



The Grenoble Applied Economics Lab (GAEL), the Grenoble Economic Research Center (CREG) and the Research Institute for the Political Economy of the Firm (IREPE) in partnership with the Grenoble Doctoral School of Economics (EDSE) invite you to the second

Webinar “Institutional and Organizational Economics”

May 20, 2021, from 2:00 p.m. to 3:30 p.m

The cognitive processes behind the shift between strategy exploitation and exploration

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Once a strategy is found to solve a problem, individuals may either repeat it routinely or try to discover new ways to achieve the same goal. While the shift between strategy exploitation and exploration may be unconscious, it can be revealed through behavioural experiments, provided that the shift is precisely measured.

“Target The Two” is a card game invented by Michael Cohen to explore the routinization of behaviour in the laboratory. It is therefore a platform that helps discover the spontaneous change to better strategies while an established strategy is being executed. The game admits a broad number of different initial card distributions and two strategies to achieve the goal, each of which is more efficient in a different domain of initial card distributions. In an experiment (organized with Narduzzo), we observed the emergence of a persistent differentiation of behaviours between a majority of players who exploited one strategy even when it was not efficient and a minority who explored the strategy space to discover the most efficient one. To disentangle this phenomenon’s cognitive elements from the organizational ones, I converted the game into a puzzle (<http://graphgames.luiss.it/admin/>).

The results of the new experiment again showed the same phenomenon, i.e. routinization and shift to exploration; this dualism can be explained as the outcome of two conflicting cognitive processes: on the one hand, the automatization of one strategy reduces the mental load permitting the exploration of new alternatives; on the other hand, automatization implies high accessibility to the familiar strategy and this, in turn, directs attention to the strategy’s key cards. Then, the cards that are useful for a new strategy are less accessible than the familiar key cards and therefore many players do not “see” them. The mechanisms through which automatization permits or prevents discovery have recently been further explored through multivariate neuroimaging analyses by Schuck et alii, who show that the elements that trigger the search for a new strategy are not the product of a conscious deliberation.

Massimo Egidi is a Professor at LUISS University in Rome, where he served as rector from 2006 until 2016, after being rector of the University of Trento from 1996 to 2004. He is currently the President of the Schumpeter Society. Together with Axel Leijonhufvud, he co-founded the Laboratory of Computational and Experimental Economics in Trento (Italy). He collaborated with H.A. Simon (Nobel prize, 1980) and Reinhard Selten (Nobel prize, 1994) and developed bounded rationality approaches applied to Behavioral Economics, theory of organizations, organizational learning and decision theory. He is the author or co-author of 100 acclaimed academic articles, chapter and book chapters.

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