# Distant Relations, a Review of "Social Psychology and Economics"

Joep Sonnemans

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Adam Smith noted that division of labor by specialization increases productivity. He referred to manufacturing, the famous example being the making of pins: "One man draws out the wire, another straights it, a third cuts it, a fourth points it, a fifth grinds it at the top for receiving the head..." (Wealth of Nations, Book 1, Chapter 1). In academia we see much specialization, but not directly in a division of labor context. Academics don't make their products (theories, models) on order, to be used by academics in other fields. Articles are primarily aimed at colleagues in the same field.

Specialization is of course inevitable; nobody can keep up with all literature in a mature discipline. It has its disadvantages, though. A labor-economist can stay unaware of recent developments in industrial organization or macro-economics, even though these developments may be relevant for his own field. The same goes for social psychologists who fail to stay updated with psychophysics or clinical psychology. These problems are often recognized on a departmental level, and departmental seminars and colloquia are organized to enhance communication between fields. These seminars can work well, if all participants have the same basic training and share conventions and norms (what questions to ask, what methods to use) and if they speak the same language (jargon).

Between disciplines the situation is more serious. Interdisciplinary research is important, but difficult. It is important for at least two reasons. First, studying a problem from different points of view may provide new insights. Second, some questions may be ignored by the different disciplines, because they are not

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CREED, Faculty of Economics and Bussiness, University of Amsterdam,

Roetersstraat 11, Amsterdam 1018 WB, The Netherlands

e-mail: J.H.Sonnemans@uva.nl



J. Sonnemans (⋈)

considered 'pure' problems (for example, "too psychological" for an economist and "too economic" for a psychologist). In this way academic specializations may leave holes in our knowledge. Interdisciplinary research is difficult because practitioners speak different languages. They have different goals, ask different research questions, and use different methods. Misunderstandings arise when researchers work from different, implicit basic assumptions and goals.

"Social Psychology and Economics" (edited by de Cremer et al., 2006) attempts "... to integrate the fields of social psychology and economics..." and is the result of a scientific meeting where researchers of both disciplines discussed their work. The contributors are all well known in their field and have interesting stories to tell. Before reading the book, I had hoped for interesting discussions like in the (now to some extent outdated) book on rationality in economics and psychology edited by Hogarth and Reder (1987). I was a little disappointed to find that all chapters are monologues; the reactions of the other participants of the meeting are not included. The last chapter tells the story of the successful collaboration of the psychologist Murnighan and the economist Roth and gives amusing insights into the differences and similarities of the two fields. What is missing in the book is a concluding chapter that shows how the different goals, motivations and traditions in the two disciplines, as illustrated in the research discussed, cause misunderstandings and make collaboration difficult.

In the following sections I will present my personal views (and experiences) and discuss the most interesting parts of the book. Before I do this, let me introduce myself. By training I am a psychologist (PhD) and worked in the psychology department before I moved to the economics department as a member of the experimental economics research team CREED (15 years ago). This group has always been very open to interdisciplinary collaboration with sociologists, biologists, political scientists, and psychologists. Of these, psychologists are not the easiest group to communicate and work with. This may be surprising, because the experimental methods in social psychology and economics have much in common. However, though the experiments in psychology and economics may look similar at first glance, they often have different goals and the research questions differ accordingly. In the next section I will discuss some typical prejudices of these two tribes on the same university campus. After that a selection of chapters of the book will be discussed.

#### **Prejudices**

Of course, not all researchers within a discipline hold the same opinions about the other discipline, but some opinions are too common to ignore and can be used to illustrate the differences and misunderstandings.

<sup>&</sup>lt;sup>1</sup> The title of the book is remarkable. Because all contributing economists are experimental economists (still a minority in economics), one would expect 'Social Psychology and Experimental Economics" or the shorter "Psychology and Economics". It suggests that subfields in psychology are demarcated more sharply in psychology than in economics.



A common view of an economist: "Social psychologists are great experimentalists, but sloppy thinkers. Most of them don't understand game theory."

A common view of a social psychologist: "Economists stubbornly believe in unlimited rationality and self-interest, although there are now ample demonstrations of systematic deviations from rationality and of fairness concerns and altruism. The experiments they do are mostly variations of experiments we did 20 years ago."

I will now discuss these views in more detail. Social psychologists are great experimentalists. This can be considered a positive opinion, but if the emphasis is on the last word, the suggestion is that designing experiments is their only strength. Psychologists are very creative and clever in designing an experimental situation that demonstrates the existence of a certain phenomenon. However the mere existence of a phenomenon in a specific situation is not satisfactory for most economists. Economists like to have a theory for all situations or institutions. In what kind of institutions can we expect this phenomenon, and how important is it compared with other effects? This calls for carefully defined theories.

As for the second part of the economist's view of psychologists: "They are sloppy thinkers," economists are used to precise definitions. The chapter about conventional behavior by Andrew Schotter can illustrate this. After a more verbal introduction he gives a precise definition of conventions: "A regularity R in the behavior of members of a population P when they are agents in a recurrent situation  $\Gamma$  is a convention (institution) if and only if it is true and common knowledge in P that ...(followed by 4 conditions)" (p. 33). It is a tradition in economics to use a mathematical notation and if possible to present a theory in the form of a model. The mathematics that is used is often very basic, but this format forces the economist to be precise in definitions, assumptions and relations. Psychologists can be discouraged by these complex formulations and notations for (sometimes) simple ideas. Needless to say, psychologists are not sloppy thinkers, but they use a way of presenting their ideas that is not familiar to economists. Psychologists have a tendency to introduce new terminology in their theories by contrasting the new term with existing ones and by giving some illustrations. This can be very frustrating for economists who are not familiar with the jargon.

In addition, psychologists often have different goals than economists and neither seems to realize that. Psychologists want to show that a certain psychological process can play a role by demonstrating a phenomenon that cannot be explained by other, rival theories. Whether the employed experimental situation is close to real life situations and whether the effect is strong enough to be quantitatively important in other situations is not relevant to the psychologist, but most relevant for the economist.

"Psychologists don't understand game theory." Game theory is central for almost all micro-economic theories of the last 50 years. Economists use it as a toolbox to describe and understand strategic situations. Because sociology and political science, as well as theoretical biology, make extensive use of game theory, some economists hope that some day game theory will be the common language that will unite the social sciences. Many psychologists are skeptical about game theory. They consider game theory exclusively as a theory for predicting behavior in a given experimental game (under the assumption that players care only for their



own payoff) that often fails. Therefore, they are not very interested in learning the subtleties of game theory and only very basic aspects of game theory are included in their training (if at all).

Economists use game theory in another way. What are the possible actions of the agents in a strategic situation, in what order can they act, what do they know at each decision node, what are the possible outcomes of the interactions, and what are the preferences of the agents over these outcomes? Game theory provides all the elements necessary to describe a strategic situation exactly. If observed behavior is different from the game theoretic model of the situation, something is wrong in the model, for example, the assumptions about the agents' preferences over the outcomes. Game theory can be used as an exact language to describe strategic situations, and economists are disappointed that psychologists do not use it for that purpose. Of course, this is caused by the different goals of psychologists and economists. Economists want to understand situations and institutions, and the behavior of the agents therein, while psychologists are mainly concerned with the psychological processes that lead to the behavior.

And now the views of the psychologists: "Economists stubbornly believe in unlimited rationality and self-interest, although there are now ample demonstrations of systematic deviations from rationality and of fairness concerns and altruism." This statement is partly true and partly false. True, in many economic models unlimited rationality and self-interest is assumed. On the other hand, for many decades economists have shown much interest in bounded rationality and social behavior. In 1978 Herbert Simon received the Nobel Prize in economics for his work on bounded rationality. Social behavior such as contributions to public goods or giving to charities have been studied extensively for the last 25 years by economists and resulted in theories about fairness concerns and reciprocity. In fact, psychologists know this and therefore are quite surprised that economists sometimes use assumptions that they know are false. But there seems to be an important difference between psychologists and economists in how they use theory. In the words of economist Alvin Roth:

Psychologists want theories to be true; they have little tolerance for theories that can be shown to be false, but a lot of tolerance for theories of limited scope. If different situations require different theories, so be it. Economists seem to view theories more as useful approximations, and they want them to be useful in a broad range of circumstances and are willing to tolerate that they are not precisely true, which isn't what they expect of approximations. (p. 328)

Assumptions of rationality and self-interest work very well in many situations, and an economist is only willing to introduce bounded rationality or social preferences if such complications are really needed to improve the model. This is again a question about how institutions frame individual behavior. For example, Fehr and Schmidt (1999) have a much-cited article in the *Quarterly Journal of Economics* about social preferences. They propose a simple model to describe different social preferences, and they provide a rough indication of the proportion of the different kinds of social preferences in the population. The next step is careful reasoning about the kind of situations where social preferences will have an impact



on the aggregate outcome. For example, in a repeated public good game with enough group members with social preferences, self-interested agents have an incentive to contribute to the public good and thus act as if they have social preferences too. This is because if they don't contribute, the players with social preferences will reduce their contribution and that hurts more than the cost of a current contribution. The presence of agents with social preferences can have a very large impact in this situation. However, in a double auction market (both buyers and sellers make offers that can be accepted by all, like a stock-market) the self-interested trader determines the price and the influence of traders with social preferences will be very small.

Let me give another example, now about bounded rationality. To an economist it seems reasonable that errors are less likely when the cost of the error will be larger. The idea behind this is that a decision maker is willing to spend more time thinking if she expects this will be worthwhile; there is a trade-off between the cost of thinking and the benefits of a better decision. In this model the best decision is not always made, but there is a positive relationship between the expected quality of a choice and the probability it is made (in technical terms; a quantal response is assumed). In strategic situations this means that a player is not sure that the other player is completely rational (an assumption of standard game theory) but knows that some mistakes are more likely than others. If both players rightly assume that both make the same kind of errors (both make quantal responses) an equilibrium can be calculated. In some cases this equilibrium is close to the standard game theoretic equilibrium, but in some cases it is not. These quantal response models can very well explain experimental data (for example, Goeree & Holt, 2001).

However, the difference between economists and psychologists may be smaller than perceived by some. Psychologists also like elegant theories with as few elements as possible. It is very common for psychologists studying social behavior to assume that participants make rational decisions, that is, choose the behavior according to their social preferences without systematic mistakes. I will come back to this later, when I discuss the chapter by Daniel Batson.

"The experiments economists do are mostly variations of experiments we did 20 years ago." Experimental economics started in the early sixties with market experiments in the USA and oligopoly experiments in Europe. In the eighties attention shifted (partly) to the anomalies found by psychologists, for example the preference reversal phenomenon [when presented with a pair of lotteries (cleverly designed by the researcher), decision-makers will value one lottery above the other, but inconsistently tend to choose the other one]. At that time experimental economists replicated psychological results using economic experimental methods (e.g., paying subjects substantial sums based upon their decisions instead of using questionnaires). Of course, an economist may think an experimental situation to be very different from others because of (game) theoretic subtleties, while a psychologist may not think it to be such a fundamental variation.

Concluding, misunderstandings between psychologists and economists are, for the most part, caused by both parties failing to realize that, although the methodology is much the same, the goals and the research questions often differ on essential points. Psychologists want to understand the processes underlying



human behavior and focus on theories that are essentially true but with a limited scope. Economists are interested in the relations between institutions and behavior, and consider a theory to be an approximation that will not always be completely true but often close. Bounded rationality and social preferences are only included in models when necessary to improve predictions considerably. In order to know in what kind of situations we can expect a specific behavior to have an impact, we need to understand the processes behind that behavior. Differences in experimental methodology are not the main problem; in marketing science (also a very experimental oriented field) economists and psychologists apparently can work together well.

#### Social Behavior

Before discussing some chapters of the book in more detail, I will consider social behavior as studied by psychologists and economists. Psychologists treat helping behavior, social dilemmas and common pool resources as different topics. In the case of helping behavior the situation is asymmetric: the helper bears costs (time, effort, money) and the person that is helped, benefits. The main question is when can we expect helping behavior to occur (what are the influences of characteristics of the situation or the possible helper). A social dilemma is a strategic situation in which all members of a group have to decide individually to cooperate or defect. For each decision-maker the individual benefits of cooperation are less than the cost, but the group benefits (sum of the individual benefits) are larger than the individual costs. Finally, in a common pool resource all group members decide individually how much to take from the common pool but taking too much diminishes the pool size in the present and future periods (compare over-fishing from the oceans).

Economists focus on public good games, intergenerational solidarity games, oligopoly games and network games. Public good games are much like social dilemmas. Group members can contribute to a public good (a part of their endowment in the so-called voluntary contribution mechanism, or sometimes an allor-nothing decision) and the size of the public good is determined by the total size of the contributions (continuous public good), or the public good is provided only if the total contributions exceed a certain number (a step-level public good). In intergenerational solidarity games an experiment lasts for many periods but in most cases a participant plays only two periods. In the first period the participant is a "young worker" and decides how much to pay to the old workers. In the second period the participant is a "retired worker" who receives money from the new young workers. Earnings in the experiment are determined in a way that income transfers in all periods are efficient. Oligopoly games are somewhat related to social dilemmas but are not public good games. If there are only a limited number of producers in a market, they will make a higher profit if they don't compete fiercely but by tacit coordination or after consultation (illegal in most countries) agree to keep prices high by limiting production. However, a firm that cheats and produces more than agreed (leading to lower market-prices) can make a large profit. This has all the elements of a social dilemma; however 'social' acts of the firms are now



harmful for consumers and society. Many economic experiments are focused on institutions that may decrease cartel formations and enhance competition (for example by manipulating the information structure or designing rules that encourage cheating in a cartel). Finally, in network games participants are not forced to interact. They choose with whom they want to establish a connection. Connections have their costs and their benefits, and it is possible to disconnect from players (for example because they misbehaved). The form of the network, the dynamics and the stability are typically studied<sup>2</sup>.

Typical treatments in the experiments described above are variations in parameters (group size, symmetry of pay-offs, etc.), information (availability of own and others' history of actions and earnings), repeated play or one-shot, extending the game with sub-periods in which actions can be rewarded or punished, measuring or manipulating beliefs about other players, and many others.

Psychologists are inclined to consider each experimental situation described above as a different *paradigm* unrelated to the others. Psychologists studying one paradigm (e.g., social dilemmas) don't cite psychological literature on other paradigms (e.g., helping behavior), or the other way round, and they certainly do not cite economic literature on oligopoly games. To a lesser extend, the same is true for economists. The frustrating thing is that we know that social preferences, individual or social norms about fairness (of outcomes or procedures), conventions, emotions and expectation formation about the behavior of others are likely to play a (more or less) similar role in all these different issues and experimental situations, but reliable *general* theories are missing. Economists realize that standard microeconomic theory based upon assumptions of rationality and self-interest has the advantage of being very general, but that it is too crude to be of use in many practical situations; and the available psychological theories are too specific to be used to predict behaviors in new situations that have not yet been studied explicitly.

#### **Social Psychology and Economics**

The book is about 350 pages long and consists of a short introduction, four chapters about preferences, utility and choice, two chapters about emotions, three chapters about reciprocity, cooperation and fairness, three chapters about social distance, three chapters under the heading of 'Challenges to social psychology and economics' and one final chapter that tells the story about the collaboration of the economist Roth with the psychologist Murnighan. Because of space limitations I will describe four chapters, two by economists and two by psychologists, as an illustration of the different approaches taken by scholars in these two disciplines.

<sup>&</sup>lt;sup>2</sup> This list is not intended to be complete. I will discuss below chapters of Andrew Schotter and Iris Bohnet, who study ultimatum games and trust games, respectively. These games also contain elements of social behavior.



### Institutions: Andrew Schotter's Chapter on Conventions

Andrew Schotter's very interesting chapter ("Conventional Behavior") is illustrative of the kind of questions economists tend to ask and the way they try to answer them. According to Schotter, there are two important questions to ask: "Why do we make the choices we do?" (individual level) and "Why are things organized the way they are?" (institutional, aggregate level). These two questions are very much related, because how well an institution functions depends on the way individuals behave within that institution. Psychologists tend to focus on the first question only, while for many economists questions of the first kind are (only) important because the answers are needed for understanding institutions.

Schotter's chapter is about conventional behavior, that is behavior that is not deliberative, but done by rote or through the process of socialization. We live in a complex world and have limited attentional resources. Conventions offer a quick solution to this problem of bounded rationality. Schotter starts with a precise definition of conventions and norms. He presents two intergenerational game experiments that examine how conventions are established; I will discuss the first one. Schotter justifies the design of the experiment by pointing to the real world: long-lived firms play an infinite repeated game while the decision makers (CEOs) change regularly.

In the experimental setup there is no direct contact between generations and all participants played an ultimatum game only once. In this game the sender suggests a division of 10 dollars to the receiver, and this receiver can either accept this division (and receive his/her part of the proposed division) or reject it (in which case sender and receiver both receive nothing). Before playing, participants see first the advice of the previous generation and can observe (part of) the history of previous generations. After that beliefs about the behavior of the other party are measured and the game is played. After the outcome of their game is revealed, senders and receivers give advice to the next generation of senders and receivers (a suggestion of the amount to send or a minimum acceptable offer, respectively). They have an incentive to give what they consider good advice because part of their earnings is determined by the play of the next generation. Treatments differed in the available history, advice or both, and games were run for more than 60 generations each. Results show that in particular intergenerational advice was helpful in establishing a convention. These conventions are efficient because they coordinate beliefs about behavior while limiting the cognitive resources needed by the decision makers.

#### Psychological Processes: Batson Chapter on Altruistic Preferences

Psychology is concerned mainly with how *processes* within the individual (formation of cognitions, emotions and motivation) determine or influence behavior. An artificial experimental situation is designed and by changing elements of this situation subtle psychological mechanisms can be demonstrated. A typical example is the research of C. Daniel Batson in Chapter 15 ("Not All Self Interest After All"). Batson describes a series of experiments that demonstrate the existence of altruistic motives. In addition, two small new experiments are reported.



According to Batson, social behavior can be caused by an altruistic motive or by three kinds of egoistic motives: avoidance of punishments, seeking of rewards, and averse-arousal reduction (seeing someone in need causes an unpleasant arousal and helping reduces this arousal). By carefully designing a series of experiments that systematically rule out these egoistic motives and still observing helping behavior, Batson and coauthors show that pure altruistic motives have to exist. In these experiments the participant is given the opportunity to help someone in need (a confederate of the researcher). The strength of the three possible motives is manipulated, for example by making it possible to avoid observing the stress of the person in need (and so avoiding the unpleasant arousal without helping). In the chapter Batson describes two new experiments in which a prisoners' dilemma player's empathy for the other player is manipulated, and he finds that the amount of cooperative behavior increases with empathy.

If we compare this chapter with the one of Schotter described above, two remarkable differences can be observed. First, Schotter feels the need to justify the design of the experiment by referring to real world examples. The goal of Batson's series of experiments is only to prove the existence of an alternative motive, not to examine its relative importance and therefore his design doesn't need such justifications. Second, Batson's underlying assumption is that a motive (either altruistic or egoistic) is always needed for behavior. This suggests that psychologists also tend to assume rationality (and/or self-interest) when convenient. In a bounded rationality context the cost of thinking should also be considered. An agent with no altruistic motives may help *routinely*, if doing so is not too costly, because on average helping is profitable, and considering all the pros and cons in every instance is too time consuming. If someone asks what time it is, it will cost less effort to give a truthful answer than performing a cost-benefit analysis (compare the classic copymachine experiment of Langer et al., 1978).

#### Institutions: Bohnet's Chapter on Institutions and Behavior

In Chapter 12 ("How Institutions Affect Behavior) economist Iris Bohnet discusses how institutions influence and direct behavior. Many examples are given, mostly in the field of trust and trustworthiness. She considers six possible influences of institutions on behavior, but I will summarize only one of these: how institutions influence preferences. Bohnet describes how intrinsic motivations may disappear when extensive motivations (sanctions by law) appear. In a trust-game the first mover can either trust or not trust the second mover, and the second mover can either reward or betray the trust. In the case of no trust both players earn 50 cents; in the case of betrayal the earnings are 20 cents (mover 1) and 250 cents (mover 2); and in case of rewarded trust both players earn 150 cents.

Now a law is introduced: with probability p betrayal is punished and in that case the earnings are 150 (mover 1) and 120 cents (mover 2). If p is large enough (for example 90%) institutional incentives are large enough for mover 2 to always reward trust. This means that the intrinsic motivation to be trustworthy is supplanted by extrinsic incentives. In an experiment discussed by Bohnet, participants first



played 3 periods with p set at either 0.1, 0.5 or 0.9 and after these three periods p was set at 0.1 for 6 periods (participants didn't know beforehand that p would change during the experiment). In the first three periods the institutions had the expected effect (more trust when p=0.9), but after period 3 the groups that started with a p>0.1 did considerably worse. The intrinsic motivation to reward trust was apparently destroyed by the extrinsic incentives in the first three periods. Interestingly, psychologists also study these negative effects of sanctions on cooperation and trustworthiness, and these psychological studies certainly have had some impact on (law and) economic research. However, the emphasis differs. While psychologists focus on the psychological processes that cause these phenomena, economists tend to focus on the consequences for the design of institutions. Bohnet ends her chapter with the wish, typical for economists: "We hope that more economists and psychologists will dare to use this knowledge to make recommendations for how to change institutions for the better of mankind" (p. 232).

# Emotions: The Chapter of Zeelenberg and Pieters

Two chapters in the book are dedicated to emotional behavior. More and more economists realize that human economic decision-making cannot be described properly without understanding emotions. For example, every day a huge amount of money is spent on advertising. Only a small part of the advertising content is product-information that focuses on our abilities for rational decision-making; most advertising tries to influence preferences by making associations between successful living and using a certain product. Also emotions can play an important role in the workplace (e.g., at negotiations, helping behavior, etc.).

An essential characteristic of an emotion is that it cannot be completely controlled. This is the case on the level of feeling - one cannot stop feeling sad and start feeling happy just by making that decision - but also on the level of behavior. Emotions lead to action-tendencies (e.g., fighting when angry, crying when sad, escaping when afraid, approaching when in love, etc.), and these action-tendencies can only be controlled by considerable effort, if at all. As Ketelaar puts it (in Chapter 6 "The Role of Moral Sentiments in Economic Decision Making"): "emotions have more in common with relatively automatic processes such as intuition and perception than they have to do with more calculated processes such as rational deliberation and logical inference" (p. 101). Economic theory can include automatic behavior like habits or conventions (see the discussion above of Schotter) if this can be interpreted as an efficient solution for a recurring situation (the cost of deliberating every decision is not compensated by the expected returns). This is not the case with emotional behavior. Emotions tend to arise especially when the situation is important and consequences can be large. Buying a house involves more emotions than buying a bicycle, while the consequences of a bad decision are larger in the former case. The important (also from an economic point of view) lifetime decision of choosing a marriage partner is in the West often based upon love.

Up to now, most theories on emotional economic behavior simplify emotions considerably by focusing only on the *valence* of the emotion: pleasure and pain.



Consequently, the behavioral implications of emotions in these theories are also one-dimensional: approach (pleasure) or avoidance (pain). Zeelenberg and Pieters (Chapter 7) make a strong and (in my opinion) convincing argument that this is not a fruitful line of attack. The title of their chapter "Feeling is for Doing" reflects their opinion that the emotional system is primarily a motivational system, and that different emotions signal different problems of the individual with the environment and call for different actions (and thus serve different motivational functions). The valence-only approach has problems with emotions that are in some way bivalent (e.g., nostalgia, surprise, schadenfreude) and mixed emotions (e.g., in case of the death of a relative sadness but also relief that the suffering ended). Most important is the failure of valence-only theories to accurately predict behavior in rich environments<sup>3</sup>. Individuals who are treated unjustly may feel anger, disappointment or sadness, all emotions with a negative valence. The emotional behavior will depend on the specific emotion: active and external when angry (revenge) and passive and internal when sad or disappointed. The chapter discusses in more detail the behavioral differences between disappointment and regret.

Zeelenberg and Pieters plead for emotion-specific research focusing on the behavioral implications in a dynamic context. The emotions to be studied should be endogenous, that is, caused by and relevant for the decision-making situation. The dynamic framework is important because emotions influence behavior, but behavioral decisions (e.g., to give in to the action tendency like fighting) can also influence the emotion itself.

#### Conclusion

The interests and methods of social psychologists and economists overlap, but the emphasis is different. Social psychologists focus on the processes underlying behavior, while economists focus on the interaction between institutions and behavior. Of course, this difference may not be that clear-cut, with some researchers located somewhere at the border.

In the introduction I noted that academic articles are primary directed at colleagues working in the same field. These colleagues are likely to be the referees of your papers, and they are most important for making steps in your academic career. Although there is no clear division of labor between fields, the output of one field can be used as an input in another one. Economists need psychological theories to understand the working of economic institutions. Economists can certainly profit from an improved interaction with psychologists. But do psychologists need economists? If their goal is to publish only in their own field, the answer is probably no<sup>4</sup>. However, if psychology wants to play a role in policy advice, the answer is yes.

<sup>&</sup>lt;sup>4</sup> In economic journals you sometimes find citations of psychological literature, but too often in an eclectic and opportunistic way (for example when motivating some elements of new behavioral model). Psychologists rarely cite economic literature.



<sup>&</sup>lt;sup>3</sup> In experiments in which behavior can vary only along one dimension like cooperation-defection the limitations of the theory may be less apparent.

Authors of two chapters of the book (Bazerman and Malhotra in Chapter 14 and Murnighan and Roth in Chapter 17) mention the remarkable fact that policy makers pay much more attention to economic advice than to psychological advice, as illustrated by the presence of economic councils at various government levels. The influence of psychology on policy can increase in two ways. First, psychologists can change their ways and, like economists, make more general theories and not shy away from making recommendations. In that case psychology should pay much more attention to the working of institutions and definitely study economic (game theoretic) models. Second, psychologists could decide to stay away from policy recommendations and (as Bazerman and Malhotra put it) "leave it to the growing breed of behavioral economists who integrate psychological insights into economic frameworks and policy recommendation" (p 278). In that case it is important that the psychological theories are presented in a form that is better accessible to (applied) economists. In any case, both for the advancement of social science and for policy recommendations, regular interaction between psychology and economics is necessary and this book makes a valuable contribution to that interaction.

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