

Prescription for Social Dilemmas

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Psychology for Urban, Transportation,
and Environmental Problems

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Preface to the English Translation

Since its original publication in Japan in 2003, I have used *Prescription for Social Dilemmas: The Psychology of Urban, Transportation, and Environmental Problems* in my applied (or public) psychology and global survivability university classes for both undergraduate and graduate students. This book has also been read by Japanese researchers, students, and practitioners interested in both scientific and practical aspects of social dilemmas.

Meanwhile, several of the economic and social problems related to social structure discussed in the book have become even more serious. Indeed, the global economic crisis triggered by the bankruptcy of Lehman Brothers in 2008 resulted in the EU debt crisis in 2009 and the Chinese stock market crash in 2015. Such global economic crises have produced political unrest throughout the world, leading to serious (sometimes armed) conflict between different ethnic, national, and religious groups.

However, a *cooperative* effort that involved people, companies, and states throughout the world, aimed at redistributing their resources through various means including economic investment and consumption rather than saving them for themselves, would prevent deflation. What actually happens, however, is that these actors operate according to self-interest and keep their income, an approach that will never prevent deflation. Thus, although only a few economists, practitioners, and politicians grasp its significance, the global economic crisis presently afflicting people all over the world is typical of a *social dilemma*, one that involves conflict between individual rationality and collective rationality. It is important that people realize that *cooperation* can alleviate or eliminate this crisis (see *Fujii, 2005, Beyond Global Capitalism, in Springer*).

We are now also suffering from major natural disasters, including the Indian Ocean earthquake and tsunami in 2004, Hurricane Katrina in 2005, and the Great East Japan Earthquake in 2011. The damage done by such disasters can be minimized if people in areas at risk for disasters are sufficiently *cooperative*, because cooperation is essential for the establishment of regional *resilience* in the wake of

disasters, and for recovery from the damage inflicted by disasters (see *Fujii, 2004, Kyojinka: Building National Resilience, in Aspect*).

Thus, the global problems we are currently facing are not restricted to issues that have long been recognized, such as global warming or the population explosion and poverty in developing countries, but include the global economic crisis and major natural disasters. From a theoretical perspective, these can be viewed as social dilemmas. In this era of serious global crises arising from worldwide social dilemmas, we need *prescriptions* for how to solve problems.

This realization led me to publish this book in English in the hope it will contribute to solving not only global problems but also domestic problems, such as those affecting urban areas, transportation, and local environments. Although I updated parts of the book as I translated it into English, especially the section addressing work to be done in the future, most sections are left intact, as the theory and empirical data originally presented remain relevant and helpful for understanding both the theoretical and practical aspects of social dilemmas.

This book provides a theoretical, empirical, and pragmatic treatment of social dilemmas. Most books treating social dilemmas are not monographs but are proceedings or omnibus volumes composed of chapters written by different researchers. Few monographs about social dilemmas have been published, and those few only cover with basic theories and empirical findings. This book, by contrast, is a monograph by a single author and provides a complete coverage from basic theories in Part I to applied theories and pragmatic solutions for urban, transportation, and environmental problems in Parts II and III. While previously published books on social dilemmas are written for researchers in the field, the present volume is written not only for social dilemma researchers but for a wider variety of readers including practitioners in environmental psychology, transportation psychology and travel behavior, and urban planning and transportation. Furthermore, the theory and prescriptions for social dilemmas can also contribute to efforts to solve a wide variety of real problems, including economic deflation, global economic crisis, and establishment of regional or national resilience in the context of many kinds of risk.

This work effectively provides a bridge between basic behavioral scientists, applied behavioral scientists, and practitioners. With this useful source, basic scientists will understand how to apply their scientific knowledge to the real-world and also will encounter new scientific problems that should be solved scientifically. Applied researchers and specialists will become familiar with new solutions through basic research on social dilemmas and will be made aware of new pragmatic problems that should be solved with a practical approach.

I would like to thank Mr. Yutaka Hirach of *Springer Japan* for assistance in the publication of this English translation, and also to express deep thankfulness to Prof. Tommy Gärling and Prof. Anders Biel in the department of psychology in Göteborg University for their special comments for the book before its publication.

At my home in Murasakino, Kyoto, Japan
January 2016

Satoshi Fujii

Preface to the First Edition in Japanese in 2003

There are many academic disciplines such as psychology and engineering, in which over the centuries our predecessors have made tremendous efforts to further human knowledge. When we consider this point, one question naturally comes to mind: why have humans dedicated such a vast amount of time and effort to academic studies? From among the many reasons, in general, two basic motivations stand out; one is “curiosity” and the other is “practicality”. Broadly speaking, it seems that academic studies driven by curiosity are often referred to as “science”, while those with an underlying expectation of practical results are classified as “engineering”.

However, is it really possible to separate science and engineering?

The only way to explain why we possess this trait called “curiosity” is, if we consider it from the evolutionary point of view, because curiosity had a practical function to enhance our adaptation to our environment. It is also safe to say that in order to gain practical knowledge, it is important to freely observe the world with a spirit of curiosity. Thinking this way, as summed up in the phrase “scientific technology”, we find that all academic studies were once included in the framework of philosophy, and our “body of knowledge” may be an indivisible, coherent whole, in which case it may not be a substantially meaningful effort to separate science and engineering. It may just be that a particular body of knowledge is viewed as scientific when it arouses curiosity, while the same body of knowledge may be referred to as engineering if it brings about practical results. This book “Prescription for Social Dilemma: The Psychology of Urban, Transportation, and Environmental Issues”, is firmly based on the above recognition of science and engineering being two sides of the same coin.

This book first considers that at the root of almost all social problems in real society, there lies a “social dilemma” of “whether to behave selfishly, or to behave cooperatively in consideration of others and the future”. We presuppose that a key to solving various social problems can *only* be obtained by taking into account, whether intentionally or not, the structure of a social dilemma. Then, by simultaneously taking an “engineering” approach to solve problems, and exploring the

“scientific” understanding of a phenomenon, we present a multi-faceted approach to discuss the “theories and methods” to solve social dilemmas.

Part I discusses the structure of social dilemmas and basic theories for solving them. Part II discusses “psychological strategies” which expect behavior change not through working on the “environment of behavior” but rather on each person’s “awareness”, thereby aiming at the solving of social dilemmas. Lastly, Part III discusses “structural strategies” that aim at solving social dilemmas by working on the “environment of behavior”. Especially, in the final Part III, we discuss several collateral discussions centered upon the “problem of social acceptance (agreement formation) of a policy” which occurs when implementing a structural strategy.

Having this structure, the book targets students and researchers in fields such as social psychology related with social dilemmas; it also aims to be of use to students, researchers, and administrators in fields dealing with actual social problems, in such fields as transportation, urban life, the environment, and politics, in which the term “social dilemma” had not previously been explicitly used.

By targeting such a wide range of readers, this book may cause some readers to have the impression the book is too practical, or conversely it deals too much with the scientific understanding of phenomenon”. However, for readers who find it too practical, please bear in mind the undeniable fact that:

“The only reason why research on social dilemmas is conducted so widely is because social dilemmas are an important social problem requiring practical solutions.”

And for the reader who finds too much scientific understanding, we would like them to recall another undeniable fact that

“There is no way to solve an actual social problem without properly and scientifically understanding the phenomenon.”

Whichever camp any reader may belong too we would suggest the following reading schemes. For the reader concerned about the amount of practical material please focus on

- Chapter 4 to 6, and Chapter 9 or 11 that especially discuss the theoretical structure of social dilemmas.

For the reader concerned about the amount of scientific material please focus on

- 3-1 of Chapter 3

And then read through

- Chapter 7 and 8 that discuss the practical aspects of “psychological strategies” in a social dilemma, or
- Chapter 11 that mainly discuss the “problem of accepting a policy and the problem of forming social agreement”.

I am not confident how much my book is harmonized as a coherent “body of knowledge”, yet I would be extremely happy if this book provides a trigger to help configure such a body of knowledge that arouses both curiosity and practicality, and

that it may become one of many efforts contributing to the field of solving social dilemmas.

I would like to express my gratitude to the many people who helped me bring this book to completion. I would never have been able to write this book if I had not had the opportunity to study in the research group of Prof. Tommy Gärling at the University of Gothenburg, Sweden. The fruits of joint research with Prof. Gärling provided the whole base of this book, and implications obtained through joint research and discussions with colleagues such as Prof. Anders Biel, Mathias Gustafsson, Daniel Eek, and Cecilia Jakobsson Bergstad are important catalysts. Also, joint research with Prof. Kazuhisa Takemura of Waseda University, who stayed in Gothenburg around the same time, forms a central part of the discussion on the decision making frame; an essential part of the text.

Meanwhile, as I named this book a “prescription”, I was able to clearly structure it as a tool to solve problems, thanks to my experience of academic training for problem solving through writing my bachelor’s, master’s and doctoral theses under the guidance of Prof. Yasunori Iida and Prof. Ryuichi Kitamura of Kyoto University. In addition, I received many important insights that helped nourish this book, from daily seminars and discussions with Prof. Tetsuo Yai, Prof. Takayuki Ueda, Ass. Prof. Yasunori Muromachi, and Ass. Prof. Daisuke Fukuda of Tokyo Institute of Technology, and from workshops and joint research with Prof. Kazuhiro Arai, Prof. Kaori Karasawa, Prof. Toshiko Kikkawa, Prof. Kazuya Nakayachi, Prof. Susumu Nishibe, and Ass. Prof. Motoki Watabe. Moreover, Mr. Fumihiro Hara and Ms. Ayako Taniguchi of Hokkaido Development Engineering Center gave me valuable comments and readily provided me with their documents.

This book refers to many joint research projects I have conducted at the Tokyo Institute of Technology and Kyoto University, and all of them were realized for the first time with the cooperation of professors such as Prof. Ryuichi Kitamura, as well as many graduates. Furthermore, based on the rough draft of this book, I gave seminars at Fujii Laboratory (as of 2003), with Mr. Masashi Yanagida, Mr. Go Hagihara, Mr. Yutaka Takasu, Mr. Hiroki Matsuyama, Mr. Yusuke Someya, Mr. Yoshifumi Tanikawa, and Ms. Yoko Suzuki, through which I obtained helpful ideas and concepts.

Lastly, I was able to publish this book thanks to the efforts of Mr. Yoshitaka Shishikura of Nakanishiya Shuppan, and the support of my family, Maoko, Sakura, Taishi, and Masashi. In addition there are countless people who helped me with direct and indirect support. To all of them I would like to express my sincere gratitude from the bottom of my heart.

Thank you very much.

At my home in Suginami, Tokyo, Japan
July 2003

Satoshi Fujii

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