

Curriculum vitae

Giorgio Coricelli

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Research interests

I study human behaviors emerging from the interplay of cognitive and emotional systems. My research agenda includes two main projects. The first one concerns the role of emotions in decision making, and the second is aimed at investigating the relational complexity in social interaction. My objective is to apply robust methods and findings from behavioral decision theory to study the brain structures that contribute to forming judgments and decisions, both in an individual and a social context.

I conduct my research using a fundamentally multidisciplinary approach (Neuroeconomics), drawing from behavioral and experimental economics, game theory, neuroimager (fMRI), neuropsychology (patients studies), and cognitive neurosciences.

Education

2002 – Ph.D. in Economics, University of Arizona, USA.

2001 – Master of Arts in Economics, University of Arizona, USA

1996 – Master Degree Analysis and Management of Science and Technology, Universidad Carlos III, Madrid, Spain

1995 – Degree in Economics, *Magna cum Laude*. University of Rome “La Sapienza”, Italy

Work experience

- 2004-present** – Research scientist (*Chargé de Recherche*) CR 1-CNRS, *Institut des Sciences Cognitives*, Lyon
- 2003** – *Chercheur associe étranger*, CNRS *Institut des Sciences Cognitives*, Lyon
- 2002** – Post-doctoral research fellow. Department of Economics, University of Siena
- Visiting research fellow at the Max Planck Institute for Research into Economic Systems. Strategic Interaction Group. Jena, Germany
- 2001** – *Research fellow at the Centre for Experimental Economics (EXEC)*, Department of Economics and Related Studies, University of York, UK
- 1999-2002** – Research assistant, Economic Science Laboratory, University of Arizona, Tucson, USA
- 1997-1998** – *Visiting Pre-Doctoral Fellow*, Economic Science Laboratory (ESL), University of Arizona, Tucson. Advisor: Vernon L. Smith
- 1997** – Research fellow at ISPE (Istituto di Studi per la Programmazione Economica), Rome. Public Policy Department, Microsimulation Unit

Teaching experience

Courses taught:

- *Experimental Economics, ESL University of Arizona, 2000*
- *Game Theory and Experimental Economics, Doctoral program in economics, University of Siena, 2001*
- *Theory of Mind and Autism, University of Arizona, 2001*
- *Econ201B, Macroeconomics. Spring 2001, University of Arizona*
- *Statistical Economics, University of Siena, 2002-2003*
- *Experimental Economics, University of Lyon 2, France, 2004*
- *Neuroeconomics, Doctoral program cognitive sciences, University of Siena, 2005*
- *Introduction to Neuroeconomics, Doctoral program in Economics and Complexity, University of Torino, 2006-2007*
- *Introduction to Neuroeconomics, SISSA, Trieste, 2006*

- *Brain and decision making, Doctoral program in Behavioral Economics, University of Trento, 2006-2007*

Invited Lectures

“Theory of Mind Mechanism in Personal Exchange.” Department of Economics, University of Siena, November 2000

“Strategic Interaction in Iterated Zero-sum Games.” Max Planck Institute for Research into Economic Systems, Jena, Germany, November 2001

“Multi-level Contests: Within Group Conflict and Between Groups Competition.” Max Planck Institute, Jena, Germany, December 2002

“*Theorie de l’Esprit et Psychopathologie*”. *Colloque des Confrontations Psychiatriques*. Lyon, September 26, 2003

“The emotions of regret and disappointment”. University of Tilburg, Holland, October 2003

“Endogenous partner selection in public goods experiments.” *Groupe d’Analyse et de Théorie Economique (GATE) CNRS - Lyon*, October 13, 2003

“The role of ventromedian cortex in experiencing regret.” Workshop on Modelling of Prefrontal Function. Trieste, Italy, 15-18 October 2003

“How the brain evaluates and predicts monetary rewards.” 6th Workshop in Applied Game Theory: The Brain, Rationality, and Economics. University of Hamburg, December 2003

“How the brain processes the consequence of our choice”. *Third Tilburg Symposium on Psychology and Economics: Games and Decisions. Tilburg, Holland, 1 September 2004.*

“How the brain processes the consequences of our choice”. *Advances in Neuroeconomics*. University of Siena, Italy June 21, 2005.

“The neural basis of individual and social decision making”. University Pompeu Fabra, Barcelona, Spain, 13 July, 2005.

“How would have been better if I had chosen differently : Learning to avoid intense negative emotions”. *Groupe d’Analyse et de Théorie Economique (GATE) CNRS*. Lyon, November 7, 2005.

“Brain and decision making”. 15^{ème} Journée de Neuropsychologie Jean-Louis Signoret. Hôpital de la Salpêtrière. Paris, October 24, 2005.

“Brain and decision-making: learning to avoid intense negative emotions”. TWENTY-FOURTH EUROPEAN WORKSHOP ON COGNITIVE NEUROPSYCHOLOGY. Bressanone, January 2006.

"The influence of high-level emotions on decision making: An fMRI study". University of Trento, Rovereto, April 3, 2006.

“The role of the Orbitofrontal cortex in decision making”. University of Verona, Department of Neurology, May 31, 2006.

“The neural and theoretical basis of regret as an adaptive emotion“. Workshop on Neuroeconomics. University of Florence, November 17, 2006.

“Neural basis of emotional aspects of ‘Economic decision making’”. Université Paris I, Panthéon Sorbonne, Institut Nicod, Paris, December 1, 2006.

“Brain and decision making: A multidisciplinary approach for A multidisciplinary approach for understanding individual and social behavior”. FENS/Hertie WINTER SCHOOL 2006, Brain Basis of Social Interaction: From Concepts to Imaging.

“Bases neuronales de la toma de decisiones.” V Simposio de Neurociencias FLENI. 9-12 May 2007.

“Neuroeconomía.” V Simposio de Neurociencias FLENI. 9-12 May 2007.

Honors and Awards

- B.A. with Laude, 1995
- Graduate assistantship from the University Carlos III, Madrid, 1995-96
- Fellowship from the University of Rome “*La Sapienza*” 1997-98
- Fellow, Economics Science Laboratory Graduate Student Workshop, summer, 1997
- George Coleman Award for the 1999-2000 academic years USA
- Graduate assistantship (research and teaching assistant) from the University of Arizona, 1998-2002
- *Prix Découvertes 2004 : Comment éprouver du regret influence nos décisions.* From the French Ministry of Research.

Research Grants

- Grant from the Economic Science Laboratory, University of Arizona, 2001-2002
- National Science Foundation (grant number SES9818561)
- Grant from EU-TMR Research Network ENDEAR, 2001-2002

- “*Systemes complexes en SHS*”, Grant from CNRS and *Ministere de la Recherche*, 2003-2004. Title of the project: “Relational Complexity”.
- Human Frontier Science Program (HFSP), Title: Decision making and strategies in the brain: a multidisciplinary approach for understanding social behaviour.

PUBLICATIONS

- Coricelli, G.**, McCabe, K.A. and Smith V.L. (2000). “Theory-of-Mind Mechanism in Personal Exchange”. *Affective Minds*. Elsevier Science Publishers, pp. 249-259.
- Coricelli, G.** (2002). “Experiment on interactive economics behavior”. Dissertation Abstracts International. UMI N° 3053861, volume 63-05-A.
- Coricelli, G.**, and Luini, L. (2003). “Double Moral Hazard: an Experiment on Warranties”. *Economic, Management and Financial Markets*, N.2, October, pp. 7-25.
- Camille, N., **Coricelli, G.**, Sallet, J., Pradat, P., Duhamel, JR, and Sirigu, A. (2004). “The involvement of the orbitofrontal cortex in the experience of regret”. *Science*, Vol. 304, Issue 5674, 21 May 2004, pp. 1167-1170.
- Coricelli, G.**, Fehr, D., and Fellner, G. (2004). “Partner selection in public goods experiments”. *Journal of Conflict Resolution*. Vol. 48 N 3, June 2004, pp. 356-378.
- Coricelli, G.** (2004). “How the Brain Evaluates and Predicts Monetary Rewards”. *Homo Oeconomicus* 21: 509-520.
- Coricelli, G.** (2004). “Reciprocity-based emotions: An experimental study.” *Rivista Internazionale di Scienze Sociali*. pp. 359-379.
- Coricelli, G.**, (2005). “Two-levels of mental states attribution: from automaticity to voluntariness”. *Neuropsychologia*, 43, pp. 294-300.
- Coricelli, G.**, Camille, N., Pradat-Diehl, P, Duhamel, JR, Sirigu, A. (2005). “Why anticipated regret influences subjects’ choice”; *Science*, 308, pp. 1260-1261.
- Coricelli, G.**, Critchley, H.D., Joffily, M., O’Doherty, J.D., Sirigu, A., and Dolan, R.J. (2005). “Regret and its Avoidance: A Neuroimaging Study of Choice Behavior” *Nature Neuroscience*, 8, pp. 1255 - 1262.

Coricelli, G., Gonzales-Morales, L. and Mahlstedt, A. (2006). "The investment game with asymmetric information". *Metroeconomica*, 57:1, pp. 13-30.

Büchner, S., **Coricelli, G.**, and Greiner, B. (2007) "Self-centered and other-regarding behavior in the Solidarity game". *Journal of Economic Behavior and Organization*, 62: 2, pp. 293-303.

Giardini, F., **Coricelli, G.**, Joffily, M., Sirigu, A. (2007). "The effect of desirability on confidence". In: Abdellaboui, M., Hey J.D. (Eds.) *Advances in Decision Making under Risk and Uncertainty. Selected Papers from the FUR 2006 conference*, Heidelberg: Springer.

Coricelli, G., Dolan, R.J., Sirigu, A. (2007). Brain, emotion and decision making: the paradigmatic example of regret. *TRENDS in Cognitive Sciences*. Vol.11, 6, June 2007, pp. 258-265..

Papers under revision

"Reward biases people's self-confidence". With Giardini, F., Joffily, M., Sirigu, A.

"Strategic interactions in iterated zero-sum games"

"Impaired decision-making in schizophrenia and orbitofrontal cortex patients: a comparative study". With Marion Larquet and Florence Thibaut

Work in progress

"Guessing in the brain: an fMRI study on deep of reasoning". With Rosemarie Nagel (collecting data, finalizing the analysis).

"The neural basis of pro-social behavior: A neuropsychological study". With Angela Sirigu and Mateus Joffily (manuscript in preparation).

"Pathological gambling phenomenon in Parkinson disease after L-dopa therapy" (collecting data, finalizing the analysis).

"Neuronal Basis of Empathy, Altruistic Reward and Punishment in Third-Party Social Exchange." With Tania Singer, Aldo Rustichini, Ray Dolan (finalizing the analysis of the fMRI data).

"Choice with regret and envy". With, Nadège Bault, Mateus Joffily, Angela Sirigu, Aldo Rustichini. (manuscript ready for submission).

In the press

“Les bones raïsons d’avor des regret”, *Cerveau & Psycho*

“Le rôle du regret dans la prise de décision mesure par des neurologues”. LE MONDE.

“Nella testa di chi non conosce il rimpianto”. IL CORRIERE DELLA SERA.

“Il rimpianto è l'anima del commercio”. La REPUBBLICA

“Vital signs : Winning, losing and regretting”. THE NEW YOURK TIME

“Brain region tied to regret identified”. SCIENTIFIC AMERICAN.

“Pinpointing regret in the brain”. NEW SCIENTIST.

“Where regret roots in the brain”. FOX NEWS.

“Estudian cómo el cerebro elige gastar o invertir”. Clarin.

Radio and TV: RAI Radio 3 Science, Italy. France 2

Professional affiliations

- *Institut des Sciences Cognitives*, CNRS, Bron, France
- *Université Lyon I*
- Laboratorio di Economia Sperimentale, Università di Siena (LabSi)
- EXEC University of York, UK, 2001-2002
- Cognition and Neuroimaging Laboratories University of Arizona, 1999-2002
- Economic Science Laboratory, University of Arizona, 1998-2002

International collaborations

Aldo Rustichini, University of Minnesota, USA

Colin Camerer, Caltech, USA

Raymond Dolan, UCL, FIL, London, UK

Rosemarie Nagel, University Pompeu Fabra, Barcelona, Spain

Tutorial activity

Francesca Giardini, Doctoral program in Cognitive Science, University of Siena

Nadège Bault, First year PhD student, University Lyon 1

Chiara Chelini, Second year PhD student, University of Torino

Elissar Andari, Master student, University Lyon 1