

BAR-ILAN UNIVERSITY

Department of Economics
52900 Ramat-Gan, Israel



אוניברסיטת בר-אילן

המחלקה לכלכלה
רמת-גן 52900

טלפון : 972-3-5318345/6, פקס : 972-3-7384034

MINI-COURSE: 66-843-01

כלכלה התנהגותית

BEHAVIORAL ECONOMICS

Professor Simon Gächter

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7 Lectures (January 7-15 2009)

◆ יום רבעי - 7/1/ 2009 - WEDNESDAY

Lecture #1: 12:00-14:00

◆ יום חמשי - 8/1/ 2009 - THURSDAY

Lecture #2: 10:00-12:00

Lecture #3: 16:00-18:00

◆ יום שלישי - 13/1/ 2009 - TUESDAY

Lecture #4: 12:00-14:00

◆ יום רבעי - 14/1/2009 - WEDNESDAY

Lecture #5: 19:00-21:00

◆ יום חמשי - 15/1/2009 - THURSDAY

Lecture #6: 10:00-12:00

Lecture #7: 16:00-18:00



THIS MINI-COURSE IS MADE POSSIBLE BY THE GENEROUS SUPPORT OF
THE ADAR FOUNDATION, DEPARTMENT OF ECONOMICS,
BAR-ILAN UNIVERSITY

ב"ה, כ"ה כסלו תשס"ט
22 דצמבר 2008

COURSE 66-843-01
כלכלה התנהגותית
BEHAVIORAL ECONOMICS

Professor Simon Gächter

להלן כיתות הלימוד בהן יתקיימו המפגשים במהלך הקורס:

מיקום	שעות הפגישה	יום ותאריך
107/507	12-14	רביעי 07/01/09
102/604	10-12	חמישי 08/01/09
6/507	16-18	חמישי 08/01/09
4/507	12-14	שלישי 13/01/09
11/604	19-21	רביעי 14/01/09
102/604	10-12	חמישי 15/01/09
6/507	16-18	חמישי 15/01/09

Behavioural Economics

Simon Gächter, University of Nottingham

Behavioural economics is the reintegration of psychology into economics. The development of formalized neoclassical economics, utility theory, and game theory (which all allow economists to make more precise behavioural predictions than any other social science) and the tools of experimental economics have paved the way for this exciting import. The ultimate aim of this scientific effort is to make economics a more realistic science.

The goal of this course is to make people aware of the psychological underpinnings of economic behaviour. The course is structured along the dominant model of economics: economic actors maximize a present value utility function with exponential discounting given the information they possess and given the choice set they have. Thus, the primitives of any economic model are preferences, information, and choice sets from which rational individuals will choose the optimal one given their preferences and their information. We will use this very basic economic model as a guide for studying the psychological realism of these building blocks. We focus on preferences – risk preferences, reference-dependent preferences, time preferences, and social preferences. We will discuss the most important/recent (experimental) evidence, discuss some policy implications, and some seminal developments in behavioural economic theory – theories that model some of the most important behavioural findings. Along the way we will also discuss some analytical tools for conducting behavioural research, in particular laboratory experiments.

Contact: simon.gaechter@nottingham.ac.uk.

Course Outline (7 Lectures)

- A. Reference-dependent (risk) preferences
 - 1. Risk preferences and non-expected utility theories
 - 2. Endowment effect, loss aversion, and reference-dependent preferences
 - 3. Economic applications
- B. Time preferences, discounting and self-control
 - 4. Measuring and modeling time preferences
 - 5. Self-control
- C. Social preferences
 - 6. The interdisciplinary toolbox of measuring social preferences
 - 7. Theories of social preferences

Detailed references:

* will be discussed more intensively in class. The other references are recommended reading and/or will only be briefly mentioned in class.

1. Risk preferences and non-expected utility theories

Camerer, Colin (1995). Individual Decision Making. In: John Kagel and Alvin Roth (eds.) *Handbook of Experimental Economics*. Princeton: Princeton University Press.

De Martino, B., Kumaran, D., Seymour, B., Dolan, R. J., 2006. Frames, biases, and rational decision-making in the human brain. *Science* 313, 684-686.

* Dohmen, Thomas, Armin Falk, David Huffman, Uwe Sunde, Jürgen Schupp & Gerd Wagner (2005). Individual Risk Attitudes: New Evidence from a Large, Representative, Experimentally-Validated Survey. IZA Discussion Paper Series No. 1730. Available at: <http://ftp.iza.org/dp1730.pdf>

* Huck, Steffen & Wieland Müller (2007). Allais for all: revisiting the paradox. CentER Discussion Paper No. 2007-99, University of Tilburg. Available at <http://arno.uvt.nl/show.cgi?fid=67482>.

* Kahneman, Daniel & Amos Tversky (1979). Prospect theory: An analysis of decisions under risk. *Econometrica* 47(2), pp.313-327.

Post, T., van den Assem, M. J., Baltussen, G., Thaler, R. H., 2008. Deal or No Deal? Decision Making under Risk in a Large-Payoff Game Show. *American Economic Review* 98, 38-71

Rabin, Matthew (2000): Risk-aversion and expected utility theory: A calibration theorem. *Econometrica*, 68(5), 1281-1292.

Rabin, Matthew & Richard Thaler (2001). Anomalies. Risk Aversion. *Journal of Economic Perspectives* 15(1), 219-232.

Rabin, Matthew & Georg Weizsäcker (forthcoming). Narrow bracketing and dominated choice. *American Economic Review*. Available at: <http://ftp.iza.org/dp3040.pdf>.

Schmidt, Ulrich, Chris Starmer & Robert Sugden (2008). Third-generation prospect theory. *Journal of Risk and Uncertainty* 36, 203-223

* Starmer, Chris (2000): Developments in non-expected utility theory: The hunt for a descriptive theory of choice under risk. *Journal of Economic Literature* 38, 332-382.

* Tom, S. M., Fox, C. R., Trepel, C., Poldrack, R. A., (2007). The Neural Basis of Loss Aversion in Decision-Making Under Risk. *Science* 315, 515-518.

Tversky, Amos & Daniel Kahneman (1981). The framing of decisions and the psychology of choice. *Science*, 211, 453-458.

Tversky, Amos & Daniel Kahneman (1992). Advances in prospect theory: Cumulative representation of uncertainty. *Journal of Risk and Uncertainty*, 5, 297-323.

2. Endowment effect, loss aversion, and reference-dependent preferences

Bateman, Ian, Alistair Munro, Bruce Rhodes, Chris Starmer & Robert Sugden (1997): A test of the theory of reference-dependent preferences. *Quarterly Journal of Economics* 112(2), 479-505.

Camerer, Colin (1995). Individual Decision Making. In: John Kagel and Alvin Roth (eds.) *Handbook of Experimental Economics*. Princeton: Princeton University Press.

* Gächter, Simon, Eric Johnson & Andreas Herrmann (2007). Individual-level loss aversion in riskless and risky choices. CeDEx Discussion Paper No. 2007-02, University of Nottingham, Available at <http://www.nottingham.ac.uk/economics/cedex/papers/2007-02.pdf>.

Kahneman, Daniel, Jack Knetsch & Richard Thaler (1990): Experimental tests of the endowment effect and the Coase theorem. *Journal of Political Economy* 98, 1325-1348.

* Kahneman, Daniel, Jack Knetsch & Richard Thaler (1991): Anomalies: The endowment effect, loss aversion and status quo bias. *Journal of Economic Perspectives* 5(1), 193-206.

Knetsch, Jack (1989): The endowment effect and evidence of non-reversible indifference curves. *American Economic Review* 79(5), 1277-1284.

* Köszegi, Botond & Matthew Rabin (2006). A Model of Reference-Dependent Preferences. *Quarterly Journal of Economics* 121, 1133-1165.

List, John A. (2003): Does Market Experience Eliminate Market Anomalies? *Quarterly Journal of Economics* 118(1): 41-71.

* Tversky, Amos & Daniel Kahneman (1991): Loss aversion in riskless choice: A reference-dependent model. *Quarterly Journal of Economics*, 106, 1039-1061.

3. Economic applications

Beshears, John, James Choi, David Laibson, and Brigitte Madrian (2008). "The Importance of Default Options for Retirement Saving Outcomes: Evidence from the United States" In Stephen J. Kay and Tapen Sinha, editors, *Lessons from Pension Reform in the Americas*, pp. 59-87. Oxford University Press. Available at: <http://www.som.yale.edu/faculty/jjc83/turin.pdf>

* Camerer, Colin (1999): Prospect theory in the wild. In: D. Kahneman & A. Tversky: *Choices, Values and Frames*. Cambridge University Press. Available at http://www.hss.caltech.edu/~jernej/BehEcon485b/ABE_Ch5.pdf

Camerer, Colin, Linda Babcock, George Loewenstein & Richard Thaler (1997). Labor supply of New York City cab drivers: One day at a time. *Quarterly Journal of Economics*, 111, 408-441.

* Carroll, Gabriel D., James Choi, David Laibson, Brigitte C. Madrian & Andrew Metrick forthcoming. Optimal defaults and active decisions. *Quarterly Journal of Economics*, available at <http://www.som.yale.edu/faculty/jjc83/AD-QJE.pdf>.

* Fehr, Ernst & Lorenz Goette (2007). Do Workers Work More if Wages Are High? Evidence from a Randomized Field Experiment. *American Economic Review* 97, 298-317.

Genesove, David & Christopher Mayer (2001). Loss aversion and seller behavior: Evidence from the housing market. *Quarterly Journal of Economics* 116(4), 1233-1260.

Heidhues, Paul & Botond Köszegi (2008). Competition and Price Variation When Consumers

Are Loss Averse. *American Economic Review* 98, 1245-1268.

* Johnson, Eric J. & Daniel Goldstein (2003). Do Defaults Save Lives? *Science* 302, 1338-1339.

Odean, Terrence (1998). Are investors reluctant to realize their losses? *Journal of Finance*, LIII(5), 1775-1798.

Samuelson, William & Richard Zeckhauser (1988). Status quo bias in decision making. *Journal of Risk and Uncertainty* 1, 7-59.

Thaler, Richard (1980): Toward A Positive Theory of Consumer Choice, *Journal of Economic Behavior and Organization*, 1, 39-60.

4. Measuring and modeling time preferences

* Andersen, Steffen, Glenn Harrison & Elisabet E. Rutström (2008). Eliciting risk and time preferences. *Econometrica* 76, 583–618

Angeletos, George-Marios, David Laibson, Andrea Repetto, Jeremy Tobacman & Stephen Weinberg (2001): The hyperbolic buffer stock model: Calibration, simulation, and empirical evaluation. *Journal of Economic Perspectives*, 15(3), 47-68.

Benzion, Uri, Amnon Rapoport & Joseph Yagil (1989). Discount rates inferred from decisions: An experimental study. *Management Science* 35(3), 270-284.

Chabris, Christopher F., David Laibson & Jonathon P. Schuldt. (2008). Intertemporal choice. The New Palgrave Dictionary of Economics. Palgrave Macmillan, Basingstoke. Available at: <http://www.economics.harvard.edu/faculty/laibson/files/article%20Palgrave.pdf>

Chabris, Christopher F., David Laibson, Carrie L. Morris, Jonathon P. Schuldt & Dmitry Taubinsky (2008). Individual laboratory-measured discount rates predict field behavior. *Journal of Risk and Uncertainty* 37, 237-269.

Dohmen, Thomas, Armin Falk, David Huffman & Uwe Sunde (2007). Are Risk Aversion and Impatience Related to Cognitive Ability? IZA Discussion Paper No. 2735, available at <http://ftp.iza.org/dp2735.pdf>.

* Frederick, Shane, George Loewenstein, & Ted O'Donoghue (2002). Time discounting and time preferences: A critical review. *Journal of Economic Literature* 40, 351-401.

Laibson, David (1997). Golden eggs and hyperbolic discounting. *Quarterly Journal of Economics* 112, 443-477.

Laibson, David, Andrea Repetto & Jeremy Tobacman (2007). Estimating Discount Functions with Consumption Choices over the Lifecycle. Mimeo Harvard University. Available at <http://www.economics.harvard.edu/faculty/laibson/files/msmpaper20070731AERresubmit.pdf>

Loewenstein, George & Drazen Prelec (1992). Anomalies in intertemporal choice. Evidence and interpretation. *Quarterly Journal of Economics*, 107(2), 573-597.

Loewenstein, George (1992): The fall and rise of psychological explanation in the economics of intertemporal choice. In George Loewenstein & Jon Elster (eds.), *Choice over time* (pp. 3-34). New York: Russell Sage.

Loewenstein, George, Daniel Read & Roy Baumeister (eds) (2003). *Time and Decision. Economic and Psychological Perspectives on Intertemporal Choice*. New York: Russell Sage Foundation.

* McClure, S. M., Laibson, D. I., Loewenstein, G. & Cohen, J. D. (2004). Separate neural systems value immediate and delayed monetary rewards. *Science* 306, 503-507.

Thaler, Richard (1981): Some Empirical Evidence on Dynamic Inconsistency. *Economics Letters* 7, 201-207.

5. Modeling self-control problems

Becker, Gary & Kevin Murphy (1988). A theory of rational addiction. *Journal of Political Economy* 96(4), 675-701.

DellaVigna, Stefano & Ulrike Malmendier (2004). Contract Design and Self-Control: Theory and Evidence. *Quarterly Journal of Economics* 119, 353-402.

DellaVigna, Stefano & Ulrike Malmendier (2006). Paying not to go to the gym. *American Economic Review* 96, 694-719.

Gruber, Jonathan & Botond Köszegi (2001). Is addiction rational? Theory and evidence. *Quarterly Journal of Economics* 116(4), 1261-1303.

Laibson, David (2001). A cue-theory of consumption. *Quarterly Journal of Economics* 116, 81-119.

Laibson, David, Andrea Repetto & Jeremy Tobacman (1998). Self-control and saving for retirement. *Brookings Papers on Economic Activity*, 91-196.

Loewenstein, George & Jon Elster (eds) (1999). *Choice over time*. Russell Sage Foundation.

Loewenstein, George (1996): Out of control: visceral influences on behavior. *Organizational Behavior and Human Decision Processes*, 65, 272-92.

O'Donoghue, Ted & Matthew Rabin (1999). Addiction and Self-Control. In: Jon Elster (ed). *Addictions: Entries and Exits*. New York: Russell Sage.

* O'Donoghue, Ted & Matthew Rabin (1999). Doing it now or later. *American Economic Review* 89, 103-124.

* O'Donoghue, Ted & Matthew Rabin (2001). Choice and procrastination. *Quarterly Journal of Economics* 116, 121-160.

Rachlin, Howard (2000): *The Science of Self-Control*. Cambridge: Harvard University Press.

* Reuben, Ernesto, Paola Sapienza & Luigi Zingales (2007). Procrastination and impatience. NBER Working Paper 13713. <http://ereuben.googlepages.com/ProcrastinationImpatience.pdf>

Shefrin, Hersh & Richard Thaler (1992): Mental accounting, saving, and self-control. In George Loewenstein & Jon Elster (eds.), *Choice over time* (pp. 287-329). New York: Russell Sage Foundation.

6. The interdisciplinary toolbox for measuring social preferences

Abbinck, Klaus, Irlenbusch, Bernd, & Renner, Elke (2000). The moonlighting game: An experimental study on reciprocity and retribution. *Journal of Economic Behavior and Organization*, 42, 265-277.

Andreoni, James & John Miller (2002). Giving according to GARP: An experimental study of

rationality and altruism. *Econometrica*, 70, 737-753.

* Bellemare, Charles & Sabine Kröger (2007). Representative Social Capital. *European Economic Review* 51, 183-202.

Berg, Joyce, John Dickhaut & Kevin McCabe (1995). Trust, reciprocity, and social history. *Games and Economic Behavior*, 10, 122-142.

Blount, Sally (1995). When social outcomes aren't fair: The effect of causal attributions on preferences. *Organizational Behavior and Human Decision Processes*, 63, 131-144.

Camerer, Colin & Ernst Fehr (2006). When Does 'Economic Man' Dominate Social Behavior? *Science* 311, 47-52.

* Camerer, Colin (2003). *Behavioral Game Theory*. Princeton: Princeton University Press. Chapter 2.

Eckel, Catherine, & Phillip Grossman (1996). Altruism in anonymous dictator games. *Games and Economic Behavior*, 6, 181-191.

* Falk, Armin (2007): Gift-Exchange in the Field, *Econometrica* 75(5), 1501-1511.

Fehr, Ernst & Colin Camerer (2007). Social neuroeconomics: the neural circuitry of social preferences. *Trends in Cognitive Sciences* 11, 419-427.

Fehr, Ernst & Simon Gächter (2000). Fairness and retaliation. The economics of reciprocity. *Journal of Economic Perspectives*, 14, 159-181.

Fehr, Ernst & Simon Gächter (2002). Altruistic punishment in humans. *Nature*, 415, 137-140.

Fehr, Ernst & Urs Fischbacher (2002). Why social preferences matter: The impact of non-selfish motives on competition, cooperation, and incentives. *Economic Journal* 112, C1-C33.

Fehr, Ernst & Urs Fischbacher (2003). The Nature of Human Altruism. *Nature* 425, 23 October 2003, 785-791.

* Gächter, Simon, Elke Renner & Martin Sefton (2008). The long-run benefits of punishment. *Science* 322, 1510.

Güth, Werner, Carsten Schmidt & Matthias Sutter (2003). Fairness in the mail and opportunism in the internet. A newspaper experiment on ultimatum bargaining. *German Economic Review*, 4, 243-265.

* Henrich, Joseph, Robert Boyd, Samuel Bowles, Colin Camerer, Ernst Fehr, & Richard McElreath (2001). In search of homo economicus: behavioral experiments in 15 small-scale societies. *American Economic Review* 91(2), 73-78.

* Herrmann, Benedikt, Christian Thöni & Simon Gächter (2008). Antisocial punishment across societies. *Science* 319, 1362-1367

* Jensen, Keith, Josep Call & Michael Tomasello (2007). Chimpanzees are rational maximizers in an ultimatum game. *Science* 318, 107-109.

Sanfey, A.G., Rilling, J.K., Aronson, J.A., Nystrom, L.E., & Cohen, J.D. (2003). The neural basis of economic decision-making in the ultimatum game. *Science*, 300, 1755-1758.

7. Theories of social preferences

* Bellemare, Charles, Sabine Kröger & Arthur van Soest (2008). Measuring inequity aversion in a heterogeneous population using experimental decisions and subjective probabilities. *Econometrica* 76, 815-839

Bolton, G., & Ockenfels, A. (2000). ERC – A theory of equity, reciprocity, and competition. *American Economic Review*, 100, 166-193.

Charness, Gary & Matthew Rabin (2002). Understanding social preferences with simple tests. *Quarterly Journal of Economics* 117(3), 817-869.

Cox, James, Friedman, Daniel & Gjerstad, Steven (2007). A tractable model of reciprocity and fairness. *Games and Economic Behavior* 59, 17-45.

Dufwenberg, Martin & Georg Kirchsteiger (2004). A theory of sequential reciprocity. *Games and Economic Behavior* 47, 268-298.

* Engelmann, Dirk & Martin Strobel (2004): Inequality Aversion, Efficiency, and Maximin Preferences in Simple Distribution Experiments. *American Economic Review* 94(4), 857-869.

Falk, Armin, Ernst Fehr, and Urs Fischbacher (2008), “Testing Theories of Fairness - Intentions Matter. *Games and Economic Behavior* 62, 287-303.

Falk, Armin, Ernst Fehr, & Urs Fischbacher (2005): Driving Forces Behind Informal Sanctions. *Econometrica* 73(6), 2017-2030.

Falk, Armin & Urs Fischbacher (2006). A theory of reciprocity. *Games and Economic Behavior*.

* Falk, Armin, Ernst Fehr, & Urs Fischbacher (2003). On the nature of fair behavior. *Economic Inquiry* 41(1), 20-26.

* Fehr, Ernst, & Klaus Schmidt (1999). A theory of fairness, competition, and cooperation. *Quarterly Journal of Economics* 114, 817-868.

Fehr, Ernst, & Klaus Schmidt (2003). Theories of fairness and reciprocity: Evidence and economic applications. In: Matthias Dewatripont, Lars Hansen & Stephen Turnovsky (Eds.). *Advances in Economics and Econometrics. Theory and Applications*. Vol. I. (pp. 208-257). Cambridge: Cambridge University Press.

Geneakoplos, John, David Pearce, & Ennio Stacchetti (1989). Psychological games and sequential rationality. *Games and Economic Behavior*, 1, 60-79.

Loewenstein, George, Leigh Thompson, & Max Bazerman (1989). Social utility and decision making in interpersonal contexts. *Journal of Personality and Social Psychology*, 57, 426-441.

Rabin, Matthew (1993). Incorporating fairness into game theory and economics. *American Economic Review*, 83, 1281–1302.

Sobel, Joel (2005): Interdependent Preferences and Reciprocity. *Journal of Economic Literature* XLIII, 392-436.

General references on Behavioural Economics

- Barberis, Nicholas & Richard Thaler (2003). A Survey of Behavioral Finance. In George Constantinides, M. H., Rene Stulz, (Ed.), *Handbook of the Economics of Finance*. North Holland, Amsterdam.
- Camerer, Colin & George Loewenstein (2004): *Advances in Behavioral Economics*. Princeton: Princeton University Press 2004.
- Camerer, Colin (2003). *Behavioral game theory*. Princeton University Press, Princeton.
- Camerer, Colin; George Loewenstein; and Drazen Prelec (2004): Neuroeconomics: Why Economics Needs Brains. *Scandinavian Journal of Economics* 106(3), 555-579.
- DellaVigna, S., (in print). Psychology and economics: evidence from the field. *Journal of Economic Literature*. <http://www.econ.berkeley.edu/~sdellavi/wp/pefieldevid08-08-07Longer.pdf>
- Diamond, P., Vartiainen, H. (ed), (2007). *Behavioral Economics and Its Applications*. Princeton University Press, Princeton.
- Gintis, Herbert, Samuel Bowles, Robert T. Boyd & Ernst Fehr: *Moral Sentiments and Material Interests: The Foundations of Cooperation in Economic Life*. MIT Press 2005.
- Kagel, John & Alvin E. Roth (1995). *The Handbook of Experimental Economics*. Princeton University Press, Princeton.
- Kahneman, Daniel (2003): A psychological perspective on economics. *American Economic Review*, 93(2), 162-168.
- Kahneman, Daniel (2003). Maps of bounded rationality: Psychology for behavioral economics. *American Economic Review* 93, 1449-1475.
- Kahneman, Daniel & Amos Tversky (ed) (2000). *Choices, Values, and Frames*. Cambridge University Press, Cambridge.
- Lewin, Shira (1996). Economics and psychology: Lessons for our own day from the early twentieth century. *Journal of Economic Literature*, 34(3), 1293-1323.
- Plott, Charles R. & Vernon L. Smith (eds) (2008). *Handbook of Experimental Economic Results*, Vol. 1. North-Holland, Amsterdam.
- Rabin, Matthew (1998): Psychology and economics. *Journal of Economic Literature*, 36, 11-46.
- Rabin, Matthew (2002): A perspective on psychology and economics. *European Economic Review*, 46, 657-687.
- Thaler, Richard (1991). *The Winner's Curse: Paradoxes and Anomalies of Economic Life*. Free Press, New York.
- Thaler, Richard (2000). From homo economicus to homo sapiens. *Journal of Economic Perspectives* 14(1), 133-141.
- Tirole, Jean (2002): Rational irrationality: Some economics of self-management. *European Economic Review*, 46, 633-655; in particular pp. 633-642.
- Wilkinson, N., 2008. *An introduction to behavioral economics*. Palgrave MacMillan, Basingstoke, UK.

Popular books on Behavioural Economics

Ariely, Dan (2008). *Predictably Irrational: The Hidden Forces That Shape Our Decisions*. HarperCollins, New York

Thaler, Richard H., Sunstein, Cass (2008). *Nudge: Improving Decisions About Health, Wealth, and Happiness*. Yale University Press, New Haven, CT