37-42, June 2008. Reprinted as: A New World Order, *Cosmos* 26:47-54, April/May 2009.

<u>Cut Medicine In Half, CATO Unbound</u>, September 10, 2007. Replies by David Cutler, Dana Goldman, Alan Garber. Responses <u>Let Go The Monkey Trap</u>, <u>Are the Aggregate Studies Misleading? Why?</u>, <u>Still Seeking Specific Critiques</u>, <u>Yes, There are Costs of Change</u>, <u>Beware Double Standards</u>, September 18,21,22,23,26.

Birds of a Feather; Letter On Why Hawks Win, Foreign Policy, pp. 10-12, March/April 2007.

You're Fired, Forbes, p.38, October 30, 2006.

The Myth of Creativity. Business Week p.134, July 3, 2006.

Reality and Fantasy in Economic Revolutions, CATO Unbound, Future of Work Issue, June 6, 2006. mirror

Letter, Wilson Quarterly 30(2):7,9, Spring 2006.

The Next Really Big Enormous Thing. Future Brief. October 6, 2004.

The Morality of Meat - Why eating your vegetables is cruel to animals. *The American Enterprise Online Hot Flash*, July 24, 2002.

<u>Dreams of Autarky</u>. <u>Doctor Tandy's Guide to Life Extension and Transhumanity</u>, ed. Charles Tandy, Ria University Press, 2001.

Why Cryonics Isn't Popular. *Longevity Report* 12(72), July 1999.

Market-based approaches to managing science return from planetary missions, *European Space Agency (Special Publication) ESA SP* 394(1):524-531, 1996.

24 short essays in <u>DIY Futures - People's Ideas & Projects for a Better World</u>, ed. <u>Nicholas Albery</u>. <u>The Institute for Social Inventions</u>, London, 1996. Also 4 short essays in *Creative Speculations*, 1997.

Hard to Tax Scenario, with Hal Finney, Hettinga's Best of the Month, Journal of Internet Banking and

Finance 2(1), January 1997.

Idea Futures. Wired 3(9):125. Excerpt was Quotable Quote, Wall Street Journal A14, 30 August, 1995.

Links at http://hanson.gmu.edu/vita.html