

Background

This book is designed to acquaint you with some ideas from decision theory, and to examine how they might help in making better decisions. The method of presentation is based on problems in which you are asked to imagine a situation, and make a decision or a judgment. The problems are chosen to exemplify some principles of decision theory, as well as violations of these principles derived from the psychological literature.

What are “better decisions” and who has the authority to judge what a good decision is? The answers are not obvious. I take the view that the quality of a decision is, in the final analysis, a judgment to be made by the decision maker. That is, a “good,” or a “better,” decision should be so judged by the one who makes it. Decision makers may need to be exposed to some analysis and reasoning about their decisions; they may also need some experience to be able to judge their decisions with the appropriate perspective. But eventually, it is the decision makers themselves who should feel that they make better decisions. If decision theorists preach a certain mode of decision making, but they do not manage to convince decision makers that this mode is “right,” then it probably isn’t.

Background

Borrowing an economic metaphor, I view people like me – namely, decision theorists – as merchants. We buy decision principles (mostly from the forefathers of decision theory) and try to sell them to decision makers. These are our consumers, and the consumers should feel they are happy with the product they have bought. This doesn't mean that all consumers should be happy at all stages of the process. Sometimes acquiring knowledge might take some patience. It's also possible that some people will find parts of this book useful but not others. But if most readers find most of the book useless, there's something wrong with the product I'm selling.

I usually start with examples in which classical decision theory is violated. Many such examples were provided by the psychologists Daniel Kahneman and Amos Tversky.¹ They and their followers ran carefully designed laboratory experiments which showed that almost all rationality assumptions in economics may be violated, in certain examples, by a non-negligible portion of decision makers.² Other examples predate the works of Kahneman and Tversky. In any event, it should be emphasized that for practically every general principle there will be examples in which it will be violated by many decision makers.³

I believe that the best way to explain a principle is to start with an example that violates it. In general, it is useful to understand a theory by that which it rules out, and a few good examples are the best way to envision the general principle. Moreover, in the case of decision making, observing a violation of a certain theory, or principle, also raises a question that each of us has to cope with on her or his own: do I like to be the kind of decision maker who violates this principle and, if so, when, and under what conditions? Seeing an example in which I violated a certain principle, and then understanding what the principle suggests, I can next judge whether I wish to change my behavior in the future or not.

In a sense, you may consider this book as a catalog of patterns of decision making that some theorists consider to be irrational. I use these patterns both to present the general principles, but also to criticize them. As explained above, I will try not to offer a supposedly correct answer as to which principles we should adopt and when.

This decision should be made by each and every decision maker. I believe that, whatever is your answer, you will be enriched by understanding the general principles and by being acquainted with examples in which these principles tend to be violated.

It might be useful to mention two terms that decision theorists and economists like to use in this context: descriptive and normative theories. A *descriptive* theory is meant to describe reality. For instance, the claim that demand curves slope down attempts to tell us something about the world. Importantly, it does not make a value judgment and takes no stand on whether this feature of the world is good or bad.

A *normative* theory is a recommendation to decision makers, a suggestion regarding how they *should* make decisions. For instance, the claim that we should reduce income inequality is a normative claim. Note that the word “normative” does not mean here “the norm in a given society” as it does in other social sciences. The term only says something about the type of interaction between the theorist and the decision maker, namely, that this is an instance in which the former is trying to convince the latter to behave in a certain way.

In decision theory it is often the case that a principle can be interpreted either descriptively or normatively. Consider the theory that each economic agent maximizes a utility function. I may propose it as descriptive, namely, arguing that this is a good description of real economic agents. And I may promote it as normative, in which case my claim will be that you would be wise to become such an agent. As a descriptive theory, the principle is tested for its correspondence to reality. The better it fits the data, the more successful it is. As a normative one, the principle should not fit reality. In fact, there is no point in giving decision makers recommendations that they anyway follow. Rather, the test is whether the decision makers *would like* to follow the principle.

It is important to realize that you will typically be interested in both normative and descriptive theories. A good normative theory is one that you would like to adopt, that is, one that would allow you to make better decisions in your own eyes. A good descriptive

Background

theory will tell you how people around you behave. Whether you interact with your boss or your underlings, colleagues or customers, competitors or other traders, it is important to know how they make decisions.

There is a delicate point here. When we teach the foundations of microeconomics, for example, we typically assume that agents are rational. If this happens to be a good descriptive theory, you may use it to make better decisions in the market, and this seems like fair play. But when we focus on modes of behavior that are considered irrational (at least by some), an ethical issue emerges. Suppose that we are convinced that a certain mode of behavior is silly, and that we would like to avoid it. It so happens that many people are not aware of our analysis and they still follow it. Knowing this fact might be useful, but is it morally right? Will we be justified in making better decisions for ourselves, relying, as it were, on other people's mistakes? And if not, will not a book such as this make the world a worse place, helping some decision makers take advantage of others?

These are serious concerns. Nevertheless, I do not hesitate to teach the material presented here or to publish this book. There are two main reasons for this. First, I do not believe that such knowledge can be kept confidential. Too many people know of this material (including the work of Kahneman and Tversky) for this to be a secret. Second, many if not most practitioners who could benefit from this knowledge had already done so years before it made its way into the realm of academic knowledge. Many of the effects that Kahneman and Tversky documented in their careful studies had been made use of by marketing people and politicians, among others. Hence, one might hope that such a book will do more good than harm, because it will help the unprofessional make better decisions in the presence of the professionals.

Notes

- 1 Daniel Kahneman received the Nobel Prize in Economics in 2002 for his contributions in this area. Amos Tversky died in 1996.

- 2 See, for instance, Kahneman, D., Slovic, P. and Tversky, A. (eds) (1982) *Judgment under Uncertainty: Heuristics and Biases*. Cambridge University Press.
- 3 Amos Tversky used to say: "Give me an axiom, and I'll design the experiment that refutes it."

Suggested Reading

On the foundations of theories of rational choice:

Binmore, K. (2009) *Rational Decisions*. Princeton University Press.

Gilboa, I. (2010) *Rational Choice*. MIT Press.

Hammond, J. S., Keeney, R. and Raiffa, H. (1998) *Smart Choices: A Practical Guide to Making Better Decisions*. Harvard Business School Press.

On the psychology of choice and violations of classical theories:

Ariely, D. (2008) *Predictably Irrational*. MIT Press.

Bazerman, M. H. and Moore, D. (2006) *Judgment in Managerial Decision Making*. John Wiley & Sons, Inc.

Thaler, R. H. and Sunstein, C. R. (2008) *Nudge: Improving Decisions About Health, Wealth, and Happiness*. Yale University Press.