



In collaboration with Master in Economics and Complexity of the Collegio Carlo Alberto

With the support of



Are glad to invite you to the

# **International Workshop**

## Adaptive and Ecological Rationality in Complex Environments

## Campus Luigi Einaudi

Lungo Dora Siena 100 - Turin

**December, 16<sup>th</sup> 2015** from 3.00 to 7.30 p.m. Room C4 and **December 17<sup>th</sup> 2015** from 9.30 a.m. to 1.00 p.m. Room D5

Special guest: professor Gerd Gigerenzer

REGISTRATION IN THE MAIN HALL ONE HOUR BEFORE THE BEGINNING

### **PROGRAMME**

## 16<sup>th</sup> December Room C4

3.00 p.m.

### **Welcoming Remarks and Introduction**

Pietro Terna President, Collegio Carlo Alberto, Turin Riccardo Viale Herbert Simon Society and Scuola Nazionale dell'Amministrazione, Rome

Chairman

Magda Fontana University of Turin

3.15 p.m.

**Keynote speech Gerd Gigerenzer** 

Max Planck Institute for Human Development, Berlin President, International Herbert A. Simon Society, Berlin

4.00 p.m. **Discussion** 

4.20 - 6.40 p.m.Selected papers for the WS

4.20 p.m.

Thinking thanks to constraints

Laura Macchi University of Milan, Bicocca

4.50 p.m. **Coffee break** 

5.10 p.m.

Can Bounded Rationality Be Prescriptive?
Konstantinos Katsikopoulos Max Planck Institute for Human Development, Berlin

5.40 p.m.

Co-evolution of Mind and Society: Institutional Economics of Cognition and Emergence Shinji Teraji Department of Economics, Yamaguchi University, Japan

6.10 p.m.

How much can I widen my decision boundaries? A look at bounded rationality and transaction costs in the light of machine learning and big data analysis

Remo Pareschi Department of Bioscience and Territory, University of Molise, Pesche, IS

6.40 p.m.

**General Assembly of Herbert Simon Society** 

7.15 p.m.

**End of the Assembly** 

# 17<sup>th</sup> December Room D5

9.30 a.m.

#### **Introduction and Chairman**

Massimo Egidi Vice President, Herbert Simon Society and LUISS, Rome

9.40 a.m. - 1.00 p.m. Selected papers for the WS

9.40 a.m.

The dynamics of organizational structures and performances under diverging distributions of knowledge and different power structures

Luigi Marengo Department of Business and Management, LUISS University, Rome

10.10 a.m.

Statistical properties of decision environments

Ozgür Şimşek Max Planck Institute for Human Development, Berlin

10.40 a.m.

Time and error as measures of the quantity of attention: an experimental approach
Pierre Garrouste Université Nice Sophia Antipolis et GREDEG

11.10 a.m. **Coffee Break** 

11.30 a.m.

Global socio-economic problems or what is wrong with other people Marcel Tyrell Entrepreneurship and Finance, Zeppelin University, Lake Constance

12.00 p.m.

The role of comprehension in the prisoner's dilemma:
A pilot study on the positive effects of using simplified paradigms

Davide Pietroni Department of Business Studies, University of Chieti-Pescara

Sibylla Verdi Hughes University of Padua

12.30 p.m.

Haggling on Values: Towards Consensus or Trouble?

Victorien Barbet Aix-Marseille School of Economics & CNRS & EHESS, Aix-Marseille University

1.00 p.m.

Conclusion



#### **International Herbert A. Simon Society**

The Herbert Simon Society brings together cognitive scientists, economists, social scientists and philosophers aiming to renew the fundamental concepts of rationality and social action. Starting from the seminal work of Herbert Simon in economics, psychology, computer science, organizational theory, philosophy of science, the HSS wishes to tackle the current debate about the crisis of economic and social rationality, the alternative architectures of mind, the mind-brain relations and the simulation of creativity.

#### Introduction

What is Bounded Rationality (Simon, 1956; Gigerenzer and Selten, 2001)? Simon's metaphor of the pair of scissors is the best representation of the concept and of the connected naturalizing nature of the research program. One blade is the nature of our reasoning and decision making processes with all its limits in computation and time and the other blade is the nature of the environment, with all its complexity. The first blade is characterized by limited features compared to the ideal optimization model. The second is characterized by a changing complex structure. Sometimes the first blade fits with the second and those rational scissors work, but sometimes this does not happen. The rationality, that is the ability of the scissors to cut, is bounded by the fitting of one blade, that is reasoning and decision making, with the other blade that is the environment. Fitting, in other words, means adaptive choices in a given environment. Therefore, bounded rationality is a research program aiming to discover what are the natural specific decision rules that are adaptive in specific different environments. From this point of view, the natural decision rules of bounded rationality are the only rules that can be labeled as rational in a prescriptive meaning. Their label of rational is obviously non universal but local to the specific environment or problem space where the rule is adaptive. In other words human beings are often, but not always, bounded rational. Actually, sometimes they are also irrational, that is when their choice is not adaptive to the environment because they don't use the specific natural rule of bounded rationality that is suitable for the particular environment.

Economics and organizational studies have been mainly the dominion of the application of bounded rationality. Actually, the application of bounded rationality is much more wide and inclusive. It covers any field that implies human choice. The adapting features of bounded rationality should deal with many disciplines that usually are outside the field, such as developmental psychology, social psychology, psychopathology, evolutionary psychology, complexity sciences and cognitive anthropology. These different areas could help deepen aspects of bounded rationality and might also be very useful in their application to the field of economics.

#### FOUNDING MEMBERS

Kenneth Arrow (Stanford Univ. and Nobel Price in Economics in 1972); Mie Augier (Stanford Univ.); William Baumol (New York Univ.); Philip Bromiley (Univ. of Minnesota); Richard Day (Univ. of Southern California); Giovanni Dosi (Sant'Anna School of Advanced Studies, Pisa); Peter Earl (Univ. of Queensland); Massimo Egidi (LUISS, Rome); Edward Feigenbaum (Stanford Univ.); Shane Frederick (Massachusetts Institute of Technology); Gerd Gigerenzer (Max Planck Institute for Human Development, Berlin); Yuji Ijiri (Carnegie Mellon Univ.); Daniel Kahneman (Princeton Univ. and Nobel Price in Economics in 2002); David Klahr (Carnegie Mellon Univ.); Kenneth Kotovsky (Carnegie Mellon Univ.); Pat Langley (Stanford Univ.); Axel Leijonhufvud (Univ. of Trento); Brian Loasby (Univ. of Stirling); James March (Stanford Univ.); Luigi Marengo (Department of Management, LUISS University, Rome); Pamela McCorduck; Richard Nelson (Columbia Univ.); Joseph Pitt (Virginia Polytechnic Institute); Roy Radner (New York Univ.); Reinhard Selten (Univ. of Bonn and Nobel Price in Economics in 1994); Katherine Simon Frank (Univ. of Minnesota); Vernon Smith (George Mason Univ. and Nobel Price in Economics in 2002); James J. Staszewski (Carnegie Mellon Univ., Pittsburgh); Shyam Sunder (Yale School of Management); Raul Valdes-Perez (Vivisimo, Inc.); Riccardo Viale (Scuola Nazionale di Amministrazione, Rome).

### **GOVERNING BODIES**

PRESIDENT: Gerd Gigerenzer (Max Planck Institute for Human Development, Berlin)

VICEPRESIDENT : **Katherine Simon Frank** (University of Minnesota) and **Massimo Egidi** (LUISS; Rome)

EXECUTIVE COMMITTEE: **Giovanni Dosi** (Sant'Anna School of Advanced Studies, Pisa); **Richard Nelson** (Columbia University); **Roy Radner** (New York University); **Oliver Williamson** (University of California Berkeley, Nobel Prize for Economics in 2009)

GENERAL SECRETARY: **Riccardo Viale** (Scuola Nazionale di Amministrazione, Rome) DEPUTY GENERAL SECRETARY: **Marco Novarese** (Università del Piemonte Orientale Amedeo Avogadro)

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