

OUTLINE OF MINICOURSE “BIOLOGICAL BASIS OF ECONOMICS”  
TOULOUSE SCHOOL OF ECONOMICS  
ARTHUR J. ROBSON                      JANUARY 2013

GENERAL REFERENCES

Dawkins, Richard. *The selfish gene*. New York: Oxford University Press, 1976.

Dennett, Daniel (1995) *Darwin's Dangerous Idea: Evolution and the Meanings of Life* New York: Simon and Schuster

Robson, A.J. “The Biological Basis of Economic Behavior,” *J. Econ. Lit.* 29 (2001), 11-33.

Robson, A.J. "Evolution and Human Nature," *Journal of Economic Perspectives* 16 (2002), 89-106.

Robson, A.J. and Larry Samuelson "The Evolutionary Foundations of Preferences" In *Handbook of Social Economics*. Edited by Alberto Bisin and Matt Jackson, North-Holland, pp. 221-310.

WHY DO WE HAVE UTILITY FUNCTIONS? WHAT ARE ITS ARGUMENTS?

Binmore, Kenneth G. 1994. *Game Theory and the Social Contract. Volume 1: Playing Fair*. Cambridge: MIT Press.

Robson, A.J. "Why Would Nature Give Individuals Utility Functions?" *Journal of Political Economy*, 109 (2001), 900-914.

Rayo, L. and Robson, A.J. “Biology and the Arguments of Utility” WP 2012

WHY WOULD HEDONIC UTILITY FUNCTIONS ADAPT?

Daniel Gilbert. *Stumbling on Happiness*. Vintage Books, New York, 2007.

Frederick, Shane, and George Loewenstein. 1999. "Hedonic Adaptation." In *Well-Being: The Foundations of Hedonic Psychology*. Daniel Kahneman, Ed Diener, and Norbert Schwarz, eds. New York: Russell Sage Foundation.

Robson, A.J. "The Biological Basis of Economic Behavior," *J. Econ. Lit.* 29 (2001), 11-33.

Nick Netzer, 2009. "Evolution of Time Preferences and Attitudes toward Risk," *American Economic Review*, 99(3), 937-55.

Rayo, L., and Becker, G. "Evolutionary Efficiency and Happiness," *JPE* 115 (2007), 302-337.

David A. Schkade and Daniel Kahneman. (1998) "Does living in California make people happy? A focusing illusion in judgments of life satisfaction." *Psychological Science*, 9(5): 340-346, 1998.

Daniel Kahneman and Richard Thaler. "Anomalies: Utility maximization and experienced utility." *Journal of Economic Perspectives*, 20(1):221-234, 2007.

Robson, A.J. and Larry Samuelson "The Evolutionary Optimality of Decision and Experienced Utility" *Theoretical Economics* 6 (2011), 311–339.

## RISK

Robson, A.J. "A Biological Basis for Expected and Non-Expected Utility", *Journal of Economic Theory* 68 (1996), 397-424.

Cooper W. S., R. H. Kaplan. 1982. Adaptive "coin-flipping": a decision theoretic examination of natural selection for random individual variation. *Journal of Theoretical Biology*. 94: 135—151.

Curry, PA. "Decision making under uncertainty and the evolution of interdependent preferences." *Journal of Economic Theory*, 98: 2001, 357-369.

Grafen, A. "Formal Darwinism, the individual-as-maximizing-agent analogy and bet-hedging," *Proceedings of the Royal Society B: Biological Sciences* 266: 1999, 14, 799-803.

## TIME PREFERENCE

Bishai, David M. 2004. "Does time preference change with age?" *Journal of Population Economics*, 17(4):583-602

Bettinger, Eric, and Robert Slonim. (2007). "Patience among children." *Journal of Public Economics*, 91: 343-363

Nordhaus, William. 2007. "The Stern Review on the economics of climate change." *Journal of Economic Literature*, 45(3): 686-702.

Sozou, Peter D. 1998. "On hyperbolic discounting and uncertain hazard rates." *Proceedings of the Royal Society of London, Series B*, 5(1409): 2015-2020.

Dasgupta, Partha, and Eric Maskin. 2005. "Uncertainty and hyperbolic discounting." *American Economic Review*, 95(4):1290-1299.

Robson, A.J. and Larry Samuelson "The Evolution of Intertemporal Preferences" (with Larry Samuelson), *American Economic Review P&P* 97 (2007), 496-500.

Robson, A.J. and Larry Samuelson "The Evolution of Time Preference with Aggregate Uncertainty" *American Economic Review*, 99 (2009), 1925-53.

Rogers, Alan R. 1994. "Evolution of Time Preference by Natural Selection" *American Economic Review* 84(3):460-481.

Robson, A.J. and Balazs Szentes "Evolution of Time Preference by Natural Selection: Comment" *American Economic Review* 98 (2008), 1178-1188. (See also online material "An Extended Example".)

Robson, A.J., Balazs Szentes, and Emil Iantchev "The Evolutionary Basis of Time Preference: Intergenerational Transfers and Sex" *American Economic Journal: Microeconomics* 2012, 4(4), 172-201

Robson, A.J. and Szentes, B. "A Biological Theory of Public Discounting" WP, 2012

## POSSIBLE ADDITIONAL TOPICS GIVEN TIME

### ALTRUISM TO KIN

Hamilton, W. D. "The Genetical Evolution of Social Behavior, I." *Journal of Theoretical Biology*, July 1964a, 7(1), pp. 1-16.

\_\_\_\_\_ "The Genetical Evolution of Social Behavior, II." *Journal of Theoretical Biology*, July 1964b, 7(1), pp. 17-52.

Trivers, Robert. *Social evolution*. Menlo Park, CA: Benjamin-Cummings, 1985.

Bergstrom, T.C. "On the Evolution of Altruistic Rules for Siblings," *Amer. Econ. Rev.* 1995, 85, 58-81.

Bergstrom, T.C. "Economics in a Family Way," *J. Econ. Lit.* 1996, 34, 1903-1934.

Alger, Ingela & Weibull, Jörgen, 2012. "Homo Moralis-Preference evolution under incomplete information and assortative matching," TSE Working Papers 12-281, Toulouse School of Economics.

### THEORY OF MIND

Byrne, R.W. and A. Whiten (1997): "Machiavellian Intelligence," in *Machiavellian Intelligence II: Extensions and Evaluations*, Whiten, A. and R.W. Byrne (eds.), 1-23. Cambridge University Press: Cambridge, UK.

Byrne, R.W. and Whiten, A. (eds) (1988): *Machiavellian Intelligence: Social Expertise and the Evolution of Intellect in Monkeys, Apes and Humans*. Blackwell: Oxford, UK.

Cheney, D.L. and R.M. Seyfarth (1990): *How Monkeys See the World: Inside the Mind of Another Species*. University of Chicago Press: Chicago.

Stahl, D.O. (1993): "Evolution of Smart-n Players," *Games and Economic Behavior*, 5, 604-617.

Robalino, N., and A.J. Robson "The Economic Approach to Theory of Mind" *Philosophical Transactions of the Royal Society: Series B* 2012, 367(1599): 2224-33.

Monte, D., N. Robalino and A.J. Robson "The Evolution of Theory of Mind" WP 2012

## GENES AND CULTURE

Boyd, Robert and Richerson, Peter. *Culture and the evolutionary process*. Chicago: University of Chicago Press, 1985

Cavalli-Sforza, Luigi and Feldman, Marcus. *Cultural transmission and evolution*. Princeton, NJ: Princeton University Press, 1981

J. R. Behrman & P. Taubman (1989): Is Schooling 'Mostly in the Genes'? Nature-Nurture Decomposition Using Data on Relatives. *Journal of Political Economy*, 97(6), pp. 1425–1446.

D. Cesarini, C. T. Dawes, M. Johannesson, P. Lichtenstein & B. Wallace (2009) "Genetic Variation in Preferences for Giving and Risk Taking." *Quarterly Journal of Economics*, 124(2), pp. 809–842.

D. J. Benjamin, D. Cesarini, M. J. van der Loos, C. T. Dawes, P. D. Koellinger, P. K. Magnusson, C. F. Chabris, D. Conley, D. Laibson, M. Johannesson & P. M. Visscher (2012): The Genetic Architecture of Economic and Political Preferences. *Proceedings of the National Academy of Sciences of the United States of America*, 109(21), pp. 8026–8031.

A. Bisin & T. Verdier (2000): "Beyond the Melting Pot": Cultural Transmission, Marriage, and the Evolution of Ethnic and Religious Traits. *Quarterly Journal of Economics*, 115(3), pp. 955–988.

Robalino, N., and A.J. Robson "Genes, Culture, and Preferences" WP, 2012

NOTE: Not all of these references can be extensively discussed; additional references may be needed.