The Bounds of Reason:
Preface to the Japanese Edition

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I am deeply honored that The Bounds of Reason is being offered to Japanese readers. The Bounds of Reason and the ideas therein have deep roots in the Japanese intellectual world. When I was a young researcher, often taking positions not favored by the economics establishment, Professor Hirofumi Uzawa emerged as a strong supporter of my work. My research with Professor Tsuneo Ishikawa, who was sadly taken from us at a young age, was formative of my current ideas. Professor Masahiko Aoki, who befriended me when we were both very young, has been a constant inspiration in his ability to combine economic theory with deep truths from other behavioral science disciplines, as well as deep insights of his own. Professor Toshio Yamagishi, also a dear friend, is perhaps the greatest living social psychologist, and one of the few to transcend his discipline by incorporating central concepts from other fields, including economics. His work has offered me key insights into the nature of human sociality.

The Bounds of Reason reveals my deepest commitment as a scientist, that of unity, harmony, and synergy across the behavioral sciences, deepening in addition to broadening the analytical power and scope of each. My general strategy for adjudicating among the social sciences is clear throughout the book, and yet this transdisciplinary stance in no way reduces the analytical rigor of the work.

I have always loved sociology, political science, cognitive and social psychology, and anthropology almost as much as I have loved economics. I have always believed each field has much to offer the others, strengthening rather than diluting the fundamental insights of the recipient. How could sociologists and social psychologists reject rational decision theory and game theory? This to me is singularly bad judgment. I studied the various arguments rejecting game theory, but these arguments, are each and every one, even when penned by great minds, inaccurate and even ignorant.

Some researchers have used the brilliant experimental findings of Daniel Kahneman, Amos Tversky and their colleagues to assert that humans are very poor

decision-makers. They conclude that the study of decision-making is the study of irrational behavior. A prominent psychologist once told me "People are not logical, they are psychological." This is very amusing (I don't know whether the play on words comes over in the Japanese), but quite silly. The human brain is the most complex and powerful information processing system known to us, and it evolved at great cost to its bearers, because of its capacity to enhance our biological fitness. The notion that it is a fundamentally irrational decision instrument is *prima facie* absurd, and as I shown in this book, has no empirical support.

Let me give an apt analogy. Psychologists who study vision have discovered many optical illusions that lead people systematically to make erroneous visual assessments. However, vision researchers do not thereby conclude that human vision is generally non-representative. Such a conclusion would be our general understanding of visual information processing. Similarly, finding that people do not always conform to the most elementary form of the rational actor model does not imply that people are irrational or illogical. As I argue in The Bounds of Reason, much of the time one can restore the transitivity of preferences by modeling an expanded choice space, in others knowledge is so incomplete or the differences among the choices so minor that there are virtually no costs to holding intransitive preferences. What canon of rationality if violated if I prefer A to B and B to C and C to A in a situation where have little idea of the real value of any of the three alternatives to me? In other cases, as in the famous Linda the Bank Teller experiment, I show in The Bounds of Reason that the experimental subjects are correct and the experimenters are incorrect.

Standard rational decision theory holds only when subjects have a clear idea (correct or incorrect) of what the payoffs are and how their actions affect the relative probability of different payoffs. When subjects do not have a clear idea of the situation they are in, they will attempt not to choose at all, or they will consult others and more generally take into account the experience of others who have faced similar situations. When these avenues are not open to them, subject behavior will be silly and uninteresting, like testing dogs for their relative preference for Beethoven vs. Mozart.

The rational actor model is thus one pole of a continuum in choice theory, the other pole of which is the social specification of beliefs and conformist behavior. Real world choices are generally located somewhere between the poles, but often enough very near the complete specification pole—as for instance when we go to the supermarket for our weekly shopping. This is why economic theory has been so successful. For this reason, firms and governments keep economists and not psychologists on the payroll when they want to predict consumer or labor market behavior.

Sociological theorists have distinct critiques of rational decision theory and

game theory, but they are no more valid than those of the psychologists. Sociologist stress that people are not generally selfish. However, as explained in The Bounds of Reason, the rational actor model and game theory do not assume selfishness. That people are selfish is an old prejudice of biologists and economists that is rapidly fading away, and both game theory and the rational actor model have been central in overcoming rather than perpetuating this prejudice, because they are jointly used in experimental and behavioral economics.

Sociologists also complain that the subjective priors posited as *sui generis* in rational decision theory are in fact socially constituted. This is of course absolutely correct, and exploring how beliefs are constituted is a very important part of social theory. But this does not undermine rational choice theory. Sociologists will say that beliefs are not rational. This is often the case, but rational decision theory requires only that individuals update using Bayes' Law. It does require that their priors be formed through some sort of rational scientific or philosophical process. Indeed, beliefs are not generally so formed. It is also true that individuals do not always use Bayesian updating, so even though they can be described as maximizing subject to constraints, their reactions to new information involve forces other than those captured by Bayesian updating (e.g., denial of the facts). This is an important area of study, but it does not require that we reject rational choice models in general.

I suspect that sociologists and psychologists reject game theory and the rational actor model largely because it is too much work to learn and use the theories. Even the members of the profession who have mastered the techniques refrain from using them because of the resulting social ostracism by their colleagues. As long as a sociologist one can get tenure and promotion without having to do the difficult stuff, why should one bother? My answer is that they should because they are scientists, and that is the scientific method.

I am often asked why I hold so strongly to the rational actor model and game theory. It is not because I think these theories are perfect. Indeed, you will see heaps of criticism in the following pages. It is because they have put the study of behavior, animal and human, on a scientific footing for the first time. Animal behavior theory (biology) and human behavior theory (economics) have analytical cores that are learned and shared by all researchers in the discipline. New contributions are additions to and amendments of the successes of previous researchers. Psychological decision and social interaction theory has never had a core, so the field is a succession of fads and nanotheories, each dedicated to "explaining" one little facet of human behavior.

Sociology had the beginnings of a core theory in Talcott Parsons, who began his career as the great integrator (Pareto, Durkheim, Marshall), but veered off into a caricature of social theory in which incentives have no place and action is expres-

sive rather than rational. When sociologists rejected Parsons (which they did for personal aggrandizement or political correctness), they threw out the baby with the bathwater. Contemporary sociology has no core theory at all, but is rather more like the fine arts, where each Master would be offended if anyone suggested they "borrowed" from a predecessor other than their beloved teacher. Although contemporary sociology produces wonderful middle-level research into social problems, the field is dominated by immature leftists who would be embarrassed to wear a business suit, and are obsessively preoccupied with inequality with absolutely no theoretical tools for understanding it.

This is why I hold so strongly to the rational actor model and game theory. These are core tools for all of the behavioral sciences, and without which there is no core theory at all.

Of course, I have equally suffered when reading the naive attempts of economists to deny the importance of the other disciplines in understanding human nature and strategic interaction. The traditional prejudice in economic theory is that we can completely explain the social dynamics of rational agents using rational decision and game theory, and any other behavior they are happy to leave to the other disciplines. The fact is, as I make clear in this book, we cannot explain social behavior in terms of rationality alone. And the limit of rationality, as I argue in The Bounds of Reason, is not unreason but sociality.

My message in this books is perfectly clear and should not be hard to understand, although if taken seriously is should lead to significant alterations in the directions of research in several disciplines. The most obvious reaction to my arguments by lovers of the *status quo* is simply to ignore them, because there can be no successful defense of the current state of the behavioral sciences. Not a single economist has reviewed the English edition of this book, much less denied any of its central claims, and I don't expect the situation to change.

I expect that the next generation of young economists in a variety of behavioral disciplines will not stick with a sinking ship, but rather undertake the intellectual integration needed to put the behavioral sciences back on the scientific track. There is simply no coherent body of intellectual thought justifying the current division of labor in the social sciences. There are great gains to be made by analytically unifying the social sciences, so that there is one underlying model of human behavior, differentiated and amplified in different directions to meet the needs of the diverse disciplines. Most important, we must overcome the blatant and scandalous contradictions among models of human choice and strategic interaction perpetrated in the various social science disciplines. That is the central message of The Bounds of Reason. I hope that my Japanese readers will join in the project.