

## ETIC 2005

### Giorgio Fagiolo - Reading List

#### Basic Papers on Simulations, ABM and ACE-approaches:

- Aruka, Y. (2001), *Evolutionary Controversies in Economics: A New Transdisciplinary Approach*, Springer, Tokyo, Berlin and others.
- Axelrod, R. (1997), "Advancing the Art of Simulation in the Social Sciences", in Conte, R., Hegselmann, R. and Terna, P. (Eds.), *Simulating Social Phenomena*, Berlin, Springer (av. At <http://www.econ.iastate.edu/tesfatsi/ace.htm> ).
- Boulding, K. E. (1991), What is evolutionary economics? *Journal of Evolutionary Economics*, 1, 9-17.
- Edmonds, B. and S. Moss (2004), "From KISS to KIDS: an 'anti-simplistic' modelling approach", Centre for Policy Modelling, Manchester Metropolitan University, mimeo.
- Epstein, J.M. and Axtell, R. (1996), *Growing Artificial Societies: Social Science from the Bottom-Up*, Washington D.C., MIT Press and Brooking Press.
- Frenken, K. (2005), "History, state and prospects of evolutionary models of technical change: a review with special emphasis on complexity theory", mimeo, Utrecht University, The Netherlands.
- Gilbert, N. and Troitzsch, K. (1999), *Simulation for the Social Scientist*, Open University Press, Milton Keynes.
- Grebel, T. and Pyka, T. (2003), "Agent-based Modeling – A methodology for the analysis of qualitative development processes", Discussion Paper #251, Department of Economics, University of Augsburg, Germany.
- Judd, K. and Tesfatsion, L. (2005), *Handbook of Computational Economics II: Agent-Based Computational Economics*, North-Holland, Forthcoming.
- Kwásnicki, W. (1998), Simulation methodology in evolutionary economics, in F. Schweitzer and G. Silverberg (eds), *Evolution und Selbstorganisation in der Ökonomie*, Vol. 9 of *Selbstorganisation: Jahrbuch für Komplexität in den Natur-, Sozial- und Geisteswissenschaften*, Duncker&Humblot, Berlin, pp. 161-186.
- Lane, D. (1993a), Artificial worlds and economics, part I, *Journal of Evolutionary Economics* 3, 89-107.
- Lane, D. (1993b), Artificial worlds and economics, part II, *Journal of Evolutionary Economics* 3, 177-197.
- Mäki, U. (1994) Reorienting the assumptions issue, in R. Backhouse (ed.), *New Directions in Economic Methodology*, London and New York, Routledge.
- Page, S.E. (1997), "On Incentives and Updating in Agent Based Models", *Computational Economics*, 10: 67-87.
- Pyka, A. and Fagiolo, G. (2005), "Agent-Based Modelling: A Methodology for Neo-Schumpeterian Economics". Forthcoming in: Hanusch, H. and Pyka, A. (eds.), *The Elgar Companion to Neo-Schumpeterian Economics*, Edward Elgar, Cheltenham. Available also as: Discussion Paper No. 272, Department of Economics, University of Augsburg, Germany (<http://www.wiwi.uni-augsburg.de/vwl/institut/paper/272.pdf>)

- Tesfatsion, L. (2001), Agent-based modelling of evolutionary economic systems, IEEE Transactions on Evolutionary Computation 5, 1-6.
- Tesfatsion, L. (2002), "Agent-based Computational Economics: Growing Economies from the Bottom Up", Ames, Iowa, Working Paper, No.1, Iowa State University, Dept. of Economics.
- Valente, M. (2004), "Qualitative Simulation Modelling", Faculty of Economics, University of L'Aquila, L'Aquila (Italy), mimeo.
- Werker, C. and T. Brenner (2004), "Empirical Calibration of Simulation Models", Papers on Economics and Evolution # 0410, Max Planck Institute for Research into Economic Systems, Jena.
- Wooldridge, M. and Jennings, N.R. (1995), Intelligent agents: theory and practice. Knowledge Engineering Review, 10: 115-152.

### **Additional References**

#### **Internet Resources**

<http://www.econ.iastate.edu/tesfatsi/ace.htm>

#### **Background on Standard Accounts (General Equilibrium, Game Theory, Etc.):**

- Kreps, D.M. (1990), A course in microeconomic theory, New York, Harvester Wheatsheaf, Ch. 6 (especially Par. 6.2) (available in the Library).
- Mas-Colell, A., Whinston, M.D. and Green, J.R. (1995), Microeconomic theory, Oxford, Oxford University Press, Chs. 10 and 15 (available in the Library).
- Rasmusen, E. (1990), *Games and information: an introduction to game theory*, Oxford, Basil Blackwell, Chs. 1-4 (available in the Library).
- Romer, D. (1996), Advanced Macroeconomics, New York, McGraw Hill, Ch. 2 (available in the Library).

#### **On Critiques to Standard Accounts and Difficulties in explaining Stylized Facts:**

- Kirman, A.P. (1989), "The intrinsic limits of modern economic theory: the emperor has no clothes", Economic Journal, 99: 126-139 (avail. through JSTOR at <http://www.jstor.org/>)
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- Dosi, G. and Orsenigo, L. (1994), "Macrodynamics and microfoundations: an evolutionary perspective", in Granstrand, O. (Ed.), *The economics of technology*, Amsterdam, North Holland.
- Dosi, G., Fagiolo, G., Aversì, R., Meacci, M. and Olivetti, C. (1999), "Cognitive Processes, Social Adaptation and Innovation in Consumption Patterns: from Stylized Facts to Demand Theory", in Dow, S.C. and Earl, P.E. (Eds.), *Economic Organizations and Economic Knowledge. Essays in Honour of Brian Loasby*, Cheltenham, Edward Elgar.
- Dosi, G., Marengo, L. and Fagiolo, G. (1999), "Learning in Evolutionary Environments", forthcoming in Dopfer, K. (Ed.), *The Evolutionary Foundations of Economics*, Cambridge,

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- Mayer, T. (1993), *Truth versus precision in economics*, Cheltenham, Edward Elgar.
- McCloskey, D.N. (1995), *The rhetoric of economics*, Brighton, Wheatsheaf.

### **On Modeling Decentralized Economies as Complex Evolving Systems:**

- Arthur, W.B., Durlauf, S.N. and Lane, D. (1997), "Introduction", in Arthur, W.B., Durlauf, S.N. and Lane, D. (Eds.), *The Economy as an Evolving Complex System II*, Santa Fe Institute, Santa Fe and Reading, MA, Addison-Wesley (p. 3-5) (available in the library, E-6202)
- Axtell, R. (2000), "Why agents? On the varied motivations for agent computing in the social sciences", The Brookings Institution, Washington, DC, *Mimeo*.
- Conlisk, J. (1996), "Why Bounded Rationality ?", *Journal of Economic Literature*, 34: 669-700 (av. Through JSTOR at <http://www.jstor.org>).
- Fagiolo, G. (1998), "Spatial interactions in dynamic decentralized economies: a review", in Cohendet, P., Llerena, P., Stahn, H. and Umbhauer, G. (Eds.), *The Economics of Networks. Interaction and Behaviours*, Berlin - Heidelberg, Springer Verlag.
- Kirman, A.P. (1997), "The Economy as an Evolving Network", *Journal of Evolutionary Economics*, 7: 339-353 (available through EBSCO online at <http://www-us.ebsco.com/>)
- Tesfatsion, L. (2002), "Agent-based Computational Economics: Growing Economies from the Bottom Up", Ames, Iowa, Working Paper, No.1, Iowa State University, Dept. of Economics (av. At <http://www.econ.iastate.edu/tesfatsi/ace.htm>).
- Arthur, W.B., Durlauf, S.N. and Lane, D. (Eds.), *The Economy as an Evolving Complex System II*, Santa Fe Institute, Santa Fe and Reading, MA, Addison-Wesley (available in the library, E-6202).
- Auyang, S. Y. (2001), "Synthetic Analysis of Complex Systems, I-Theories", Iowa State University, *Mimeo*.
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- Brock, W., and S. Durlauf (2001), "Discrete Choice with Social Interactions", *Review of Economic Studies*, 57, 68(2), 235-260 (available upon free subscription at [http://www.restud.com/past\\_editions.asp](http://www.restud.com/past_editions.asp))
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- Durlauf, S. N. (2001), "A Framework for the Study of Individual Behavior and Social Interactions", SSCI Working Paper, No. 2016, University of Wisconsin, Madison, WI.
- Holland, J.H. and Miller, J.H. (1991), "Artificial adaptive agents in economic theory", *American Economic Review*, 81: 365-370 (av. Through JSTOR at <http://www.jstor.org>).

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- Marengo, L. and Willinger, M. (1997), "Alternative Methodologies for Modeling Evolutionary Dynamics: Introduction", *Journal of Evolutionary Economics*, 7: 331-338 (available through EBSCO online at <http://www-us.ebsco.com/>).