

flourish



the quarterly newsletter of the
center *for* neuroeconomics studies

fall 2009

neuroeconomics *meets* positive psychology

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Letter from the Director

October is an exciting time for scientists because the Nobel prizes are announced. This year's Nobel laureates in economics are well-deserved and wonderful choices. The prize was shared by Oliver Williamson at Berkeley and Elinor Ostrom at Indiana University. Williamson pioneered the study of contracts as a way to understand how economic activity is organized. Oliver recently told me he thinks of economics as "the science of contracting." Lin Ostrom, the first woman to win the economics Nobel, is a fearless researcher who has done everything

at Lin's lab showing her our results and reviewing what she is doing.

In the experiments we run at CNS, we empower individuals to solve economic problems with all



of their cognitive resources and measure how their brains produce these solutions. This fall will be our busiest semester ever. Our neuroeconomics studies will include more than 500 participants as we push the frontiers of knowledge in economics, finance, and human flourishing. We have three grants concluding next year, including our three-year study of the virtues of resilience, generosity and compassion, and we are on pace to establish new findings for these important human behaviors. I will report to you what we have found soon, with some preliminary findings discussed in this issue of Flourish.

Yours,

Paul Zak

we empower individuals to solve economic problems with all of their cognitive resources from field experiments in Africa to laboratory experiments in Bloomington, much of it focused on understanding how individuals resolve property rights conflicts. Her most important finding is that individuals with a stake in the resource find better solutions to common resource problems compared to solutions imposed by governments. This last May I spent three very productive days

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Recent Media & Publications



De Standaard

November 8, 2009

De Standaard

Belgian newspaper reports CNS findings on testosterone and behavior.



Smart Money

October 30, 2009

SmartMoney
It's your money. Be smart.

Financial Bubbles: Why Do Fools Fall in Love?

Prof. Zak clarifies the neural basis for “foolish” behavior stimulated by media.



New Scientist

October 26, 2009

NewScientist

High Testosterone Linked to Miserly Behavior

Further reports testosterone inhibits generosity in men.



Laboratory Equipment

October 21, 2009

Laboratory
EQUIPMENT

Testosterone Makes Men Stingy

Testosterone makes men stingy but more likely to punish others for stinginess.



Thai News

October 13, 2009

NEURONECONOMICS
เบ็ดเตล็ดใหม่ทางเศรษฐศาสตร์

Thai newspaper describes our research and the emergence of neuroeconomics.



USA Today

October 11, 2009

USA
WEEKEND
.com

What's With All The Hugging?

A simple solution for setting the level of closeness upon meeting.



CNBC

September 16, 2009

CNBC

Four Dumb Financial Moves in a Recession

Professor Zak contributes to a set of potent preventive strategies for outsmarting yourself in surviving the economic downturn.



The City Journal

August 26, 2009

CITY

What Ever Happened to the Work Ethic

Explores the role of virtues in the health and sustainability of the American economy.

7

semester

500

participants

Stay tuned, exciting results are on the way.

neuroeconomics *meets* positive psychology

By Ryan Merlin & Denise Grosberg



Human happiness was relatively unexplored terrain in science before the emergence of Positive Psychology. Since then, researchers have found that in individualistic Western cultures, happy people tend to believe they are more intelligent, more ethical, less prejudiced, and more sociable than average. Yet in the quest for happiness, the satisfaction of physical and psychological needs only goes so far. As social beings, we are driven by an innate desire to connect to others in order to gain their affection and approval. The human capacity for empathy allows us to meet this fundamental need and can be traced back through our evolutionary history. For instance, this vital emotion not only facilitates prosocial behavior, but it also helps us feel good about ourselves and our place within society (see the summer 2009 *Flourish* for more about empathy and moral behavior).

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Researchers at the Center for Neuroeconomics Studies have just discovered a link between the hormone oxytocin and feelings of empathy and happiness. Empathy is the capacity to share and understand another's emotions. In our research, we have found that oxytocin release is associated with empathy and makes people more generous towards strangers with their own money (Jorge Barraza and Paul J. Zak, Empathy toward Strangers Triggers Oxytocin Release and Subsequent Generosity. *Annals of the New York Academy of Sciences*, 1167: 182-189, 2009).

Current research from our lab is finding that oxytocin release is also associated with emotional well-being and satisfaction with life. Connecting to others makes us happy, and now we know why. We have found that strong social connections not only make individuals happy, but also predict happiness at the societal level (see Figure 1). Countries where trust is high also have the highest levels of self-reported happiness and the lowest rates of depression (Paul J. Zak and Ahlam Fakhar, Neuroactive Hormones and Interpersonal Trust: International Evidence. *Economics & Human Biology*, 4: 412-429, 2006.)

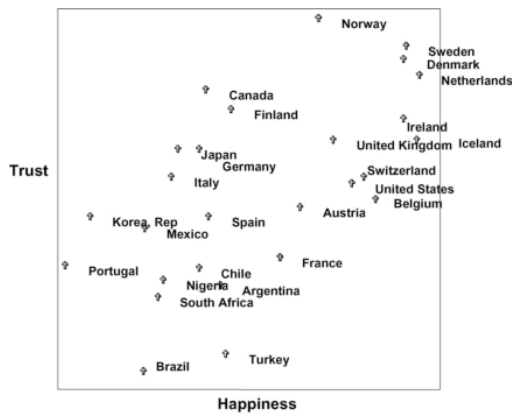
The news gets even better: people who are happier are more trusting and people who are more trusting are happier. Our research shows that maintaining social connections are not only an inherent part of human nature, but also individuals engage in behaviors that perpetuate these connections because they literally “feel good.” Research at CNS has proven that the oxytocin-potentiated system that promotes maternal bonding and romantic relationships also makes us happy when we are around our friends and

Connecting with others is a source of happiness for people, so choosing prosocial behaviors is a major factor in life satisfaction.



Continued on pg. 5

Fig. 1 shows the results of a study by Dr. Zak correlating happiness and trust at the societal level.

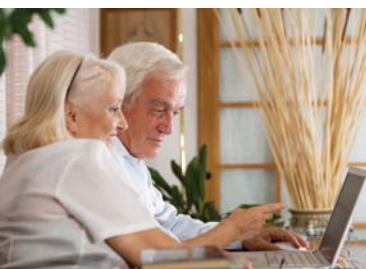


even strangers. Our current studies are discovering ways to mobilize this brain circuit to increase peoples' satisfaction with their lives.

Oxytocin connects us to others by helping us understand their emotional states. When we do this, we trust people and feel a sense of belonging and calmness. This ultimately leads to higher levels of happiness. In fact, research in positive psychology has shown that one of the greatest predictors of happiness is the quality of one's social relationships. Building social connections creates a feedback loop of positive, constructive emotions that allow us, as hyper-social beings, to flourish.

Our evolutionary history has endowed us with a strong desire for social connectedness that occurs through the actions of oxytocin. Unlike Jean-Paul Sartre's famous quip that "Hell is other people," we are finding that other people is what makes our lives satisfying and that social connections cause societies to thrive.

Current research is showing how people can mobilize their minds and bodies to increase satisfaction with life.





Board Member

Closeup

Yannis Venieris

Open Mind, Open Doors



You mentioned that to be a good social scientist you need to be a good scientist. Can you explain what you mean by that?

One has to be succinct and able to express views in a precise manner; for that you need mathematics because mathematics not only helps you to express your views succinctly, but also allows you to express your hypotheses parsimoniously in attempting to approximate and explain reality. More often than not reality is far more complex than the models we use to explain it. Yet, we insist on using models that in spite of their low predictive capacity, nevertheless, find their way into our textbooks.

One of the reasons economics didn't make progress for a long time is because economists have been acting like frustrated mathematicians, and failing to make contributions about the real world. They were more concerned about exhibiting mathematical virtuosity and elegance and less in advancing testable hypotheses that would explain social phenomena. If you abstract from the complexity, you really abstract from the problem. There is always a medium, the golden rule really, where you can find a way to approach the problem realistically.

You initially doubted if neuroeconomics could contribute to social science. What has changed in your thinking?

When Professor Zak came to me excited to tell me about this new field I was thinking very provincially, like an economist. I asked him "what does it have to do with the price of rice in China? How will this change the rates of

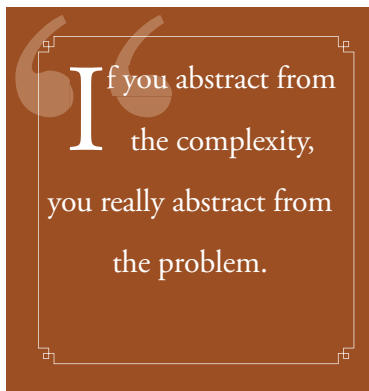
interest?" Answer: it will tell you nothing, but it should tell you about people's behavior in the market place. It takes time to appreciate the answer. If Paul goes and gives a lecture about his stuff, there would be many unbelievers because our education is so limited, it is not broad enough. The only way to convince economists at this stage is to say that my axioms would lead to a theory that would predict better. I am now convinced that if we give CNS twenty more years, it will produce Nobel prizes.

What area of social science research do you think is most promising?

I'm not a prophet. The last guy who was making predictions was crucified. Integration of social sciences will produce more meaningful theories. It's nice to differentiate, but we shouldn't be offended when others step into another discipline. The borders we defined are arbitrary lines in the sand; we should really allow this cross-fertilization. One of the beautiful examples is what Paul is doing right now. This is wonderful, one of the most important developments in the social sciences. What is missing is to put axioms that will reflect these attributes, then use these axioms to extend and develop the theory it is implied by. Just like the typical

axioms in economics.

Yannis Venieris is Emeritus Professor of Economics at San Diego State University and was the Founding Director of the Institute for Central and Eastern European Studies where he facilitated the transition to market-based economies in a number of new democracies in this region. He is currently finishing a book on the political economy of economic development. Dr. Venieris joined the CNS Advisory Board in 2009.



Calendar of Events FALL & WINTER '09/'10

NOV 20-21
2009

Workshop on Neuroeconomics and
Endocrinological Economics
University of California at Davis Davis, CA

21-22

The Physiology of Moral Sentiments
Conference on Empirical Legal Studies
Los Angeles, CA

JAN 2-5
2010

Allied Social Science Association Meeting
Atlanta, GA

28

Gratitude and Oxytocin
The Science of Virtues
University of Chicago, Chicago, IL

FEB 5-7
2010

The Science of Generosity
Nassau, The Bahamas

SAVE the
DATE 21

CNS EXPANSION CELEBRATION
Lee Dugarkin Presentation and Reception at CNS
Claremont Graduate University, Claremont, CA

MAR 15
2010

The Moral Molecule at the Mind Science Foundation
San Antonio, TX

16

The Neurobiology of Trust
Psychiatry Grand Rounds, University of Texas, San Antonio
San Antonio, TX

We wish to thank the John Templeton and Kaufman Foundations as well as the National Institutes of Health for their generous support as well as contributors, collaborators and reviewers of our ongoing and new neuroeconomics research.



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