K 1

Economic and cognitive engineering of social interaction

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Economic engineering is the science of designing real-world institutions and mechanisms that align individual incentives and behavior with the underlying goals. Institutions and mechanisms matter because they affect incentives, and decision makers respond to incentives. They do not always do so in a rational or selfish way, though; yet behavior often responds in a systematic and predictable way. This opens the door for a behaviorally sound approach to economic engineering.
However, so far there is only very little research that incorporates behavioral sciences into economic engineering. In this talk, I focus on engineering efforts related to social behavior. By way of example, I show how manipulating information flows may affect reciprocity and social comparison standards. More specifically, I first report on the repair of an Internet market trust mechanism. While all markets require some minimum amount of trust, it is a particular challenge for Internet markets, where trading is typically anonymous, geographically dispersed, and executed sequentially. To incentivize trustworthiness, Internet markets commonly employ reputation-based 'feedback systems' that enable traders to publicly post information about past transaction partners. However, there is evidence that reciprocal feedback distorts the production and content of reputation information, hampering trust and trade efficiency. Yet, the scope for gaming in the production of reputation information depends on the design of the feedback system. Data from eBay and other sources combined with laboratory data provide a robust picture of how reciprocity can be guided by changes in the way feedback information flows through the market, leading to more accurate reputation information, more trust and more efficient trade.
Second, I investigate how bonus payments affect satisfaction and performance of managers in a large, multinational company. I show that falling behind a naturally occurring reference point for bonus comparisons reduces satisfaction and subsequent performance. Yet the effects tend to be mitigated if information about one's relative standing towards the reference point is withheld. This seems to suggest that if one's position relative to the social reference point is not known it is probably less relevant: "What you don't know won't hurt you." The effect is also consistent with the social psychology literature, where a series of classic findings demonstrate that social judgments critically depend on which comparison standards are made accessible in the judgmental situation. That is, comparison standards that are not (made) accessible are not used.
Finally, I argue that social behavior is not only affected by the 'cognitive engineering' of comparison standards but also by the comparison procedure that is (made)

accessible. Recent experimental evidence demonstrates that procedural priming techniques from social psychology can be used to manipulate the comparison procedure employed by subjects in laboratory economic games. More specifically, I show that the degree of perceived similarity strengthens altruistic and reciprocal behavior in simple trust and dilemma games with punishment.

K 2

Trust in others: Its emotional, social, rather than its economic, underpinnings

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Trust plays an essential role in people's social and economic lives, yet why and when people trust others remains something of a mystery. In this talk, I suggest that trust, which is usually thought of as more-or-less an economic act, instead involves dynamics that are more emotional and social in nature. Trust involves making oneself vulnerable to another person with the prospect of receiving some benefit in return. Usual theoretical accounts of trust among strangers emphasize its "economic" or instrumental aspects. What matters is what people think the outcome of their trust will be. Thus, people are assumed to trust to the extent that they can tolerate the risk of making themselves vulnerable and are sufficiently optimistic that their trust will be reciprocated. We describe evidence from laboratory economic games showing that this account empirically fails. In the game, participants are asked whether they will give, for example, US$5 to a complete stranger. If they do, the US$5 is inflated to US$20, and the stranger is asked whether he or she wishes to give US$10 to the original person. Participants often trust (i.e., they decide to give the US$5) even though their risk tolerance and social expectations suggest they should not. On average, they believe it is more likely that the other person will keep all the money rather than give US$10 back, yet most go ahead and give the US$5 to the other person anyway – even though they would never bet the US$5 on a lottery that presented the same odds and potential payoffs. Further studies suggest this is not mere altruism that is driving trust. Participants are reluctant to bet on lotteries that would also spread the wealth to other people. Thus, we propose that trust is largely an expressive rather than an instrumental act. By expressive, we mean that people trust because of emotional and social dynamics that surround the act itself rather than its potential outcomes. Evidence for the expressive nature of trust comes in two forms. First, studies of the emotions surrounding trust indicate that it is significantly predicted by how people feel about the act itself, not how they feel about its poten-

tial outcomes. Second, trust rates rise significantly if people are placed in a relationship with another person, no matter how anonymous, fleeting, or minimal that relationship is, presumably because being placed in a relationship evokes social norms that promote trust. I end with a discussion of two other issues our research presents. First, I present data explaining the curious fact that participants grossly underestimate the trustworthiness of others (i.e., the likelihood that strangers will give $US10 back). I also discuss possible motives for reciprocating trust, and propose questions for future research.

K 3

The libertarian welfare state

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As John Stuart Mill argued in On Liberty, governmental restraint of individual behavior is legitimate only when necessary to prohibit undue harm to others. Mill was no libertarian, but libertarians are quick to cite his harm principle approvingly. In this discussion I will adopt Mill's harm principle as my own and consider only restrictions of liberty that can be persuasively defended in its name. The list of such restrictions is far longer than is commonly supposed.

My remarks will in this sense be a critique of the libertarian position in its own terms. But the logic and evidence that form the heart of my critique also pose serious challenges to many beliefs long cherished by progressive thinkers. I will argue, for example, that although many of the shortcomings that progressives have identified in our economic and political system are real, they are often wrong about the causes of those shortcomings, and often wrong, therefore, about how best to counteract them.

The specific issue on which my libertarian friends and I part company concerns how we think about what constitutes harm to others. We all agree that it is legitimate for government to restrain people from stealing others' property or from committing violence against them. The difficult cases involve more indirect forms of harm.

For example, although a sprinter who consumes anabolic steroids may make no physical contact with his closest rival, he nonetheless imposes heavy costs on him. The rival can either abstain from taking steroids, thereby losing the race and forfeiting any return on his substantial investment of time and effort; or he can restore the competitive balance by consuming steroids himself, thereby courting serious long-term health risks. Either way, the original sprinter's action will have caused him far greater harm than if he had been physically assaulted or had his bicycle stolen. Yet many self-described libertarians insist that it should be a sprinter's right to take

performance enhancing drugs if he chooses. But why should that right trump the right of others to escape the resulting harm? Why should harm be discounted merely because it is indirect?
My answer is that for Mill's harm principle to have any coherent meaning, indirect forms of harm must count. I will argue that even if libertarians had complete freedom to join others in forming any sort of society they pleased, they would find compelling reasons for joining one that gave indirect harm equal footing with direct harm. Confusion about this point arises because indirect harm is often harder to measure than direct harm. But direct harm is sometimes hard to measure, too, and in those cases there is usually no debate about whether it should count.
The basic claim I will attempt to defend, then, is this: If one adopts any reasonable conception of what constitutes harm to others, the regulatory apparatus of the modern welfare state becomes completely consistent with – and is indeed even required by – Mill's harm principle.

K 4

On envy, trust, and sloths – How comparative thinking shapes economic decision making

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People are constantly overwhelmed by the complexity of decisions. As a consequence, they often have to rely on simplifying information processing mechanisms; mechanisms that allow them to process information in an efficient manner. One such mechanism is comparative thinking, i.e. people's tendency to process information relative to an evoked norm or standard. Abundant psychological research attests that comparative thinking is ubiquitous. Whenever people process information, form a judgment, or make a decision they rely on comparisons. I will suggest that comparative thinking is so ubiquitous, because it holds efficiency advantages and serves as an all-purpose heuristic that simplifies complex decisions. I will further highlight how comparative thinking influences economic decision making. Envy and trust will serve as two prominent cases in point. With respect to envy, I will present experimental evidence demonstrating that spontaneous social comparisons with better-off others can cause envy and desire for a superior good if people's ability to exert self-control is limited. In the realm of trust, I will present evidence demonstrating that people's trust in others depends on egocentric comparisons with their own level of trust-worthiness. Taken together, this research suggests that heeding the fundamental role comparative thinking plays in human information processing allows for a more complete understanding of economic decision making.

Panel Discussion

Economic psychology and behavioral economics – Monozygotic twins or mere siblings?

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In recent years, the two disciplines of economic psychology and behavioral economics have been growing together more and more. This is highlighted by the fact that the "Journal of Economic Psychology" is now registered as an economics journal in the Social Science Citation Index (due to the fact that its articles are more often cited by economists than by psychologists). Both organizations, the International Association for Research in Economic Psychology and the Society for Advances in Behavioral Economics, regularly conduct joint conferences; and there is an ongoing discussion about a potential merger of both organizations.
Such growing cooperation between economists and psychologists seems to be logical, fruitful, and necessary.
In this podium discussion, we want to reflect on the positive, but also on the negative aspects of such a strong cooperation between economic psychology and behavioral economics.
Amongst the questions we want to discuss are the following:

1) How stable is the common ground regarding the theories that are used by both disciplines?
2) What should define the new field? The kind of research that falls into both disciplines, or the kind of research that falls into either of them?
3) What methods are appropriate? Both disciplines rely partially on laboratory experiments, but there are also many differences: Economists, but only a very few psychologists, run simulation studies or develop formal models (and take that to be research). Some psychologists, but only a very few economists, conduct qualitative in-depth interviews (and regard this as science).
4) Which standards have to be used when running experiments? Whereas economists argue that, to take a decision seriously, it has to be for real money and that one must not cheat on one's participants, psychologists are much less rigid (or should one say: much more sloppy?) on that.
5) What degree of previous knowledge is necessary to follow the research on the edge of economic psychology and behavioral economics? For example, when giving a talk at a conference, is it possible to rely on at least rudimentary knowledge in formal models or the theory of cognitive dissonance?
6) How is this new emerging field organized in the everyday reality of academia? How many universities offer joint courses for both students of economics and students of psychology?

We will discuss these and other questions with a panel of renowned economists and psychologists. In alphabetical order, the discussants will be Gerrit Antonides, Ofer Azar, David Dunning, Robert Frank, Stephen Lea, and Folke Olander.

Work Groups

Work groups are listed in alphabetical order of convenor's surnames. Contributions within work groups are listed in alphabetical order of first author's surnames.

W 1

Behavioral impediments to socially responsible stock investments

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A future change towards sustainable development requires many actions at the societal and individual levels. One such action is that corporations behave in a manner that is environmentally, socially, and ethically responsible. This may be achieved by means of investors exerting pressure on companies, either through shareholder activism, engagement, or negative or positive screening of company stocks. So far, only a small share of the total funds under management in the world is comprised under the concept "Socially Responsible Investment" (SRI). Little is known about how and why SRI is adopted by institutional investors. Consensus is that the following factors are important: (1) the organization's strategic agenda and its value basis; (2) implementation of rules and incentives for portfolio management, and; (3) personal characteristics and motivations among individual investors. The aim of the workshop is to bring together researchers from psychology and finance to assess and discuss in which ways these three factors are behavioral impediments to mainstreaming SRI.

Behavioral finance, public policy, sustainability

Social values and mutual fund clienteles

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We study socially responsible investor (SRI) clientele by using a large and unique individual-investor data set. Our purpose is to relax the implicit assumption of many previous studies that socially responsible investors are a homogeneous group. We conduct a comprehensive segmentation analysis based on the proportion of SRI mutual funds in the portfolio of investors and the utility function of investors. The first segmentation shows that investors who are male, wealthy, risk tolerant, have extensive financial knowledge, and have a professional financial advisor, invest significantly less in SRI mutual funds. We use a conjoint analysis to estimate the multi-attribute utility function of investors, which includes pecuniary and non-pecuniary utility. Segmenting individuals on their utility function yields different groups of so-

cially responsible investors. The segments differ significantly in their loyalty towards SRI mutual funds and the attention they pay to past performance and fees. First, we identify a very loyal segment that obtains many non-pecuniary benefits by investing in SRI mutual funds and which largely ignores past performance and fees. Remarkably, instead of focusing on non-pecuniary benefits from SRI, the largest subset of the SRI clientele predominantly chases past returns. Another segment focuses primarily on fees, again suggesting a financial mindset among many of the socially responsible investors. Our finding on the heterogeneity among responsible investors offers new insights into the way mutual fund families can enhance product differentiation, advertising, and the selection of distribution channels.

Socially responsible investing, mutual funds, behavioral finance, investor heterogeneity, individual investors

A social-psychological perspective on socially responsible investments

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An account of investment behavior is often founded in neoclassical economic theory. Individuals are the actors that are assumed to achieve or maximize utility via rational decision processes. As of late, the assumption of rationality has been questioned by behavioral economists. While still focusing on intra-individual factors, behavioral economists have introduced well-known cognitive biases to explain deviations from rationality. Thus, they relax the assumption that individual preferences are fixed. However, behavioral economists pay little attention to social factors that may influence investment decisions. As group living has been central throughout human evolution, social incentives are likely to influence judgment and behavior among humans. In a series of studies, we have surveyed how social factors may influence investment decisions among investment institutions. Some of these factors, such as core values and social norms, are part of what has been called organizational culture. Sixty respondents, representing 17 of the largest investment institutions in Sweden, responded to a questionnaire measuring different aspects of Socially Responsible Investment (SRI). In comparison between fund companies that held SRI funds and those that did not (conventional investors), the intention to increase SRI assets in their funds was associated with norms and values among the former group, but not among the latter group. However, these values emphasized short-term considerations, witnessing that long-term sustainability is difficult to implement in the financial industry. Uncertainty reduction in investment decisions may also be influenced by social factors. A parallel study investigated potential drivers

of SRI by means of a questionnaire addressed to major Swedish investment institutions. Answers to the drivers were submitted to a principal component analysis, extracting two factors labeled "herding" and "regulation". Results indicated that the adoption of SRI may be influenced both by following the example of other investors, i.e., by herding, and by regulations. While SRI investors are more likely to be influenced by the example of others, conventional investors are more strongly influenced by other social actors that provide market regulations.

Socially responsible investment, values, norms, attitudes, herding

Effects of short versus long evaluation intervals on stock investments

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Performance-related components or bonuses in the finance sector are considered important tools for providing incentives. An example is that stock portfolio managers are awarded bonuses conditionally on their portfolios, producing superior returns relative to either an index or equivalent funds. However, concerns are expressed that bonuses to portfolio managers are based on too short time intervals. Short evaluation periods may impact negatively on the degree to which environmental and social factors are taken into account in investment decisions. It is argued that fund management companies may reap financial benefits from introducing longer evaluation periods arising from (1) portfolio managers' increased mandate to neglect short-term stock price fluctuations in favor of long-term stock price movements, potentially leading to improved long-term returns, and (2) diminished risk of rewarding superior short-term performance that arises by chance and instead rewarding performance arisen from skill, hence providing a more accurate basis for incentivization, at the same time as potentially decreasing total bonus expenditure. When considering the effects of prolonging the frequency of monitoring stock portfolio managers' performance, it is important to address two factors. One factor concerns the effect of longer evaluation cycles on motivation. The main rationale for offering bonuses is that this will increase employees' motivation to produce good results. It is therefore important to investigate whether it is possible to design bonus schemes so that delayed payouts will be equally motivating as immediate payouts. Another factor concerns the effect of the length of the evaluation interval on investment performance. For short-term bonuses, this interval is shorter than for long-term bonuses. However, in general, longer evaluation intervals would

lead to superior performance. To show this, an experiment was carried out in which participants (32 undergraduates) role played employees of an investment firm that asked them to buy stocks for a client at a set highest price. They were paid a bonus that increased with the difference between the set price and the purchase price. In each of 15 trading days, the participants either decided to buy or postpone purchase until the next trading day. The prices either varied randomly for the set purchase price or for a negative price trend such that on each trading day the average price deviated progressively more from the set price. In one condition, there was a cost such that the bonus was reduced for each trading day. Demonstrating the negative effects of short evaluation intervals, the results showed that 1) on average the stocks were purchased at a higher than the lowest price, that 2) because purchases were made too early performance was worse when there was a price trend than when there was no price trend, and that 3) the cost increased early purchases, resulting in even larger differences in performance when there was a price trend than when there was no price trend.

Sustainability, behavioral finance, decision making

W 2

Intra- and inter-group processes in economic decision-making

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People belong to various groups. Those group memberships – characterized by social categorization, cognitive and affective representations of similarity, and/or interdependence of fate (Campbell, 1958) – may affect individuals' behavior in interactions with members of their own and other groups. Moreover, in our globalized society, individuals of different groups (ethnic groups, religious groups, etc.) are challenged to communicate and interact with each other. Often, these interactions are very complex, as individual interest, group interest, and collective interest may conflict with each other and suggest different kinds of behavior (e.g., Bornstein, 2003). The importance of individuals' group memberships for decision-making in economic contexts has been disregarded and ignored for a very long time (e.g., Hargreaves Heap & Zizzo, 2009). Recently, both economics and (social) psychologists became interested in this topic. However, the way intra-group and inter-group

processes jointly operate in economic interactions remains inadequately understood.
The present work group illuminates the impact of individuals' group membership in selected fields of economic decision-making. The papers aim to shed light on the following questions: Under what circumstances do individuals act either in their personal interest or in the group's interest? How do intra-group conflict and inter-group conflict interact with each other? What are structural or personality variables that influence individuals' behavior in mixed-motive situations involving intra-group and/or inter-group conflicts? To answer these questions, the presenting authors use theories and experimental research methods of both Economics and Psychology. The work group aims to give new insights in the interplay of intra-group and inter-group processes on individuals' decision-making in economic contexts.

Intra-group processes, inter-group processes

Intra-group discussions increase inter-group competition: An effect of social identity or rational comprehension?

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The role of discussions for subsequent intra-group and inter-group behavior is a double-edged sword. On the one hand, intra-group discussions promote cooperation in intra-group conflict situations (for reviews see Ledyard, 1995; Weber, Kopelman, & Messick, 2004), as well as inter-group discussions promote cooperation in inter-group conflicts (e.g., Bornstein, 1992). On the other hand, intra-group discussions increase the conflict of a subsequent inter-group interaction (e.g., Bornstein, Rapoport, Kerpel, & Katz, 1989; Halevy, Bornstein, & Sagiv, 2008).
However, there are two contradicting explanations for the intra-group discussion – inter-group competition effect. It has been argued that intra-group discussions may boost individuals' social identity salience (e.g., Kerr & Kaufman-Gilliland, 1994). This should increase their commitment for the in-group and their willingness to engage in inter-group conflict (social identity hypothesis). In contrast, intra-group discussions may also facilitate individuals' comprehension of mixed-motive situations'

rational structure (e.g., Bornstein & Yaniv, 1998; Davis, 1992), leading to more selfish behavior (rationality hypothesis). The present study tested both explanations.
The experiment (N = 48) contained three conditions: In a baseline condition, individual actors played a Prisoner's Dilemma Game against another randomly assigned opponent without having participated in a group discussion. All other actors were first assigned to separate discussion groups and discussed the rules of the game as well as possible strategies. Subsequently, each participant had to select an individual choice for a Prisoner's Dilemma Game that was played against an individual member of a different discussion group (inter-group interaction), but they also had to make a decision for a Prisoner's Dilemma Game that was played against another individual member of the participant's own discussion group (intra-group interaction). Following the social identity hypothesis, participants attending a group discussion should be less cooperative in the inter-group interaction than in the intra-group interaction. According to the rationality hypothesis, actors in the group discussion condition should be less cooperative compared to individuals that had not participated in a group discussion, regardless of whether the Prisoner's Dilemma Game was played against a member of their own discussion group or against a member of another discussion group. If, as a result of a group discussion, the defective choice is perceived as being the individually most rational choice, it is then irrelevant whether opponents are in-group or out-group members.
Results of multilevel-analyses rather supported the social identity hypothesis than the rationality hypothesis: actors who engaged in an intra-group discussion prior to decision-making were less cooperative in inter-group interactions than in intra-group interactions. Interestingly, increased inter-group competition emerged in a situation of outcome-independence between in-group members, further supporting the social identity explanation. Our results indicate that intra-group discussions may be sufficient to increase discussants' social identity salience, leading to in-group favoring behavior in subsequent mixed-motive interactions, which might be either intra-group cooperation or inter-group competition.

Communication, discussion

Out-group favoritism

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In-group favoritism, the practice of treating fellow members of a group better than outsiders, is commonplace in social life. It has been observed in the field and the laboratory (e.g. see Sherif et al, 1961; Hargreaves Heap & Zizzo, 2009). Treating people differently in this way is not only a source of tension between groups (e.g.,

see Otterbein, 1985), it may also be linked to the evolutionary development of altruistic or cooperative behavior within the group when there is conflict or competition between groups (e.g., see Choi & Bowles, 2007; Bowles, 2008). We report here on what may seem, in this context, a surprising experimental result: a form of out-group favoritism.
The out-group favoritism was revealed in a trust game experiment played among the Gisu of Uganda. The experimental design, with 4 treatments, recognizes that the Gisu have ties through both kinship lineage and locality. In treatment A, each person knows that they are paired with a Gisu man who lives in the Manafwa district. In treatment B, each person knows they are paired with a Gisu man who lives in their own village. In treatment C, each person knows that they are paired with a Gisu man who belongs to their own village and their own lineage. In treatment D, each person knows that they are paired with a Gisu man who lives in a different village and who belongs to a different lineage to their own.
Out-group favoritism is revealed through the comparison in behavior between D and C. There is also some evidence in the experiment, through the comparison of A, B, and C where group ties are progressively strengthened, that this absence of in-group favoritism is accompanied by a negligible influence of group membership on trust between fellow group members. This is consistent with those evolutionary arguments that link parochialism, or hostility towards outsiders, to altruism (within the group), in the sense that the absence of one is also associated with the absence of the other. Both results reinforce the thought (see Bernhard et al. 2006) that evolutionary accounts of behavior should not always assume inter-group hostility and more attention needs to be given to the circumstances under which the character of inter-group relations varies.

Trust, parochial altruism

Group reciprocity

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Laboratory experiments have persuaded many economists that humans are reciprocators: they will pay so as to punish unkind actions, both towards themselves and others (Rabin 1993; Fehr 2000; Güth, Schmittberger, & Schwarze 1982). Real-world examples strongly suggest that people reciprocate not only towards individuals, but also towards groups. For instance, in the post-reconstruction American South, real or imagined assaults committed by a black person might be avenged by attacks on other black people (Bauerlein 2001). Similar patterns are repeated in interethnic relations in many, if not all, societies (Horowitz 2001). Revenge attacks

may be carried out by either the attacked individual, or his or her group members. This suggests that individuals are willing to reciprocate perceived harm to other group members, even if this incurs costs to them. Although group psychology has been analyzed in economics (Akerlof & Kranton 2005; Chen & Li 2006), and some psychological experiments have addressed group reciprocity (Stenstrom et al. 2008; Lickel et al. 2006; Yzerbyt et al. 2003), there has been no experiment testing for group reciprocity using real payoffs. We fill this gap. A reproducible lab experiment demonstrating group reciprocity would allow us to explore these phenomena, just as the minimal group paradigm in psychology deepened understanding of group identification processes (Tajfel et al. 1971; Tajfel 1982). In our experiment, subjects are randomly allocated into three groups. In order to increase group entitativity and identification, the groups play a game (a specially adapted version of Pelmanism), with money being allocated to members of the winning group. (The winning group is announced after the experiment.) After this, subjects are allocated into pairs, each pair containing subjects from different groups, and play a one-shot prisoner's dilemma. In the final stage, each participant must allocate money between him- or herself and two other players, one from each other group, neither of whom was the partner in the prisoner's dilemma. The set of allocations allows the participant to lower one other player's payoff, at a cost to his or her own payoff. In the treatment, this other vulnerable player is from the same group as the participant's partner in the prisoner's dilemma. In the control, the vulnerable player is from the third group with whom the participant did not play a prisoner's dilemma.
We hypothesize that, when participants were betrayed in the prisoner's dilemma (i.e. they cooperated, but the other player defected), they will be more likely to harm the other player in the treatment than in the control. This demonstrates a willingness to group-reciprocate. On the other hand, there will be no significant difference between treatment and control when participants were not betrayed. Thus, our experiment provides evidence on group reciprocity in the lab. The design rules out other explanations, including belief-based explanations. Our paper describes the experiment design in detail and reports our results.

Group reciprocity, punishment, groups, conflict