CHAPTER ONE

Introduction

By Peter Diamond and Hannu Vartiainen[1]

Over the last decade or so, behavioral economics has fundamentally changed the way economists conceptualize the world. Behavioral economics is an umbrella of approaches that seek to extend the standard economics framework to account for relevant features of human behavior that are absent in the standard economics framework.[2] Typically, this calls for borrowing from the neighboring social sciences, particularly from psychology and sociology. The emphasis is on well-documented empirical findings: at the core of behavioral economics is the conviction that making our model of an economic man more accurate will improve our understanding of economics, thereby making the discipline more useful.

It is natural for such an endeavor to begin as a subdiscipline—one that catalogs anomalies and explores alternative ways to model choice, with applications illustrating the workings of such models. A more ambitious role for behaviorally based insights is to effect how researchers in applied fields make both positive and normative analyses. By and large, this is the arena in which the usefulness of new ideas is eventually evaluated. In the long run, one expects the arguments, if useful, to be integrated into the mainstream literature.

An example of such development in the behavioral context is finance. Success of behavioral finance, a thriving area which has produced enough material to warrant a handbook treatment (Thaler 1993),[3] is partly explained by the fact that the conflict between the standard benchmark model and a rich supply of data is particularly clear. Accounting for behavioral tendencies fills a disturbing gap in understanding financial markets, and institutions therein.

While other applied fields have not gone nearly so far, there is no reason why behavioral ideas could not, and should not, be applied to other domains too. Indeed, behavioral tendencies concern human behavior in general and there is no reason to

[1]We are grateful to the participants of the conference for stimulating discussions. We owe special thanks to Emma Dain of T&T Productions Ltd, London, for devotedly copyediting this volume.

[2]For a survey on the development of the field as well as some landmark works, see Camerer et al. (2003).

[3]Behavioral macroeconomics has also received some survey discussion (Akerlof 2002).

tie the arguments to a particular field. It is hoped that this volume will contribute to the integration of behavioral insights into applied fields. The contributors to this volume take for granted the fact that behavioral ideas have an important future in economics and hope, through this book, to promote developments that will make good use of them. Our aim is not to engage in the debate between the standard modeling and behavioral approaches, but to move on to applications.

The chapters in this volume examine behavioral dimensions of six fields of economics (public economics, development, law and economics, health, wage determination, and organization economics) in which behavioral argumentation has proven to be useful but has not yet been integrated as a part of the established framework. We have left out finance as being beyond the phase where contributions such as the ones in this volume can shift a field.

Interest in behavioral economics has been stimulated by accumulating evidence that the standard model of consumer decision-making provides an inadequate positive description of human behavior for some questions. According to the evidence (and contrary to the standard economic model), individuals are bounded in many dimensions, in particular in their rationality, self-control and self-interest.

Bounded rationality[4] manifests itself in incomplete information processing ability. Individuals appeal to heuristics and rules of thumb when making their decisions. They make biased probability judgments and are often overconfident. Moreover, individuals tend to anchor to seemingly irrelevant information or to the status quo, and they are loss aversive. In general, they do not maximize expected utility (Kahneman and Tversky 1979).[5]

Incomplete self-control refers to the tendency of economic agents to make decisions that are in conflict with their long-term interest. Self-control problems may lead to addictive behavior, undersaving, or procrastination. As opposed to the neoclassical view, restricting the choice set can be beneficial for an agent with bounded willpower (see, for example, Laibson 1997).

Lack of self-interest refers to the idea that preferences have a social dimension. Individuals care, or act as if they care, about other individuals' well-being (see, for example, Kahneman et al. 1986). They are also reciprocal: they care about being treated fairly and want to treat others fairly if those others are themselves behaving fairly. As a result, agents are both nicer and (when they are not treated fairly) more spiteful than postulated by the neoclassical theory.[6]

Beyond this familiar trilogy of bases for deviations from the standard model, economists are exploring additional psychological and sociological factors that

[4]The term was coined by Herbert Simon (see Simon 1982).

[5]Rabin (1998) gives a survey on economics and psychology.

[6]Gilbert et al. (1998) is a good survey on social psychology.

shape economic decision-making. They are also examining decision processes to view and model the black box of human decision-making; very recent work in neuroeconomics focuses directly on the question of *how* decisions are made. This is an important development, since it may help to address the fundamental difficulty of constructing welfare criteria based on individual choices.

In addition to revised models of individual choice, alternative behavioral models of individual choice can help us to understand the functioning of economic institutions. On the normative side, behavioral modeling can help us to design better institutions. This can take place not only through better understanding of how the institutions work, but also through better understanding of individual needs and the concept of welfare.[7]

One cannot evaluate the ultimate goodness of a behavioral model of an economic man without seeing how useful the model is in structuring our thinking of general economics. Applicability requires that the models and stylized facts compound to an integrated theory that is flexible, adequately parsimonious, and permits us to construct testable hypotheses. This suggests enhancing communication between applications and the underlying theory. To develop the theory further it helps to have feedback from areas where the theory could be applied. Studying applications may give a sharper view of the behavioral tendencies that really matter.

The chapters in this volume describe both realized and potential opportunities for applications of behavioral economics. Each chapter includes updated versions of a presentation at the conference and the remarks of the discussants. The final chapter consists of a modified transcript of a round-table discussion. Summaries of the highlights of the general discussion have been prepared by Botond Koszegi and Emmanuel Saez.

This volume consists of the following chapters.

Douglas Bernheim and *Antonio Rangel* discuss emerging methods for normative policy analysis in behavioral economics, with a particular focus on issues in public economics. They argue against the view that a departure from the doctrine of revealed preference, which is unavoidable in the presence of bounded rationality, necessarily renders welfare analysis infeasible or entirely subjective. Instead, they argue that it is sometimes possible to replace revealed preference by other compelling normative principles. For example, if one knows enough about the nature of decision-making malfunctions, it may be possible to recover tastes by relying on a *selective* application of the revealed-preference principle. Accordingly, practicing behavioral economics requires one to modify, not abandon, the key methodological principles of modern

[7] As pointed out by a reviewer, with social- or institution-dependent preferences it is no longer obvious that methodological individualism is the most useful doctrine for the analysis. For discussion on how institutions could affect preferences, see Camerer and Malmendier (Chapter 7, this volume), and for the importance of the "portability" of the underlying model, see Tirole (Chapter 8, this volume).

economics. The chapter considers three areas: addiction, saving, and contributions for public goods. The discussants are *Nicholas Stern* and *Emmanuel Saez*.

Sendhil Mullainathan gives an overview of potential applications of behavioral ideas to economic development. He argues that the work in the behavioral literature on savings and bounded willpower can be translated into understanding savings institutions and behavior in developing countries. Additionally, the insights about self-control have some direct links to understanding education, and the behavioral approach also appears to add some insight to the large body of research on the diffusion of innovation. The question of how (and when) to evaluate the impact of development policies can also be better understood. Mullainathan speculates about specific areas where psychology could be useful in the future: poverty traps, conflict, social preferences, corruption, and research on the psychology of the poor. The discussant is *Anne Case*.

Christine Jolls discusses applications of behavioral economics to law and economics. She describes some of the central attributes of behavioral law and economics and outlines an emerging focus on prospects for "debiasing" individuals through legal structures. She argues that using the vehicle of "debiasing through law," behavioral law and economics may open up a new space for legal interventions that recognize human limitations and attempt to steer individuals away from mistakes without taking the steering wheel from the individual's own hands. Because, however, debiasing through law cannot be applied in every context, Jolls suggests that future work in behavioral law and economics should seek to refine and strengthen analyses on how to structure legal rules when debiasing is not feasible. The discussants are *Ian Ayres* and *Christoph Engel*.

Truman F. Bewley studies the origins of wage rigidity. He reports the implications of interviews with company managers and labor leaders in the northeast of the United States during the early 1990s when unemployment was high because of a recession. During this era, standard economic arguments would have predicted wage cuts, but they never came. Quite surprisingly, the primary resistance to wage reduction comes from upper management, not from employees. Bewley finds that the main reason for avoiding pay cuts is that they damage morale. Morale has three components. One is the identification with the firm and an internalization of its objectives. Another is trust in an implicit exchange with the firm and with other employees; employees know that aid given to the firm or to coworkers will eventually be reciprocated, even if it goes unacknowledged. The third component is a mood that is conducive to good work. The mood need not be a happy one; good morale is not equivalent to happiness or job satisfaction. Workers may be content, simply because they do nothing. Good morale has to do with a willingness voluntarily to make sacrifices for the company and for coworkers. Thus, this chapter is an example of the adaptation of an organization to the behavioral traits displayed by economic agents working

in the organization. This issue in general, and not just in wage setting, is the focus of the chapter on organizations (Camerer and Malmendier, Chapter 7, this volume). The discussant is *Seppo Honkapohja*.

Richard Frank argues that the health sector is full of institutions and decision-making circumstances that involve friction in markets and cognitive errors by decision makers. Stress of decision-making, anxiety, professionalism, insurance coverage, and lack of information make decision-making in health-related questions particularly relevant for behavioral analysis. He concludes that at the heart of the matter is the doctor–patient relationship, where trust plays the key role. Indeed, the field has drawn heavily on nonstandard arguments put forward by Arrow (1963) and may be ripe for expansion using the wider range of behavioral insights now available. Frank also discusses normative issues. He argues that the demand functions in health-care markets cannot be given the standard normative interpretation and, hence, that they cannot be taken as the definite guideline for policy analysis. He expresses skepticism over whether the prevailing cornerstones of the U.S. health policy—to increase information and the degree of available choices—will improve the quality health production. The discussants are *Jacob Glazer* and *Botond Koszegi*.

Colin Camerer and *Ulrike Malmendier* analyze, on the one hand, how behavioral economics can be applied to organizations and, on the other, how behavioral analysis of individuals can be enriched by thinking about the economic questions associated with economic organizations. Biases in behavior within organizations give rise to the question of how organizations should be designed in order to repair these mistakes or to exploit them, or how firms organize around them if they represent genuine regret-free preferences rather than errors. A lot of psychology and sociology is involved when workers team up in an organization: social comparison, changes in identity, camaraderie, attribution and diffusion of credit and blame, and so forth. This kind of behavioral analysis has played a small role in behavioral economics in recent years but looms large when thinking about organizations. The authors lay down an agenda for further research. Moreover, the study of institutions can provide important feedback for the analysis of behaviorally bounded individuals. The discussant is *Michael Cohen*.

The wrap-up panel consisted of *Eldar Shafir*, *Jean Tirole*, *Tim Wilson,* and *Peter Diamond*. Their remarks and the following discussion are presented in the final chapter.

References

Akerlof, G. 2002. Behavioral macroeconomics and macroeconomic behavior. *American Economics Review* 92:411–33.

Camerer, C., G. Loewenstein, and M. Rabin. 2003. *Advances in Behavioral Economics*. Princeton University Press.

Gilbert, D., S. Fiske, and G. Lindzey. 1998. *Handbook of Social Psychology*, 4th edn. McGraw-Hill.

Kahneman, D., and A. Tversky. 1979. Prospect theory: an analysis of decision under risk. *Econometrica* 47:263–91.

Kahneman, D., J. L. Knetsch, and R. H. Thaler. 1986. Fairness as a constraint on profit seeking. *American Economics Review* 76:728–41.

Laibson, D. 1997. Golden eggs and hyperbolic discounting. *Quarterly Journal of Economics* 112:443–78.

Rabin, M. 1998. Psychology and economics. *Journal of Economic Literature* 36:11–46.

Thaler, R. (ed.). 1993. *Advances in Behavioral Finance*. New York: Russell Sage Foundation.

Simon, H. 1982. *Models of Bounded Rationality*. MIT Press.