



SCHOOL OF POLITICS & ECONOMICS

THE CENTER FOR NEUROECONOMICS STUDIES

Professor Paul J. Zak

The Center for Neuroeconomics Studies (CNS), School of Politics and Economics at Claremont Graduate University (CGU) is a laboratory that applies research methods in neuroscience to understand how people make decisions. The goal of CNS is to help us make better decisions and identify why those who consistently make bad decisions do so.

Much of the lab's current research focuses on the neurophysiology of social decisions producing cooperation, or conflict. CNS researchers are delivering fascinating new findings that are identifying how our brains enable us to make decisions involving money, as well as decisions involving other people. For example, we discovered in 2004 that an ancient chemical in our brains, oxytocin, allows us to determine who to trust. This knowledge is being used to understand the basis for modern civilizations and economies, improve negotiations, and treat patients with neurologic and psychiatric disorders.

CNS is radically transdisciplinary in its research while maintaining our focus on the neuroeconomics of decision-making. In the 2006-07 academic year, we had students in the lab from economics, political science, psychology, neuroscience and molecular biology who all studied aspects of decision-making. CNS collaborators include physicians, lawyers, philosophers, and evolutionary biologists. This synergy of ideas and approaches is what drives our research both in topics and methodologies. For example, recent animal research has shown that adverse developmental trajectories

affect oxytocin receptor densities. This has led CNS researchers to examine people who have had difficult developmental histories and adult dysfunctions involving trust. We are currently running studies in psychiatric clinics and jails to understand this issue.

Another recent project looks at the brain structures that appear to cause “bubbles” in financial markets. We have designed experiments to measure activity in these structures, as well as to influence their functioning to see if this reduces the presence of bubbles in experimental asset markets. Another project is examining whether the brain structures that guide us in determining if we should trust in front of us also guide us in trusting politicians who we have not personally met. CNS researchers use a variety of techniques to measure brain function during decision-making, including functional MRI scans, blood draws, and drug interventions.