

## The origins of cooperation and generosity: an experimental approach

Thursday, April 25, 2013 at the Center for the Study of Rationality

Following the success of December's joint meeting of BGU's Decision Making and Economic Psychology (DMEP) center and HU's Center for the Study of Rationality, attended by Students and Faculty from various Israeli institutes – we are very happy to announce our next meeting. We will meet on **Thursday April, 25<sup>th</sup> at the Center for the Study of Rationality** at HU's Givat Ram Campus, Feldman Building, lecture hall 130. The meeting is supported by BGU's Psychology Department and Faculty of Humanities and Social Sciences, DMEP, and HU's center for the Study of Rationality. The meeting is open and free but requires registration by email ([dmepratio@gmail.com](mailto:dmepratio@gmail.com)). When registering please indicate if you need transportation from BGU and whether you would like to join for dinner (at your own expense). Places may be reserved for those registering by 17.4.13.

We are delighted to have Prof. Carsten De Dreu (University of Amsterdam) as our international guest. Prof. De Dreu is a fellow of the Royal Netherlands Academy of Sciences, former president of the European Association of Social Psychology, and associate editor of the flagship Journal of Personality and Social Psychology. He trained over 25 PhD students and 10 postdoctoral fellows, now working across Europe and beyond. With them, and others, he published over 150 research articles and 40 book chapters on the neurobiological, cognitive, and motivational underpinnings of human cooperation and conflict, group decision making, and creative performance.

### Program overview:

09:00-09:30	Coffee and gathering
09:30-09:45	Welcome – <b>Ilana Ritov</b> (HU, Rationality) & <b>David Leiser</b> (BGU, DMEP)
09:45-11:30	Session 1 – Chair <b>Ilana Ritov</b> (HU, Rationality)
<b>Carsten De Dreu</b> (U of Amsterdam)	The neurobiology of parochial altruism in humans
<b>Simone Shamay-Tsoory</b> (Haifa)	The neurobiology of social comparison
<b>Ariel Knafo</b> (HU)	Differential Genetic Susceptibility to Parents' Modeling of Altruism
11:30-11:45	Coffee break
11:45-13:00	Session 2 – Chair <b>Maya Bar Hillel</b> (HU, Rationality)
<b>Ilan Yaniv</b> (HU, Rationality)	Prosocial preferences and inequality: On the roles of agency and leveraging
<b>Shoham Choshen Hillel</b> (HU)	Advice giving: personal costs social benefits
<b>Yaakov Kareev</b>	
<b>&amp; Judith Avrahami</b> (HU, Rationality)	Distinguishing Generosity from Apparent Generosity in Strategic Interactions
13:00-14:00	Lunch
14:00-15:15	Session 3 – Chair <b>Rachel Barkan</b> (BGU, DMEP)
<b>Ilana Ritov</b> (HU, Rationality)	Other-oriented decisions: The role of identifiability
<b>Yoella Bereby-Meyer</b> (BGU, DMEP)	The developmental changes in negative and positive reciprocity
<b>Ro'i Zultan</b> (BGU, DMEP)	Social communication and discrimination: a video experiment
15:15-15:45	Coffee break
15:45-17:00	Session 4 – Chair <b>Ariel Knafo</b> (HU)
<b>Ifat Maoz</b> (HU, Swiss Center)	The women and peace hypothesis
<b>Anna Dorfman</b> (BGU, DMEP)	Proud to Cooperate: The Effects of Pride versus Joy on Cooperation
<b>Tehila Kogut</b> (BGU, DMEP)	The developmental sources of scope insensitivity in helping behavior
17:00	Closing remarks: <b>Ilana Ritov</b> (HU, Rationality) / Shaul Shalvi (BGU, DMEP)

Abstracts:

09:45-11:30

Session 1 – Chair **Ilana Ritov** (HU, Rationality)

**Carsten De Dreu** (U of Amsterdam)

The neurobiology of parochial altruism in humans

Humans have a stunning capacity for cooperation yet, at the same time, create and escalate conflict with often devastating consequences. Here I argue that both tendencies -- to cooperate and to aggress -- can be understood as manifestations of parochial altruism--the tendency to benefit, at a cost to oneself, the group to which one belongs and to fight or derogate rival out-groups. I present evidence that humans, especially those with pro-social value orientations, are parochial rather than universal altruists. I then explore the cognitive and neurobiological origins of parochial altruism, focusing on the oxytonergic circuitry involved in fear-regulation and (social) approach, and prefrontal cortex involved in impulse control and inhibition.

**Simone Shamay-Tsoory** (U of Haifa)

The neurobiology of social comparison

Large corpus of evidence concerning social processes indicates that one's emotional state may be affected not only by his or her actual state but also by one's relative state as compared to others. The emotional reactions to the success or failure of others can vary greatly towards different people as well as towards the same person. When another person experiences a failure or success, our emotional reaction can take various courses: it can range from feeling envious about the other's possessions, or feeling empathy toward someone in distress, to feeling pleasure at seeing an arrogant leader fall. Here we show that when facing a social agent's emotional or mental state, four types of emotional reactions may emerge: envy, schadenfreude, negative empathy (or sympathy, pity) or positive empathy (happy for). The lecture will focus on the neuroanatomical and biological bases of envy and schadenfreude using a framework of social comparison based emotions. It is proposed here that two main processes underlie the experience of social comparison based emotions: The first is the reward/punishment system mediating motivation and the experience of pleasure and displeasure. The second is the mentalizing system which processes the intentions and mental states of others'. Hence, an interaction between the mentalizing and the reward systems is proposed to be at the heart of the experience of social comparison based emotions.

**Ariel Knafo** (HU), **Peter R. Blake** (Boston University), & **Felix Warneken** (Harvard)

Differential Genetic Susceptibility to Parents' Modeling of Altruism

Parents have been shown to be powerful models for children's prosocial behavior, although children differ in their susceptibility to environmental influences. Following a surge in research on gene-environment interaction, accumulating evidence points to the importance of a polymorphism in the exon III repeat region of the DRD4 receptor gene (DRD4-III), as a moderator of parental influence (Pluess & Belsky). For example, positive parenting was associated with children's prosocial behavior, but only for carriers of the 7-repeat allele of DRD4-III (Knafo, Israel, & Ebstein, 2011). However, because parenting is not independent of the genotype of either parents or children, it is important to conduct studies in which children's environment is experimentally manipulated (Van IJzendoorn, 2011). We hypothesized (a) that children will behave more altruistically when exposed to a generous parent model, as compared to a non-generous model. And (b) that carriers of the 7-repeat allele of DRD4-III will be influenced by parental models more strongly than non-carriers. 529 six-year old Israeli twins participated with their parents. 33% of them were DRD4-III-7 carriers. We used the Imitation Dictator Game (Blake & Warneken) in order to manipulate children's degree of altruism. While being engaged in another task, children saw their parent given the opportunity to share one or more of

6 individually-wrapped cookies. Parents were instructed to share exactly one cookie with an unknown other individual when one twin was observing, and exactly five cookies when the other twin was observing (order of sharing 1 or 5 was counterbalanced and had no effect on the results). A few moments after seeing the parent model, children were given six sticker sheets and asked if they wanted to share any of them with an unknown child. In a control group, children did not observe a parental model. Parents' giving behavior had an effect on children's altruism. Even children exposed to the non-generous models were more likely to donate at least one sticker sheet (92%) than those not exposed to the parental model (66%). As hypothesized (a), twins exposed to the generous parental model donated substantially more sticker sheets than their co-twins exposed to the non-generous parental model. Among children not exposed to a model, there were no differences in altruism due to DRD4-III genotype. However, we expected this polymorphism to moderate the effect of the parental model. Both 7-repeat allele carriers and non-carriers behaved more altruistically if exposed to a generous model. However, among those exposed to the highly generous model, 7-allele carriers were more generous than non-carriers. In general, the effect size comparing generous and non-generous parental models was higher among 7-repeat allele carriers, as hypothesized.

11:30-11:45                      Coffee break

11:45-13:00                      Session 2 – Chair **Maya Bar Hillel** (HU, Rationality)

**Ilan Yaniv** (HU, Rationality)

Prosocial preferences and inequality: On the roles of agency and leveraging

We suggest the concept of “leveraging” to describe the effectiveness of acts of generosity. Leveraging refers to the ratio between the helper's sacrifice (or loss of utility) and the recipient's monetary gain (or subjective benefit). Contrary to theories of inequality aversion, we find that the greater the leveraging the more likely one is to make donations that effectively destroy equality, and create the advantage for others at the expense of oneself. This effect is particularly strong when individuals are agentic.

**Shoham Choshen Hillel** (HU)

Advice giving: personal costs social benefits

Giving and taking advice facilitates everyday decision-making. We investigate the internal motivations that underlie advice-giving. We theorize that individuals derive pleasure from the gains they help others achieve. Our studies use a novel lab paradigm to show that the rate of advice-giving changes as a function of the recipient's expected gains.

**Yaakov Kareev & Judith Avrahami** (HU, Rationality)

Distinguishing Generosity from Apparent Generosity in Strategic Interactions

Many strategic interactions allow for choosing actions that can be construed as generous, or cooperative (e.g., offering an equitable split in the ultimatum game, opting for the high-risk, ‘stag’ option in the Stag Hunt Game, opting for the low-risk, ‘shovel’ option in the Snowdrift game). In all of these cases the decision-maker incurs a cost (or the risk of a cost), while assuring a higher benefit to one's partner. We propose that repeated interactions involving random matching of partners (a ‘stranger design’) can help determine if such actions reflect true or only apparent generosity. We present data that bear on this question.

13:00-14:00                      Lunch

14:00-15:15

Session 3 – Chair **Rachel Barkan** (BGU, DMEP)

**Ilana Ritov** (HU, Rationality)

Other-oriented decisions: The role of identifiability

Decisions concerning others can be oriented towards abstract, statistical others or towards identified individuals. In this talk I will demonstrate that even when all normatively relevant factors are identical, choices concerning identified individuals yield predictably different outcomes than choices concerning unidentified individuals. The wide scope of identifiability effects suggests that different processes are set into action when a specific individual rather than an abstract entity is being considered.

**Yoella Bereby-Meyer** (BGU, DMEP)

The developmental changes in negative and positive reciprocity

Standard economic models assume people exclusively pursue material self-interests in social interactions. However, people care about fairness, and reciprocity affects behavior. Despite the importance of reciprocity in social life, little is known about factors that affect it and its interplay with rational motive. Recently we have shown that a shortage in self-control leads to an increase in negative, as well as positive reciprocity (Halali, Bereby-Meyer, Meiran, 2013). Conceivably, a shortage in self-control may lead to a return to simple patterns of behavior, characteristic for children. But this is not necessarily the case. In a series of studies with different economics games (e.g., Ultimatum Game, Trust Game, Dictator Game), played by children at different ages (from 5 to 12 years old) we show that young children are motivated to maximize their own gains and that both negative and positive reciprocity develop with age. Thus younger children's behavior differs from adults' spontaneous behavior when self-control is limited. It is remarkable that despite being costly and having developed over time, reciprocity, rather than self-interest becomes the dominant behavior.

**Ro'i Zultan** (BGU, DMEP)

Social communication and discrimination: a video experiment

We report on an experiment using video technology to study effects of communication on donations to and discrimination between potential receivers. The experimental design eliminates strategic factors by allowing two receivers to unilaterally communicate with an anonymous dictator before the latter decides on her gifts. Through the use of three communication setups (none, audio, and audio-visual) we analyze purely social effects of communication. A silent video channel leads to discrimination between potential receivers based on impression formation, but does not affect average levels of donations. When the auditory channel is added, average donations increase. The social processes invoked by the visual and audio channels are heterogeneous and communicator-specific but not unsystematic.

15:15-15:45

Coffee break

15:45-17:00

Session 4 – Chair **Ariel Knafo** (HU)

**Ifat Maoz** (HU, Swiss Center)

The Women and Peace Hypothesis?

The Effect of Opponent-negotiators' Gender on Trust and Cooperation in the Israeli-Palestinian Conflict

The “women and peace hypothesis” refers to the tendency of women to hold more peaceful and compromising attitudes than men. This study investigates the possibility that the very stereotype portraying women as

more peace oriented than men -- regardless of its validity -- may grant women with an increased capability of promoting peace, through their higher ability to elicit trust and cooperation. We hypothesized that (1) a compromise proposal offered by female opponents in the Israeli-Palestinian peace negotiations will elicit higher support in comparison to the same proposal offered by male opponents (2) female opponents will be perceived as more trustworthy than male opponents.

**Anna Dorfman** (BGU, DMEP)

Proud to Cooperate: The Effects of Pride versus Joy on Cooperation in Social Dilemmas

Specific positive emotions (i.e. pride and joy) may differently influence people's choices in social dilemmas. This proposition is based on the idea that social dilemmas resemble self control conflicts and on the notion that in self control conflicts, pride is related to the attainment of long-term goals whereas joy is related to the attainment of short-term goals. Additionally, the consideration of future pride enhances self control compared to the consideration of future joy. We report two studies demonstrating that considering future pride leads to behavior that serves long-term collective interests (i.e. cooperation) compared to consideration of future joy.

**Tehila Kogut** (BGU, DMEP)

The developmental sources of scope insensitivity in helping behavior

The singularity effect of identifiable victims is described as the greater willingness to help a single, identified victim than to help a group of victims with the same need (whether identified or not). The current research examines the developmental sources of this phenomenon in early childhood. In two studies examining children's actual giving and level of Theory of Mind (ToM) from the ages of 3.8 to 8, we show that younger children tend to give more of their endowment to a group of recipients than to a single recipient. However, this tendency reverses for older children (and those who have acquired ToM), who exhibit the singularity effect by giving more of their endowment to a single, identified target.