

Experimental Economics

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Course Description: This course will be a survey of some of the recent literature on Experimental Economics. The background for the course is graduate microeconomic theory and game theory.

Text: There is no text for the course, but students are encouraged to purchase these:

John Kagel and Alvin Roth, *Handbook of Experimental Economics*, Princeton, 1995.

Camerer, Colin, *Behavioral Game Theory*, New York, Russell Sage & Princeton University Press, 2003.

Format: This course will be taught in a seminar format, with plenty of interaction and discussion among the students. Students will be expected to make at least one presentation during the term, leading the discussion on a paper or topic. Students are expected to read the assigned papers before each meeting.

Course Project: There will be no exams for the course, but students will be required to submit a course project. Students must complete two projects.

PROJECT 1: Write a paper that surveys the literature on one area of interest of any topic concerning experimental economics, and to suggest tests of open questions. Topics need not be restricted to those covered in the course, but should be approved by Professor Andreoni. Maximum length should be 10 pages.

PROJECT 2: Design an experiment. The design should include a statement of the research question, a prediction based in economic theory, the task the subjects will complete, a sketch of the protocol (instructions for subjects, directions for experimenters), number of subjects per condition, and a description of how the data will be analyzed to test the prediction. Students are encouraged to work in pairs to design their studies. At the end of the semester, each team of designers must present their experimental ideas to the class.

Course Outline: Following is a course outline. This is a living document that will likely change and evolve as the semester proceeds-expect updates often. There are far too many papers listed here to cover in one quarter, so as the term progresses we will respond to both time and student interest to direct our attention and the depth of our discussions on the topics below.

PROPOSED OUTLINE FOR THE COURSE:

0. Background and Introduction
1. Altruism, Fairness, Trust
 - a. Ultimatum Games
 - b. Dictator Games
 - c. Trust Games
 - d. Anonymity and Social Distance
 - e. Models of Inequality Aversion
 - f. A Rational Approach to Giving and Altruism
 - g. Altruism and the Number of Recipients
2. Public Goods
 - a. Linear
 - b. Provision Point
 - c. Mechanism Design
 - d. Fund-raising
 - e. Field Studies
3. Building Cooperation
 - a. Reputation building
 - b. Sorting
 - c. Punishments and rewards
4. Uncertainty and Expected Utility
5. Coordination
6. Communication
 - a. And altruism
 - b. And coordination
 - c. And deception
7. Over-Confidence
8. Belief Polarization
9. Information and Signaling
10. Time Consistency/Hyperbolic Discounting
11. Endowment Effect
12. Sex and Beauty
13. Auctions
14. Errors and Learning
 - a. Adaptive and Evolutionary Learning
 - b. Belief Based Learning
 - c. Reinforcement Learning
 - d. Combinations of Belief and Reinforcement
 - e. Quantile Response Equilibrium
16. Neuro-economics

Experimental Economics

Econ 264 -- Winter 2007

****CURRENT VERSION OF SYLLABUS: January 8, 2007****

0. Background and Introduction

Roth, A.E., "[On the Early History of Experimental Economics](#)," *Journal of the History of Economic Thought*, 15, Fall 1993, 184-209.

Larry Samuelson, "[Economic Theory and Experimental Economics](#)," *Journal of Economic Literature*, 43 (2005), 65-107.

Rabin, Matthew. "Psychology and Economics," *J Economic Literature*, March 1998, 11-46.

Kahneman, "Maps of bounded rationality: Psychology for behavioral economics." *AER*, Dec 2003, 1449-1475. (Nobel lecture)

Binmore, Ken, "Economic Man – or Straw Man? Commentary on Heinrich, et al." *Behavioral and Brain Science* (2005) 28, 815-818. And more completely at [economicman.pdf](#)

Ralph Hertwig and Andreas Ortmann, "Experimental practices in economics: A methodological challenge for psychologists?" [Behavioral and Brain Sciences](#), [Volume 24, Issue 03](#), June 2001, pp 383-403

Roth, A.E., "[Lets Keep the Con out of Experimental Econ.: A Methodological Note](#)" *Empirical Economics* (Special Issue on Experimental Economics), 1994, 19, 279-289.

1. Altruism, Fairness, Trust

a. Ultimatum Games and Dictator Games

Guth, Werner, R. Schmittberger, and B. Schwartz. "An Experimental Analysis of Ultimatum Bargaining" *Journal of Games and Economic Behavior*, December 1982, 3(4), pp. 367—88.

Forsythe, Robert, Joel Horowitz, N.S. Savin and Martin Sefton. "Fairness in Simple Bargaining Games." *Games and Economic Behavior*, May 1994, 6(3), pp. 347—69.

Ochs, Jack and Alvin E. Roth. "An Experimental Study of Sequential Bargaining." *American Economic Review*, June 1989, 79(3), pp. 355—84.

Roth, Alvin E., V. Prasnikar, M. Okunofujiwara and S. Zamir. "Bargaining and Market

Behavior in Jerusalem, Ljubljana, Pittsburgh, and Tokyo: An Experimental Study.” *American Economic Review*, December 1991, 81(5), pp. 1068—95.

Slonim, Robert and Alvin E. Roth, “Learning in High Stakes Ultimatum Games: An Experiment in the Slovak Republic.” *Econometrica*, 66, 3, May 1988, 569-96.

b. Trust Games

Berg, Joyce, John Dickhaut, and Kevin McCabe. “Trust, Reciprocity, and Social Norms,” *Games and Economic Behavior*, 1995, 10, 122-142.

Van Huyck, John B.; Battalio, Raymond C.; Walters, Mary F. “Commitment versus Discretion in the Peasant-Dictator Game.” *Games and Economic Behavior*, July 1995, 10(1), 143-70.

Fehr, Ernst, et al., “Does Fairness Prevent Market Clearing? An Experimental Investigation.” *QJE*, May 1993, 437-59.

Glaeser, Edward L., David I. Laibson, José A. Scheinkman, and Christine Soutter, “Measuring Trust.” *Quarterly Journal of Economics*, August 2000, 115, 811–846.

Cox, James C. “How to Identify Trust and Reciprocity.” *Games and Economic Behavior*, 2004, 46, 260–281.

Fehr, Ernst, Simon Gächter, and Georg Kirchsteiger. “Reciprocity as a Contract Enforcement Device: Experimental Evidence.” *Econometrica*, 1997, 65, 833–860.

Bohnet, Iris, Bruno S. Frey, and Steffen Huck, “More Order with Less Law: On Contract Enforcement, Trust, and Crowding,” *American Political Science Review*, March 2001, 95(1), 131–144.

Andreoni, James [“Trust, Reciprocity, and Contract Enforcement: Experiments on Satisfaction Guaranteed.”](#) March 2005.

Sobel, Joel. [“Interdependent Preferences and Reciprocity,”](#) *Journal of Economic Literature*, 2005.

Engelmann, Dirk and Andreas Ortmann, “The Robustness of Laboratory Gift Exchange: A Reconsideration,” Working Paper, CERGE-EI, Prague, Czech Republic, 2002.

Gneezy, Uri, and List, John A., “Putting Behavioral Economics to Work: Testing for Gift Exchange in Labor Markets Using Field Experiments.” *Econometrica*, September 2006; 74(5): 1365-84

c. Other Sequential Games

Prasnikar, V. and Roth, A.E., "[Considerations of Fairness and Strategy: Experimental Data From Sequential Games](#)," *Quarterly Journal of Economics*, August 1992, 865-888.

Andreoni, James, Paul Brown and Lise Vesterlund, "What Makes an Allocation Fair? Some Experimental Evidence." *Games and Economic Behavior*, 40, July 2002, 1-24. [pdf](#)

d. Anonymity and Social Distance

Hoffman, E. K. McCabe, K. Shachat, and V. Smith, "Preferences, Property Rights and Anonymity in Bargaining Games." *GEB*, 1994, 346-380.

Hoffman, E. K. McCabe, and V. Smith, "Social Distance and Other Regarding Behavior in Dictator Games." *AER*, 1996, 653-660.

Iris Bohnet, Bruno S. Frey, "Social Distance and other-regarding Behavior in Dictator Games: Comment," *American Economic Review*, Vol. 89, No. 1 (Mar., 1999) , pp. 335-339.

Bolton, Gary E., and Rami Zwick, "Anonymity versus Punishment in Ultimatum Bargaining." *GEB*, **10**, 1995, 95-121.

Bohnet, I., Frey, B., 1999a. "The sound of silence in prisoner's dilemma and dictator games." *Journal of Economic Behavior and Organization* 38, 43– 57.

e. Models of Inequality Aversion

Fehr, Ernst & Schmidt, Klaus (1999), "A Theory of Fairness, Competition, and Cooperation," *Quarterly Journal of Economics*, **114**, 817-868.

Bolton, Gary E. & Ockenfels, Axel (2000), "ERC—A Theory of Equity, Reciprocity and Competition," *American Economic Review*, **90**, 166-193.

Rabin, Matthew (1993), "Incorporating Fairness into Game Theory and Economics," *American Economic Review*, **83**, 1281-1302.

Charness, Gary & Matthew Rabin (2002), "Understanding Social Preferences with Simple Tests," *Quarterly Journal of Economics*, **117**, 817-869.

Levine, D. (1998): "Modelling Altruism and Spitefulness in Game Experiments." *Review of Economic Dynamics*, 1, 593–622.

Dufwenberg, M. & Kirchsteiger, G. "A Theory of Sequential Reciprocity," *Games and Economic Behavior* 47 (2004), 268-98. [pdf](#).

Li, Jing "[The Power of Convention: A Theory of Social Preferences](#)," November 2005, *Journal of Economic Behavior and Organization*, forthcoming

Joel Sobel, "[Putting Altruism in Context](#)," *Brain and Behavioral Science*, 2003

f. A Rational Approach to Giving and Altruism

Andreoni, James, "Giving with Impure Altruism: Applications to Charity and Ricardian Equivalence." *Journal of Political Economy*, v.97, December 1989, 1447-58. [pdf](#)

Andreoni, James , "Impure Altruism and Donations to Public Goods: A Theory of Warm-Glow Giving." *Economic Journal*, v.100, June 1990, 464-477. [pdf](#)

Andreoni, James, and J.H. Miller, "Giving According to GARP: An Experimental Test of the Consistency of Preferences for Altruism." *Econometrica*, v. 70, no.2, March 2002, 737-753. [pdf](#)

Andreoni, James, Marco Castillo, and Ragan Petrie. "What do Bargainers' Preferences Look Like? Exploring a Convex Ultimatum Game." *American Economic Review*, June 2003, 93(3), 672-685.

Andreoni, James, Marco Castillo, and Ragan Petrie. "[Revealing Preferences for Fairness in Ultimatum Bargaining](#)" Working paper, 2005.

g. Giving and the Number of Recipients

Andreoni, James, "Is Altruism Congestible? On Giving and Group Size." Draft, 2006.

2. Public Goods

Ledyard, John, "Public Goods: A Survey of Experimental Research." Chapter 2 in KR.

a. Linear Public Goods Games

Marwell, Gerald and Ruth Ames, "Economists Free Ride, Does Anyone Else? Experiments on the Provision of Public Goods." *Journal of Public Economics*, 1981, 295-310.

Isaac, R. Mark and James Walker, "Group Size Effects in Public Goods Provision: The Voluntary Contributions Mechanism." *QJE*, 1988, 179-99.

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Andreoni, James, "Cooperation in Public Goods Experiments: Kindness or Confusion?" *AER*, 1995.

Andreoni, James, "Warm-glow versus Cold Prickles: The Effects of Positive and Negative Framing in Public Goods Experiments." *QJE*, 1995.

Palfrey, Thomas and Jeffrey Prisbrey, "Anomalous Behavior in Public Goods Experiments: How Much and Why?" *AER*, December 1997, 829-46.

Palfrey, Thomas and Jeffrey Prisbrey, "Altruism, Reputation, and Noise in Linear Public Goods Experiments," *Journal of Public Economics*, 61(3), September 1996, 409-27.

Andreoni, James, "An Experimental Test of the Public Goods Crowding Out Hypothesis." *AER*, 1993.

Palfrey, Thomas and Howard Rosenthal, "Testing the Effects of Cheap Talk in a Public Goods Game with Private Information." *GEB*, 3, 183-220.

Anderson, Simon P., Jacob K. Goeree and Charles A. Holt, "A Theoretical Analysis of Altruism and Decision Error in Public Goods Games." *Journal of Public Economics*, 1998, 297-323.

Chalie Holt, J. Goeree and S. Laury, "Private Costs and Public Benefits: Unraveling the Effects of Altruism and Noisy Behavior," *Journal of Public Economics*, 83(2), 2002, 257-278.

b. Provision Point

Davis, Douglas and Charles Holt, *Experimental Economics*, Princeton: Princeton University press, pp. 338-343.

Dawes, Robin, John Orbell, R.T. Simmons, and A.J.C. van de Kragt, "Organizing Groups for Collective Action." *American Political Science Review*, 80, 1986, 1171-85.

Bagnoli, Mark and Michael McKee, "Voluntary Contributions Games: Efficient Private Provision of Public Goods." *Economic Inquiry*, 29, 1991, 351-366.

Bagnoli, Mark, Shaul Ben-David and Michael McKee, "Voluntary Provision of Public Goods: The Multiple Unit Case." *Journal of Public Economics*, 47, 1994, 85-106.

Rondeau, Daniel, William D. Schulze and Gregory L. Poe, "Voluntary Revelation of the Demand for Public Goods Using a Provision Point Mechanism." *Journal of Public Economics*, 1999, 455-470.

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c. Mechanism Design

Sefton, Martin and Abdullah Yavas, ``Abreu-Matsushima Mechanisms: Experimental Evidence." *GEB*, 16, 1996, 280-302.

Chen, Yan and Charles Plott, ``The Groves-Ledyard Mechanism: An Experimental Study of Institutional Design." *Journal of Public Economics*, 1996.

Chen, Yan and Fang-Fang Tang, ``Learning and Incentive-Compatible Mechanisms for Public Goods Provision: An Experimental Study." *Journal of Political Economy*, 1998, 633-662.

d. Fund-raising and Organic Mechanisms

John Morgan, "[Financing Public Goods by Means of Lotteries](#)," *Review of Economic Studies*, 67 (2000), 761-84.

John Morgan and Martin Sefton, "[Funding Public Goods with Lotteries: An Experiment](#)," *Review of Economic Studies*, 67 (2000), 785-810.

Andreoni, James and Ragan Petrie. "[Public Goods Experiments Without Confidentiality: A Glimpse Into Fund-Raising](#)." *Journal of Public Economics*, 88(7-8), 2004, 1605-1623.

Lise Vesterlund, Jan Potters and Martin Sefton, "[After you--endogenous sequencing in voluntary contribution games](#)," *Journal of Public Economics*, August 2005, 1399-1419.

Vesterlund, Lise, John Duffy and Jack Ochs, "Giving Little by Little: Dynamic Voluntary Contribution Games," working paper, Download in [PDF](#).

Duffy, John and Tatiana Kornienko, "[Does Competition Affect Giving? An Experimental Study](#)" July 2005. working paper.

Cinyabuguma, Matthias & Page, Talbot & Putterman, Louis, "[Cooperation under the threat of expulsion in a public goods experiment](#)," *Journal of Public Economics*, 2005, Volume 89, Issue 8

Gailmard, Sean & Palfrey, Thomas R. "[An experimental comparison of collective choice procedures for excludable public goods](#)" *Journal of Public Economics*, 2005, Volume 89, Issue 8.

Eckel, Catherine C. & Grossman, Philip J. & Johnston, Rachel M., "[An experimental test of the crowding out hypothesis](#)" *Journal of Public Economics*, 2005, Volume 89, Issue 8.

Jacob Goeree, S. Onderstal, E. Maasland, and J. Turner, "How (Not) to Raise Money" *Journal of Political Economy*, 113(4), August 2005, 897-918.

e. Field Studies

John A. List & David Lucking-Reiley, 2002. "The Effects of Seed Money and Refunds on Charitable Giving: Experimental Evidence from a University Capital Campaign," *Journal of Political Economy*, University of Chicago Press, vol. 110(1), pages 215-233.

Craig Landry & Andreas Lange & John A. List & Michael K. Price & Nicholas G. Rupp, 2005. "[Toward an Understanding of the Economics of Charity: Evidence from a Field Experiment](#)," [NBER Working Papers](#) 11611, National Bureau of Economic Research, Inc.

Dean Karlan and John List [Does Price Matter in Charitable Giving? Evidence from a Large-Scale Natural Field Experiment](#) (March, 2006).

3. Building Cooperation

a. Reputation building

Selten, R. and R. Stoecker (1986). "End Behavior in Sequences of Finite Prisoner's Dilemma Supergames. A Learning Theory Approach." *Journal of Economic Behavior and Organization* 7, 47-70.

Andreoni, James and J.H.Miller. "Rational Cooperation in the Finitely Repeated Prisoner's Dilemma: Experimental Evidence." *Economic Journal*, v.103, May 1993, 570-585. [pdf](#)

Camerer, C., and K. Weigelt (1988). "Experimental Tests of the Sequential Equilibrium Reputation Model." *Econometrica* 56, 1-36.

Cooper, R., D. DeJong and R. Forsythe (1996). "Cooperation Without Reputation: Experimental Evidence from Prisoner's Dilemma Games." *Games and Economic Behavior* 12, 187-218.

John Duffy and Jack Ochs "[Cooperative Behavior and the Frequency of Social Interaction](#)" working paper, April 2005.

Dal Bó, P. "Cooperation under the Shadow of the Future: Experimental Evidence from Infinitely Repeated Games." *American Economics Review*, December 2005.

Ellison, G. (1994). "Cooperation in the Prisoner's Dilemma with Anonymous Random Matching." *Review of Economic Studies* 61, 567-88.

b. Signalling and Sorting among Cooperators

Andreoni, James and Larry Samuelson. ["Building Rational Cooperation"](#) *Journal of Economic Theory*, 127, 2006, p 117-154.

c. Punishments and rewards

Fehr, E. and S. Gächter (2000), "Cooperation and Punishment in Public Goods Experiments," *American Economic Review*, **90**, 980-994.

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David Masclet, Charles Noussair, Steven Tucker, and Marie-Claire Villeval "Monetary and Non-Monetary Punishment in the Voluntary Contributions Mechanism," *American Economic Review*, Vol. 93, No. 1, March 2003, pages 366-380.

4. Uncertainty and Expected Utility

A whole bunch of stuff.

John A. List, 2004. "[Neoclassical Theory Versus Prospect Theory: Evidence from the Marketplace](#)," [Econometrica](#), vol. 72(2), pages 615-625.

5. Coordination

Ochs, Jack, "Coordination." In KR.

Van Huyck, AER

Van Huyck, J.B., J.M. Wilentz and R.C. Battalio (2002). "Tacit Cooperation, Strategic Uncertainty, and Coordination Failure: Evidence From Repeated Dominance Solvable Games." *Games and Economic Behavior* 38, 156-175.

Charlie Holt and J. Goeree "An Experimental Study of Costly Coordination," *Games and Economic Behavior*, (special issue in honor of Richard McKelvey) 2005 (2), 349-364.

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6. Communication

a. **And altruism**

b. **And coordination**

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Andy Schotter and Barry Sopher "Social Learning and Convention Creation in Inter-Generational Games: An Experimental Study", *Journal of Political Economy*, June 2003.

Andy Schotter, "Decision Making in the Face of Naive Advice", *American Economic Review*, May 2003..

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c. **And deception**

Akerlof, A. (1970), "The Market for Lemons: Quality Uncertainty and the Market Mechanism," *Quarterly Journal of Economics*, **85**, 488-500.

Brandts, J. & G. Charness (2003), "Truth or Consequences: An Experiment," *Management Science*, **49**, 116-130.

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Cooper, R., D. DeJong, R. Forsythe & T. Ross (1992), "Communication in Coordination Games," *Quarterly Journal of Economics*, **107**, 739-771.

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7. Over-Confidence

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Cade Massey, Richard H. Thaler, "The Loser's Curse: Overconfidence vs. Market Efficiency in the National Football League Draft" April 2, 2005

Claes Bengtsson,, Mats Persson, Peter Willenhag, "Gender and overconfidence" *Economics Letters* 86 (2005) 199–203

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8. Belief Polarization

9. Information and Signalling

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10. Time Consistency/Hyperbolic Discounting

The time-additive stationary model: Varian, *Microeconomic Analysis*, 3rd ed. Pages 358-359.

Robert Strotz (1956), "Myopia and Inconsistency in Dynamic Utility Maximization," *Review of Economic Studies*, 23, 165-180

Battigali, P. (1997) "Dynamic Inconsistency and Imperfect Recall." *Games and Economic Behavior* 20, 31-50.

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11. Endowment Effect

Kahneman, D., J. Knetsch, and R. Thaler (1991), .The Endowment Effect, Loss Aversion, and the Status Quo Bias., *Journal of Economic Perspectives*, 5, 198-206

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12. Sex and Beauty

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Mark and Tanya, AER 2006

13. Auctions

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Levin, Dan, John Kagel, and Jean-Francois Richard, ``Revenue Effects and Information Processing in English Common Value Auctions." *AER*, 1996, 442-460.

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List, John A. and David Lucking-Reiley, ``Demand Reduction in Multiunit Auctions: Evidence from a Sportscard Field Experiment." *AER*, 2000, 961-972.

Kagel, John H. and Dan Levin, ``Common Value Auctions with Insider Information." *Econometrica*, 1999, 1219-1238.

Andreoni, James, Yeon-Koo Che and Jinwoo Kim ["Asymmetric Information about Rivals' Types in Standard Auctions: An Experiment."](#) February 2005.

14. Errors and Learning

a. Adaptive and Evolutionary Learning

Miller and Andreoni, ``Can Evolutionary Dynamics Explain Free Riding in Experiments?" *Economics Letters*, 1991, **36**, 9-15

Andreoni, James and John H. Miller, ``Auctions with Artificial Adaptive Agents." *GEB*, **10**, 1995, 39-64.

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Crawford, Vincent P. ``Adaptive Dynamics in Coordination Games." *Econometrica*, January 1995, 103-43.

Van Huyck, John B., Joseph Cook and Raymond C. Battalio, ``Selection Dynamics, Asymptotic Stability, and Adaptive Behavior." *JPE*, 102, 1994, 975-1005.

b. Belief Based Learning

Fudenberg, Drew and David Levine, ``Measuring Players' Losses in Experimental Games." *QJE*, 1997, 507-536.

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c. Reinforcement Learning

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d. Combinations of Belief and Reinforcement

Camerer, Colin and Teck-Hua Ho, "Experience-weighted Attraction Learning in Normal Form Games." *Econometrica*, 1999, 827-874.

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e. Quantal Response Equilibrium

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15. Neuroeconomics

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