

BREAKDOWN OF WILL

In this challenging and provocative book, the researcher who originally proposed hyperbolic discounting theory presents important new findings that confirm its validity and describes implications that undermine our most basic assumptions about how self-control works. Hyperbolic discounting theory has provoked much recent controversy in psychology, economics, and the philosophy of mind. It begins with a startling experimental finding: People devalue a given future event at different rates, depending on how far away it is. This phenomenon means that our preferences are inherently unstable and entails our present selves being pitted against what we can expect our future selves to want. Although the notion of temporary preferences upsets conventional utility theory, it offers radical solutions to problems that have defeated utility theory: Why do people knowingly participate in addictions, compulsions, and bad habits? What is the nature of will? What makes a will weak or strong? Do we in fact need a concept of will at all?

The author argues that our responses to the threat of our own inconsistency determine the basic fabric of human culture. He suggests that individuals are more like populations of bargaining agents than like the hierarchical command structures envisaged by cognitive psychologists. The forces that create and constrain these populations help us understand much that is puzzling in human action and interaction: from addictions and other self-defeating behaviors to the experience of willfulness, from pathological overcontrol and self-deception to subtler forms of behavior such as altruism, sadism, gambling, and the “social construction” of belief.

This book uniquely integrates approaches from experimental psychology, philosophy of mind, microeconomics, and decision science to present one of the most profound and expert accounts of human irrationality available. It will be of great interest to philosophers concerned with the mind and action theory. By questioning some of the basic assumptions held by social scientists about rational choice, it should be an important resource for professionals and students in psychology, economics, and political science.

George Ainslie began doing research on intertemporal conflict while still in training at Harvard Medical School, the Harvard Laboratories of Experimental Psychology, and the National Institutes of Health. The results have been published in journals ranging from *The Journal of the Experimental Analysis of Behavior* and *Behavioral and Brain Sciences* to *Law and Philosophy* and the *American Economic Review*, as well as many book chapters and a book, *Picoeconomics*. He now does his work at the Veterans Affairs Medical Center, Coatesville, Pennsylvania, and maintains a website at picoeconomics.com.

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*To the late Richard Herrnstein and his students,
who have kept the study of motivation alive.*

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PREFACE

I wrote *Breakdown of Will* in response to Cambridge editor Terry Moore's suggestion that I summarize *Picoeconomics*. This book is simpler and, I think, clearer. I have also added a great deal, both of research and theory, that I have discovered since *Picoeconomics* was published in 1992.

I've assumed no familiarity with hyperbolic discounting or intertemporal bargaining, so readers of *Picoeconomics* will find some repetition. However, if you've read the earlier book, you shouldn't assume that this book will therefore be a rehash of ideas you've seen before. In everything I've written I've thought it best to build from the ground up, rather than referring the new reader to works that may be hard to get; drafts of parts of this work have appeared not only in *Picoeconomics* but also in articles in Jon Elster's and Ole-Jorgen Skog's *Getting Hooked* and Elster's *Addiction: Entries and Exits*, *The Journal of Law and Philosophy*, and a precis in *Behavioral and Brain Sciences*.¹ However, *Breakdown of Will* pulls these works together and goes beyond them.

You may be surprised by the conversational style I use. I've adopted this style partly for readability – as a discipline against too many subordinate clauses – but also from a belief that the supposed benefit of an impersonal voice (“the language of scholars”) is false. The fact that someone uses formal language doesn't mean she's objective, and formal language makes it harder to guess at her actual thought processes. The procession of dispassionate sentences becomes a kind of priestly cant, a curtain drawn around the Wizard of Oz, potentially just as misleading as the emotionality that might be provoked by conversation.

Specialists in the fields I've drawn from may have a more substantial objection: that I've mixed the results of controlled experiments with less “hard” sources, like clinical observations, thought experiments,

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historical writings, and even personal experiences. But I'm not pretending to prove once and for all any of the possible implications of hyperbolic discounting. This discounting itself rests on so many parametric experimental findings that I can call it firmly established, but there are many ways it could affect how our motives interact. I have only developed some models that I find parsimonious, and have cast about for diverse sources of information to test this parsimony. Once researchers have seen the possibilities for modeling minds as the populations of diverging interests that are shaped by this discounting, I hope that more systematic pattern matching will gradually approach a unique fit.

Many people helped me write this book. Especially helpful were Jon Elster and the diverse group of creative investigators he gathered for his seminars on irrationality. United by nothing more than the topic, we obeyed his summons to the far reaches of two continents over a period of almost 20 years. Like Nathan Detroit's floating crap game in *Guys and Dolls*, we moved to wherever he could enlist support for this eccentric endeavor: to Paris, Collioure, Oslo, Chicago, and New York. Sometimes there was a single meeting; sometimes we were a task force that worked on a book; *The Multiple Self*, *Choice Over Time*, *Getting Hooked*, and *Addiction: Entries and Exits* were all products of these colloquia, not to mention large parts of the books and articles written individually by the members, the most productive of whom was Jon himself. He has been the guiding spirit of the modern study of irrationality.

The roots of this book go back even before Jon's project, to the late Richard Herrnstein's behavioral laboratory at Harvard. Had I thought to dedicate *Picoeconomics*, it would certainly have been to him; I make that belated gesture now. A second-year medical student with a vague idea about crossing discount curves, I was lucky enough to find his lab in 1967, the very year he and Shin-Ho Chung published the first study of his matching law as applied to delay. When I pointed out that the matching formula implied a hyperbolic discount curve (I'd been using the power function by my teacher at Yale, Frank Logan), he set me up in his laboratory with snap lead racks and an advisor (Howard Rachlin, who has also been a helpful critic over the years); then he waited patiently for the six years it took to show that pigeons have the expectable intertemporal conflict. During that time and afterward he was always open to discussing new ideas, and usually knew someone who had been doing something along the same line. It was as an invited speaker

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in one of his classes, some years later, that I first tried out the prisoner's dilemma model of bargaining among successive selves. I published work with him on temporary preference, discussed at length the theories in his and my papers of the early nineties, and worked with him in the Russell Sage Foundation phase of Jon Elster's project. He was the closest thing I ever had to a mentor.

I owe thanks to many people at the Veterans Affairs Medical Center, Coatesville, Pennsylvania, for help on the articles that led to this book. John Monterosso was especially helpful in conducting both human and animal experiments, finding relevant articles in several literatures, and reading drafts and debating my ideas; he recently did most of the work of starting a behavioral rat laboratory from scratch, including most of the design. Andrew Henry obtained many articles for me. Pamela Toppi Mullen, Barbara Gault, and Kathy Meeker helped in the research and in critiquing ideas. Lynn Debiak drew crisp figures, and Wanda Sandoski often spent a frantic day helping me meet a deadline. For the book itself I thank John Monterosso, my wife Elizabeth, and two anonymous referees for valuable criticism; such clarity as I've been able to achieve comes from Elizabeth's painstaking reading of every line. Finally, thanks to Terry Moore for his unwavering support of the project.