

INSTITUTIONAL ECONOMICS

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Course Material Developed by Department of Economics,
Faculty of Social Sciences, Eötvös Loránd University Budapest (ELTE)

Department of Economics, Eötvös Loránd University Budapest

Institute of Economics, Hungarian Academy of Sciences

Balassi Kiadó, Budapest



Author: János Mátyás Kovács
Supervised by János Mátyás Kovács

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Week 10

New Institutional Economics III Evolutionary Economics

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Key question

- Evolutionary economics: an institutional research program?
 - It is more and less than that
 - Interested in institutional change
 - Examines how that change affects the economic actors
 - Builds on evolutionary psychology

- Relies on applied research (evolutionary finance, endogeneous growth theory, etc), and uses special mathematical tools (evolutionary game theory, agent-based models)
- It supplies other NIE subdisciplines (economic history, TCE, political economy)
- Main authors: Nelson, Winter, Hodgson, Metcalfe, Dosi
- It is not only Veblen whose legacy counts (he coined the term “evolutionary economics”) but also Smith and Malthus (who influenced Darwin), Marx, Marshall, Hayek, Schumpeter, Alchian, Boulding, etc
- Marshall: “*The Mecca of the economist lies in economic biology.*” (1907)
- Pioneers: Nelson and Winter: *An Evolutionary Theory of Economic Change*, 1982
- Principal concepts: gradual, incremental, spontaneous change, cumulative processes, rivalry, learning, and – of course, following Darwin – inheritance, variability, mutation, natural selection, survival, etc
- Like in new economic history, the key question is: how do institutions emerge? Additional question: and how do they survive?

After Veblen

- Veblen’s theory: (dis)similarities (see presentation No 6)
 - Individual and institution: mutual determination
 - Both agency and emergence matter
 - Lack of biological reductionism
 - Role of learning and knowledge in the evolutionary process
 - No teleology
 - Interplay of instincts and institutions
 - Stages of evolution
 - Genetic analysis
- Differences a century later:
 - Lack of a Grand Theory of history, and of references to instincts

- Sophisticated analysis, formal models
- The economic actor (agent) and his/her interactions are in the center of attention
- The agent and the environment change in some kind of interdependence
- Permanent adaptation to unforeseen changes
- Trial and error moves with a number of boundedly rational decisions
- Cumulative learning and adaptation
- Habits may become routines, rules, conventions and institutions
- Routines as genes/memes?
- Repetition-imitation-inheritance
- Experimentation and discovery
- Advantages of institutional diversity
- Muddling through and learning by doing
- Adaptive efficiency, organizational inertia
- Tacit knowledge
- Path dependence of equilibrium
- Complexity and evolutionary algorithms
- Simulation of complex dynamic systems
- Models of agent-based computational economics
- Nelson/Winter: getting back from Darwin what Malthus gave him (Veblen is not cited)

Routines as genes

- Features and problems
 - Focusing on firms; favorite example: Schumpeterian innovation in the course of competition between small enterprises
 - Routines as the organizational memory of the firm
 - Routine is understood in broad terms: all kinds of knowledge, procedures, habits (culture?)

- The crux of genetical analogy (Winter against Friedman): the institution that survives the competition, has to make this ability hereditary if it wants to survive in the next round
- Routines are lasting abilities, can be copied through imitation (Lamarck or Darwin?); routines may change: mutations

Does evolutionary economics necessarily have to become similar to modern biology?
Does it have to seek the economic gene/meme? What is the added value for economic science?

Neighboring fields

- In the background of the NIE subdisciplines, we have always seen the concepts of bounded rationality and endogeneous preferences
- Simon, Kahnemann, Vernon Smith, etc, i.e., behavioral economics and experimental economics were also there
- Evolutionary economics needs perhaps these subdisciplines the most in order to work with the notion of routine
- A few words about the “neighbors“:
- Behavioral (psychological, cognitive) economics
- Bringing the principle of utility maximization down to earth; “framing“: perception/interpretation before decision; beliefs and emotions in the interpretation; remembering previous decisions; illusion, error, time-inconsistency, bias; behavior depends on the context; actors do not minimize uncertainty according to standard probability theory; “prospect theory“; rules of thumb, herd behavior, etc
- Experimental economics
Could be a NIE subdiscipline just like mechanism design or evolutionary economics; though closer to neoclassical theory (e.g., experimental justification of perfect competition); unlike behavioral economics, it is interested less in the personal motives of decision-making than in their outcomes; studying alternative market institutions/procedures/games (e.g., auction models); establishes the

legitimacy of controlled laboratory experiments in economics; microeconomic approach; theory of “induced value”

Instead of a summary

- Is it possible to answer the questions raised in the introductory presentations?
- 1. is NIE better than OIE? 2. does NIE develop? 3. will NIE be able to produce a consistent theory (once OIE proved unable to do so)?
- Just a few remarks (instead of resolute answers):
 - NIE has won the struggle for recognition but its future depends on the results of cooperation with behavioral economics, and on the evolutionary extension of the school; the latter may lead to technical sophistication but loss of realism, thereby endangering one of the foundation principles of the school.
 - The development of individual subdisciplines is unbalanced (TCE’s dominance); nevertheless, each of them prospers rapidly but meanwhile the philosophical/sociological nuances of OIE fade away.
 - If the mainstream will prove to be as flexible in incorporating NIE in the future as it has been in the past, then will it be necessary to go on pursuing a separate research program?
- All these are problems of the “West”. In Eastern Europe institutional thought has more prosaic concerns (see the following three presentations)

Readings

Mandatory

Nelson and Winter: An Evolutionary Theory of Economic Change, 1982 (chapters)

Nelson: Recent evolutionary theorizing about economic change, 1995

Hodgson: Economics in the Shadows of Darwin and Marx, 2006

Additional

Andersen: Evolutionary Economics: Post-Schumpeterian Contributions, 1996 (chapters)

Vincze: Evolúció és közgazdasági elmélet, 1993

Tesfatsion and Judd (eds): Handbook of Computational Economics II, 2006 (chapters)

Annex

- Biographical sketches
 - Schumpeter
 - Kahnemann
- Final questions
 - Predecessors/successors of the school
 - Friends and foes
 - Discoveries
 - Changes in the research program