

# H. PEYTON YOUNG

## Curriculum Vitae

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### EDUCATION

B.A. 1966 Cum Laude in General Studies, Harvard University.

Ph.D. 1970 Mathematics, University of Michigan.

### CURRENT POSITIONS

2015- Centennial Professor, London School of Economics

2008- James Meade Professor of Economics, University of Oxford

2005- Professorial Fellow, Nuffield College Oxford

2012- Research Principal, Office of Financial Research, US Treasury Department

### PREVIOUS POSITIONS

1997-15 Senior Fellow in Economics, The Brookings Institution

1994-07 Scott and Barbara Black Professor of Economics, Johns Hopkins University

1982-94 Professor of Economics and Public Policy, School of Public Affairs, University of Maryland, College Park

1976-82 Research Scholar and Deputy Chairman, Systems and Decision Sciences, International Institute for Applied Systems Analysis, Austria.

1971-77 Associate Professor of Mathematics, Graduate School of the City University of New York.

### OTHER PROFESSIONAL POSITIONS

2009- Co-Editor, *Handbook of Game Theory*

2006-08 President of the Game Theory Society

- 2009-12 Member of the Selection Committee, BBVA Frontiers of Knowledge Award in Economics, Finance, and Management (Chairman, 2010).
- 2004-06 Executive Vice President of the Game Theory Society
- 2001-05 Member, Science Steering Committee, The Santa Fe Institute
- 2004- International Advisory Board, *Journal of Institutional Economics*
- 1999- Associate Editor, *Games and Economic Behavior*

#### **HONORS, AWARDS, FELLOWSHIPS, ETC.**

- 2015 Best Paper Prize, SIAM Journal on Control and Optimization
- 2008 George Hallett Award, The American Political Science Association
- 2007 Fellow of the British Academy
- 2003 Fulbright Distinguished Chair in Economics, University of Siena
- 2002 Arne Ryde Lectures, University of Lund
- 1995 Fellow of the Econometric Society
- 1990 Erskine Fellow in Economics, University of Canterbury, New Zealand
- 1976 Lester R. Ford Award, Mathematical Association of America
- 1971 Sumner B. Myers Thesis Prize, University of Michigan

#### **BOOKS**

*Strategic Learning and Its Limits*. Oxford UK: Oxford University Press, 2004.

*Fair Representation*, 2<sup>nd</sup> edition (with M. L. Balinski). Washington, D. C.: The Brookings Institution, 2001.

*Individual Strategy and Social Structure: An Evolutionary Theory of Institutions*. Princeton, NJ: Princeton University Press, 1998.

*Equity In Theory and Practice*. Princeton NJ: Princeton University Press, 1994.

## EDITED BOOKS

*Handbook of Game Theory, vol. IV* (with Shmuel Zamir), Amsterdam: Elsevier, 2014.

*Social Dynamics* (with Steven N. Durlauf), Cambridge, Mass: MIT Press, 2001.

*Negotiation Analysis*, Ann Arbor MI: University of Michigan Press, 1991.

*Cost Allocation: Methods, Principles, Application*, Amsterdam: North-Holland, 1985.

*Fair Allocation. Proceedings of Symposia in Applied Mathematics, vol. 33*, Providence RI: The American Mathematical Society, 1985.

## PUBLICATIONS

“Financial Networks,” (with Paul Glasserman), *Journal of Economic Literature*, forthcoming (2016).

“Stochastic Learning Dynamics and Speed of Convergence in Population Games,” (with Itai Arieli), *Econometrica* 84 (2016): 627-676.

“Learning in a Black Box” (with H.H. Nax, M. Burton-Chellew, and S. West), *Journal of Economic Behavior and Organization* 127 (2016): 1- 15.

“The Evolution of Social Norms,” *Annual Review of Economics* 7 (2015), 359-387.

“How Likely Is Contagion in Financial Networks?” (with Paul Glasserman), *Journal of Banking and Finance* 50 (2015), 383-399.

“The Limits of Compensation in the Financial Sector” (with Thomas Noe), in *Capital Failure: Rebuilding Trust in Financial Services*, eds. N. Morris and D.Vines. Oxford University Press, 2014.

“Rapid Innovation Diffusion in Social Networks,” (with Gabriel E.Kreindler) *Proceedings of the National Academy of Sciences* 111, Suppl 3 (2014), 10881-10888.

“Achieving Pareto Optimality through Distributed Learning” (with Jason Marden and Lucy Pao), *SIAM Journal on Control and Optimization* 52 (2014), 2753-2770.

“Stochastic Evolutionary Game Dynamics” (with Chris Wallace), in *Handbook of Game Theory vol. IV*, eds. H. P. Young and S. Zamir. Amsterdam: Elsevier 2014.

- “Fast Convergence in Evolutionary Equilibrium Selection,” (with Gabriel E. Kreindler), *Games and Economic Behavior*, 80 (2013), 39-67.
- “Learning Efficient Nash Equilibria in Distributed Systems” (with Bary S.R.Pradelski), *Games and Economic Behavior*, 75 (2012), 882-897.
- “A Strategy-Proof Test of Portfolio Returns” (with Dean P. Foster), *Quantitative Finance*, 12 (2012), 671-683.
- “The Dynamics of Social Innovation,” *Proceedings of the National Academy of Sciences*, 108, no.4 (2011), 21285-21291.
- “Gaming Performance Fees by Portfolio Managers,” (with Dean P. Foster), *Quarterly Journal of Economics*, 125 (2010), 1435-1458.
- “Social Norms,” (with Mary A. Burke), in the *Handbook of Social Economics*, vol. 1A, edited by Jess Benhabib, Alberto Bisin, and Matthew Jackson, Amsterdam: North Holland, 2010.
- “Innovation Diffusion in Heterogeneous Populations: Contagion, Social Influence, and Social Learning,” *American Economic Review*, 99 (2009), 1899-1924.
- “Payoff-Based Dynamics in Multiplayer Weakly Acyclic Games,” (with Jason R. Marden, Gurdal Arslan, and Jeff Shamma), *SIAM Journal on Control and Optimization*, 48 (2009), 373-396.
- “Learning by Trial and Error,” *Games and Economic Behavior*, 65 (2009), 626-643.
- “Social Norms,” *The New Palgrave Dictionary of Economics, Second Edition*, Steven N. Durlauf and Lawrence E. Blume, eds. London: Macmillan, 2008.
- “Adaptive Heuristics,” *The New Palgrave Dictionary of Economics, Second Edition*, Steven N. Durlauf and Lawrence E. Blume, eds. London: Macmillan, 2008.
- “Stochastic Adaptive Dynamics,” *The New Palgrave Dictionary of Economics, Second Edition*, Steven N. Durlauf and Lawrence E. Blume, eds. London: Macmillan, 2008.
- “The Possible and the Impossible in Multi-Agent Learning,” *Artificial Intelligence*, 171 (2007), 429-433.
- “Regret-Testing: Learning to Play Nash Equilibrium Without Knowing You Have an Opponent” (with Dean P. Foster), *Theoretical Economics*, 1, 341-367, 2006.
- “Social Dynamics: Theory and Applications,” in *Handbook of Computational Economics, vol. II*. Ken Judd and Leigh Tesfatsion, eds. Amsterdam: North Holland, 2006.

- “Customary Contracts,” in *Legal Orderings and Economic Institutions*, Fabrizio Cafaggi, Antonio Nicita, and Ugo Pagano, eds. Oxford: Routledge, 2005.
- “The Cultural and Genetic Evolution of Human Cooperation” (with J. Henrich et al.), in *Genetic and Cultural Evolution of Cooperation*, Peter Hammerstein, ed. Cambridge MA: MIT Press, 2003.
- “The Power of Norms,” in *Genetic and Cultural Evolution of Cooperation*, Peter Hammerstein, ed. Cambridge MA: MIT Press, 2003.
- “The Diffusion of Innovations in Social Networks” in *The Economy as a Complex Evolving System, vol. III*, Lawrence E. Blume and Steven N. Durlauf, eds. Oxford University Press, 2003.
- “Learning, Hypothesis Testing, and Nash Equilibrium,” (with Dean P. Foster), *Games and Economic Behavior*, 45 (2003), 73-96.
- “Equilibrium Selection in Bargaining Models,” (with K. Binmore and L. Samuelson), *Games and Economic Behavior*, 45 (2003), 296-328.
- “On the Limits to Rational Learning,” *European Economic Review*, 46 (2002) 791-99.
- “On the Impossibility of Predicting the Behavior of Rational Agents,” (with Dean P. Foster), *Proceedings of the National Academy of Sciences of the USA*, 98, no. 22 (2001), 12848-12853.
- “Competition and Custom in Economic Contracts: A Case Study of Illinois Agriculture,” (with Mary A. Burke), *American Economic Review*, 91 (2001), 559-573.
- “Adaptive Dynamics in Games Played by Heterogeneous Populations,” (with A. Kryazhimskii and Y. Kaniovski). *Games and Economic Behavior*, 31 (2000) 50-96.
- “Conventional Contracts,” *Review of Economic Studies*, 65 (1998), 776-792.
- “On the Nonconvergence of Fictitious Play in Coordination Games,” (with Dean P. Foster), *Games and Economic Behavior*, 25 (1998), 79-96.
- “Cost Allocation, Demand Revelation, and Core Implementation,” *Mathematical Social Sciences*, 36 (1998), 213-228.
- “Individual Learning and Social Rationality,” *European Economic Review*, 42 (1998), 651-663.
- “Social Norms and Economic Welfare,” *European Economic Review*, 42 (1998), 821-830.

- “Learning with Hazy Beliefs” (with Dean P. Foster) in *Game Theory, Experience, Rationality*, W. Leinfellner and E. Koehler, eds. Amsterdam: Kluwer, 1998.
- “The Economics of Convention,” *Journal of Economic Perspectives*, 10 (Spring, 1996), 105-122.
- “Dividing the Indivisible,” in *Wise Choices*, Ralph Keeney, James Sebenius, and Richard Zeckhauser, eds. Cambridge Mass: Harvard University Press, 1996.
- “Group Choice and Individual Judgment,” in *Perspectives on Public Choice*, Dennis Mueller, ed. New York: Cambridge University Press, 1996.
- “Learning Dynamics in Games with Stochastic Perturbations,” (with Yuri Kaniovski), *Games and Economic Behavior*, 11 (1995), 330-363.
- “Dividing the Indivisible,” *American Behavioral Scientist*, 38 (1995), 904-909.
- “Optimal Voting Rules,” *Journal of Economic Perspectives*, 9 (Winter, 1995), 51-64.
- “Equilibrium Selection Through Adaptation and Experimentation,” in *Learning and Rationality in Economics*, Alan Kirman and Mark Salmon, eds. New York: Basil Blackwell, 1995.
- “Cost Allocation,” in *The Handbook of Game Theory, vol. II*, Robert J. Aumann and Sergiu Hart, eds. Amsterdam: North-Holland, 1994.
- “Apportionment” (with M. L. Balinski), in *Operations Research and the Public Sector. Handbooks in Operations Research and Management Science*, vol. 6, Steven M. Pollock, Michael H. Rothkopf, and Arnold Barnett, eds. Amsterdam: North-Holland, 1994.
- “The Evolution of Conventions,” *Econometrica*, 61 (1993), 57-84.
- “An Evolutionary Model of Bargaining,” *Journal of Economic Theory*, 59 (1993), 145-168.
- “Cooperation in the Short and in the Long Run,” (with Dean P. Foster), *Games and Economic Behavior*, 3 (1991), 145-156.
- “Stochastic Evolutionary Game Dynamics,” (with Dean P. Foster), *Theoretical Population Biology*, 38 (1990), 219-232.
- “Progressive Taxation and Equal Sacrifice,” *American Economic Review*, 80 (1990), 253-266.”

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- “Producer Incentives in Cost Allocation,” *Econometrica*, 53 (1985), 757-765.
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- “Fair Representation in the European Parliament,” (with M. L. Balinski), *Journal of Common Market Studies*, 2 (1982), 361-373.
- “Parliamentary Representation and the Amalgam Method,” (with M. L. Balinski), *Canadian Journal of Political Science*, 14 (1981), 797-812.
- “The Webster Method of Apportionment,” (with M. L. Balinski), *Proceedings of the National Academy of Sciences*, 77 (1980), 1-4.
- “Criteria for Proportional Representation,” (with M. L. Balinski), *Operations Research*, 27 (1979), 80-95.

- “Quotatone Apportionment Methods,” (with M. L. Balinski), *Mathematics of Operations Research*, 4 (1979), 31-38.
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- “The Nucleolus as a Noncooperative Game Solution” (with Martin Shubik), in *Game Theory and Political Science*, Peter C. Ordeshook, ed. New York: New York University Press, 1978.
- “A Tactical Lobbying Game” in *Game Theory and Political Science*, Peter C. Ordeshook, ed. New York: New York University Press, 1978.
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- “Stability, Coalitions, and Schisms in Proportional Representation Systems,” (with M. L. Balinski), *American Political Science Review*, 72 (1978), 848-58.
- “Power, Prices, and Incomes in Voting Systems,” *Mathematical Programming*, 14 (1978), 129-148.
- “The Allocation of Funds in Lobbying and Campaigning,” *Behavioral Science*, 23 (1978), 21-31.
- “A Consistent Extension of Condorcet's Election Principle,” (with Arthur Levenglick), *SIAM Journal on Applied Mathematics*, Part C, 35 (1978), 285-300.
- “Matroid Designs of Prime Power Index,” (with Barbu Kestenband), *Journal of Combinatorial Theory*, Series A, 24 (1978), 211-234.
- “On Permutations and Permutation Polytopes,” *Polyhedral Combinatorics: Mathematical Programming Study* 8 (1978), 128-140.
- “On Huntington Methods of Apportionment,” (with M. L. Balinski) *SIAM Journal on Applied Mathematics*, Part C, 33 (1977), 607-618.
- “Apportionment Schemes and the Quota Method,” (with M. L. Balinski), *American Mathematical Monthly*, 84 (1977), 450-455.
- “The Quota Method of Apportionment,” (with M. L. Balinski), *American Mathematical Monthly*, 84 (1977), 701-730.
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- “Interpreting von Neumann Model Prices as Marginal Values,” (with M. L. Balinski), *Journal of Economic Theory*, 9 (1974), 449-463.
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- “Least -Cost Allocation and Valuation Model for Water Resources,” (with R. G. Thompson et al.).*Water Resources Research*, 9 (1973), 1186-1195.
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- “Forecasting Water Use for Policy Making: A Review,” (with R. G. Thompson et al.). *Water Resources Research*, 9(1973), 729-299.
- “A Quick Proof of Wagner's Equivalence Theorem,” *Journal of the London Mathematical Society*," 3 (1971), 661-664.