

HUMANOMICS

While neoclassical analysis works well for studying impersonal exchange in markets, it fails to explain why people conduct themselves the way they do in their personal relationships with family, neighbors, and friends. In *Humanomics*, Nobel Prize-winning economist Vernon L. Smith and his long-time co-author Bart J. Wilson bring their study of economics full circle by returning to the founder of modern economics, Adam Smith. Sometime in the last 250 years, economists lost sight of the full range of human feeling, thinking, and knowing in everyday life. Smith and Wilson show how Adam Smith's model of sociality can re-humanize twenty-first century economics by undergirding it with sentiments, fellow feeling, and a sense of propriety – the stuff of which human relationships are built. Integrating insights from *The Theory of Moral Sentiments* and the *Wealth of Nations* into contemporary empirical analysis, this book shapes economic betterment as a science of human beings.

Vernon L. Smith is the George L. Argyros Endowed Chair in Economics and Finance at Chapman University, California. He was awarded the Noble Prize in Economic sciences in 2002 for, 'having established laboratory experiments as a tool in empirical economic analysis, especially in the study of alternative market mechanisms'. He is a founding member of Chapman University's Economic Science Institute and Smith Institute for Political Economy and Philosophy, and is a Distinguished Fellow of the American Economic Association.

Bart J. Wilson is the Donald P. Kennedy Endowed Chair in Economics and Law at Chapman University, California. He is a founding member of the Economic Science Institute and founding member and Director of the Smith Institute for Political Economy and Philosophy. He has been co-teaching humanomics courses for nearly a decade with professors in the Departments of English and Philosophy.

CAMBRIDGE STUDIES IN ECONOMICS, CHOICE, AND SOCIETY

Founding Editors

Timur Kuran, *Duke University*
Peter J. Boettke, *George Mason University*

This interdisciplinary series promotes original theoretical and empirical research as well as integrative syntheses involving links between individual choice, institutions, and social outcomes. Contributions are welcome from across the social sciences, particularly in the areas where economic analysis is joined with other disciplines such as comparative political economy, new institutional economics, and behavioral economics.

Books in the Series:

- TERRY L. ANDERSON and GARY D. LIBECAP *Environmental Markets: A Property Rights Approach*
- MORRIS B. HOFFMAN *The Punisher's Brain: The Evolution of Judge and Jury*
- PETER T. LEESON *Anarchy Unbound: Why Self-Governance Works Better Than You Think*
- BENJAMIN POWELL *Out of Poverty: Sweatshops in the Global Economy*
- CASS R. SUNSTEIN *The Ethics of Influence: Government in the Age of Behavioral Science*
- JARED RUBIN *Rulers, Religion, and Riches: Why the West Got Rich and the Middle East Did Not*
- JEAN-PHILIPPE PLATTEAU *Islam Instrumentalized: Religion and Politics in Historical Perspective*
- TAIZU ZHANG *The Laws and Economics of Confucianism: Kinship and Property in Preindustrial China and England*
- ROGER KOPPL *Expert Failure*
- MICHAEL C. MUNGER *Tomorrow 3.0: Transaction Costs and the Sharing Economy*
- CAROLYN M. WARNER, RAMAZAN KILINC, CHRISTOPHER W. HALE, and ADAM B. COHEN *Generating Generosity in Catholicism and Islam: Beliefs, Institutions, and Public Goods Provision*
- RANDALL G. HOLCOMBE *Political Capitalism: How Political Influence Is Made and Maintained*
- VERNON L. SMITH and BART J. WILSON *Humanomics: Moral Sentiments and the Wealth of Nations for the Twenty-First Century*

Humanomics

*Moral Sentiments and the Wealth of Nations
for the Twenty-First Century*

VERNON L. SMITH AND BART J. WILSON



CAMBRIDGE
UNIVERSITY PRESS

Cambridge University Press
978-1-107-19937-8 — Humanomics
Vernon L. Smith, Bart J. Wilson
Frontmatter
[More Information](#)

CAMBRIDGE
UNIVERSITY PRESS

University Printing House, Cambridge CB2 8BS, United Kingdom
One Liberty Plaza, 20th Floor, New York, NY 10006, USA
477 Williamstown Road, Port Melbourne, VIC 3207, Australia
314–321, 3rd Floor, Plot 3, Splendor Forum, Jasola District Centre,
New Delhi – 110025, India
79 Anson Road, #06–04/06, Singapore 079906

Cambridge University Press is part of the University of Cambridge.
It furthers the University's mission by disseminating knowledge in the pursuit of
education, learning, and research at the highest international levels of excellence.

www.cambridge.org
Information on this title: www.cambridge.org/9781107199378
DOI: 10.1017/9781108185561

© Vernon L. Smith and Bart J. Wilson 2019

This publication is in copyright. Subject to statutory exception
and to the provisions of relevant collective licensing agreements,
no reproduction of any part may take place without the written
permission of Cambridge University Press.

First published 2019

Printed in the United States of America by Sheridan Books, Inc.

A catalogue record for this publication is available from the British Library.

ISBN 978-1-107-19937-8 Hardback
ISBN 978-1-316-64881-0 Paperback

Cambridge University Press has no responsibility for the persistence or accuracy of
URLs for external or third-party internet websites referred to in this publication
and does not guarantee that any content on such websites is, or will remain,
accurate or appropriate.

*To Nicholas Phillipson,
historian, scholar of the Scottish Enlightenment,
biographer of David Hume and Adam Smith*

Contents

<i>List of Figures</i>	page xi
<i>List of Tables</i>	xii
<i>Preface</i>	xiii
<i>Acknowledgments</i>	xvii
<i>Cover Art Note</i>	xix
<i>Note on the Text</i>	xx
1 Humanomics Spans the Two Worlds of Adam Smith: Sociality and Economy	1
Social Order	4
<i>Sentiments</i> Predicts where the Neoclassical Model Fails	6
Modeling Human Action	8
Hume, Smith, and Utilitarianism	12
The Civil Order of Property Evolved from the Social Order of Propriety	13
Property, the Propensity to Exchange, and Wealth Creation	14
2 Words and Meaning in Adam Smith's World	19
Passions, Emotions, Sentiments, and Affections	19
Sympathy	27
The Sense of Propriety	29
3 Conduct in the Social Universe	34
Behavior in Modern Economics	35
Epicycles or Orderly Orbits?	40
Feeling plus Thinking plus Knowing	42
Gravity of the Social Universe	45

4	Frank Knight Preemptively Settles the Horse Race	49
	An Example of Behavioral Economics Method	50
	A Smithian Response to Twentieth- and Twenty-First-Century Behaviorism	55
	It Takes a Model to Beat a Model	60
5	Axioms and Principles for Understanding Human Conduct	67
	Axioms	68
	Principles	74
6	Propositions Predicting Context-Specific Action	81
	Example of a Rule, Adaptation to the Rule, and Equilibrium Harmony in Rule Space	81
	Beneficence and Justice as Virtues	83
	Propositions on Beneficence	85
	Propositions on Injustice	88
	The Generality and Symmetry of Adam Smith's Moral Universe	90
	Chance and the Sense of Merit and Demerit	92
7	Propriety and Sympathy in a Rule-Governed Order	95
	Uncovering the Social Foundations of the Rules We Follow	95
	Origins of Order Are Not in Conscious Human Reason	96
	Origins Are in Human Sentiment: Propriety and the Emergence of Rules	98
	Merit and Demerit in Judgments	100
	The Impartial Spectator	101
	Avoiding the Errors of Self-Deceit	103
	Nature Rescues Where Reason Alone Would Fail	104
	Beneficence and Justice Concern Judgments of Others	105
	Limits on the Set of Actions by the Agent Who Is Himself the Person Judged	106
	Asymmetry in Gains and Losses, Positive versus Negative Reciprocity and Escalation	107
8	Trust Game Discoveries	109
	Two-Choice Alternatives in Simple Single-Play Trust Games	112
	Exploring "Circumstances": Does Opportunity Cost Matter in Conveying Intentions?	119
	Repeat-Play Trust Games: Does a Trust Environment Encourage Trust or Invite Defection?	120
	Mix the Signal of Beneficence with Extortion and Observe Less Cooperation	123

Contents

ix

9	The Ultimatum Game as Involuntary Extortion	127
	Binary Choice Forms of the Ultimatum Game	130
	Equilibrium Play in Voluntary Ultimatum Games:	
	Beneficence Cannot Be Extorted	131
	Equilibrium Play in Ultimatum Stage Games: Voluntary	
	Play with Gains from Exchange	134
	Voluntary Ultimatum Games for the Division of a Fixed	
	Sum and of a Variable Sum	135
	Prudence Prevails in the Absence of Extortion	138
10	Designing, Predicting, and Evaluating New Trust Games	143
	Baseline Trust Game	144
	Describing Trust/Trustworthy Action	146
	Comparative Analysis of the Trust Game: Traditional	
	versus <i>Sentiments</i> Model	148
	Adding an Option to Punish “Want of Beneficence”	149
	But Do the Subjects See It as We (and Smith) See it?	151
	Commentary on the Study of “What Is Not”	152
	Introducing Punishment for Injustice	152
	Introducing an Option to Sweeten the Reward for Beneficent	
	Action	156
	Enabling Either of the Punishment Options	158
	Upshot	159
11	Reconsidering the Formal Structure of Traditional Game Theory	161
	The Traditional Game Dynamic	162
	Proposed Social Preferences Modification	163
	Reconsiderations of One-Shot Play Based on <i>Sentiments</i>	164
	From Game Structure to Action in Using the Principles	
	in <i>Sentiments</i>	167
	“Fairness” Equilibria or Agreement on Beneficence	
	Proposition 1 and Injustice Proposition 1?	168
	Equilibrium, the Person of Yesterday, and the Person of Today	169
12	Narratives in and about Experimental Economics	172
	Narrativizing the Trust Game	174
	Experimental Design and Procedures	175
	Results	185
	Life Is Indefinite and Always in Flux	195

13	Adam Smith's Program for the Study of Human Socioeconomic Betterment: From Beneficence and Justice to the <i>Wealth of Nations</i>	197
	Punishment is Proportioned to Resentment	199
	Negative Justice in <i>Sentiments</i> and Property in <i>Wealth</i>	200
	The Two Pillars of Society: Beneficence the Ornament and Justice the Foundation	201
	Equilibrium versus Alternative Paths to Cooperation: Beneficence or Punish Injustice	202
	From Moral Sentiments to the Extended Order of Markets, Specialization, and Wealth Creation	205
	<i>Index</i>	208

Figures

2.1 Google Ngram of <i>passions, emotions, sentiments</i> , and <i>affections</i> , 1700–2008	page 20
3.1 Google Ngram of <i>approbation, disapprobation, approval</i> , and <i>disapproval</i> , 1700–2008	44
8.1 Two-person, invest \$10, trust game	113
8.2 Private knowledge trust game	117
8.3 Variations of the trust game	120
8.4 Two-person, invest \$5 trust game	123
9.1 Voluntary ultimatum games	136
9.2 Results from voluntary ultimatum games	137
10.1 Baseline Trust (BT) game	145
10.2 Punish Want of Beneficence (PWB) game	150
10.3 No Punish Pass (NPP) game	151
10.4 Punish Injustice (PI) game	153
10.5 Bonus Reward Trust (BRT) game	157
10.6 Punish Either (PE) games	158
12.1 Narrative of first mover's decision node	177
12.2 Narrative of second mover's decision node	179
12.3 Story ending for the (\$18, \$30) outcome	180
12.4 Narrative of first mover at the third decision node	182
12.5 Illustration of the change in Narrative 2	184
12.6 The first possible set of results	187
12.7 The second possible set of results	189
12.8 The third possible set of results	191
12.9 The fourth possible set of results	193
12.10 Actual results of narrativized experiment	195
13.1 Beneficence/Punish Injustice (B/PI) game	204

Tables

9.1	<i>Mini-ultimatum game offers and rejections in Falk et al. (2003)</i>	page 131
10.1	<i>Comparison of backward induction in the baseline trust game</i>	148
13.1	<i>Player earnings and efficiencies for beneficence, justice, and beneficence/justice branches by game</i>	205

Preface

Each of us, as coauthors of this book, have been reading and citing Adam Smith (1759), *The Theory of Moral Sentiments* (hereafter, *Sentiments*) for well in excess of a decade.* Our comprehension, though, is much younger. It took time to gradually assimilate Smith's thinking and modeling, and we had to realize the limitations of our own earlier partial understanding. Our economic education and modeling traditions handicapped us from the start. Yet we were strengthened by nagging unanswered questions. Experimental evidence in two-person games, such as the well-known ultimatum game, had a falsifying confrontation with economics in the 1980s and 1990s, from which economic theory had not recovered by the early 2000s. Many important empirical findings followed that confrontation, but economists had not integrated the advances into a satisfactory theoretical framework.

There existed two disparate collections of evidence. Anonymously paired people were predominantly caring, other-regarding, interdependent actors in the personal, social exchange context of trust games in the laboratory. Trusting actions generated substantial trustworthiness in response. In ultimatum games proposers offered generous splits of twenty dollars in direct violation of the self-interested prediction, and responders accepted generous offers while rejecting stingier offers that were often much better than zero earnings from rejection. Contrastingly, buyers and sellers in laboratory markets were predominantly self-interested, own-regarding pursuers of utility maximization – “Max-U” – defined only over their own private outcomes.

* Beginning with Vernon L. Smith, 1998, “The Two Faces of Adam Smith,” Southern Economic Association Distinguished Guest Lecture, *Southern Economic Journal*, 65 (1), pp. 1–19. Wilson first read *Sentiments* cover to cover in the summer of 2006 with four precocious high school students (two of whom eventually received PhDs in economics).

Economists offered a solution to this dichotomous representation of the human personality in two widely accepted but unsatisfactory forms. The first was to add other, as well as own, outcomes to the individual characterizations of Max-U. Thus, in ultimatum games the proposer and the responder each have the other's, as well as their own, payoff in their respective utilities for the joint outcome. This logically circular reduction appeared to neatly and comfortably rescue the neoclassical Max-U model, legitimizing it as a theory of everything, provided only that you used the right just-so utility representation of other as well as their own outcomes. More sophisticated empirical explorations further unearthed features to be added to Max-U theory. If someone found that human intentions, or some particular context mattered, then in the venerable tradition of Ptolemaic curve-fitting, they added the finding to the utility function as a new parameter. A larger theoretical pre-experiment framework did not guide or predict the empirical discoveries.

The second form was to recognize that social transactions were just special forms of economic exchange that were reciprocal. By analogy with trade in goods and services, people exchange favors across time in life, and people reciprocate trust with trustworthiness in laboratory trust games. As another exercise in circular reasoning, this solution simply offered to assign a name to the robust empirical regularity that people responded to good things done to them by doing good things in return.

Missing in both adaptations was a more fundamental rethinking of human sociability. Why does the payoff to the other person appear in one's own utility function? How did it get there? It is not there in three-year-olds, not in sociopaths, and certainly not in psychopaths. Alternatively, why do people respond trustworthily to trusting actions when it is a convenient opportunity to gain from another's largess, as she will never know your identity? And why, when you go to the clothing store or the supermarket or Amazon, do you show so little regard for helping them by buying the highest marked-up items?

Sentiments changes all of that. Smith models human relationships as expressed in families, extended families, among neighbors, friends, and acquaintances, radiating outward until it bumps into those who are personally unknown to us. In these communities, general rules govern an inveterate commitment to sociability that characterizes relationships within which all the little utilitarian services are exchanged. Fundamentally, it is the human capacity for sentiment, fellow feeling, and a sense of propriety that is the stuff of which human relationships, and the general rules-to-be-followed, are made. Sentiments, fellow feeling,

and a sense of propriety are also the building blocks with which Smith develops an overarching theory that encompasses, by definition, the broad types of players observed in laboratory experiments that do not conform to Max-U predictions. Such player types come from Smith's propositions governing the feelings-expressed calculus of gratitude-reward or resentment-punishment. In concrete applications in the laboratory, these types (subject to errors of self-command, reading the context, self-deceit, etc.) have been called altruists or conditional cooperators or punishers of defection or rejecters of unfair offers. Such types so named enable Max-U to continue working as a superficial explanation.

But sociality and our general rules of conduct must all be learned.

We begin as children with none of these proclivities but with an inherited capacity to upload the programming scripts for social competence. Parents, knowing of our ignorance, indulge our want of self-command, restraining us enough for safety. Then at school age we mix with equals, who as Smith says, "have no such indulgent partiality." The child soon learns that things go better with playfellows if one moderates anger. Thus, the child "enters the great school of self-command" and maturation has begun in earnest.

Such rules of conduct are general, meaning that they arise, either from actions intending to do good things for others, leading to gratitude and a proportionate urge to reward, or actions intending to do bad things to others, leading to an asymmetric outsized urge to punish in proportion to the resentment felt. The former concerns beneficence, the latter justice achieved through mechanisms that limit and control the expression of injustice. Hence, the two great pillars of society: beneficence and justice. Beneficence constitutes the virtues we celebrate and applaud: courtesy, kindness, thoughtfulness, compassion, honor, and integrity. These features of good conduct cannot be extorted, coerced, or legislated. The end of justice is to nip hurtful action in the bud, to be neither excessive nor inadequate to restrain and protect the innocent while pointing the aggressor to a better way. For no society can subsist if all descend into mutually destructive injury.

Smith's propositions in *Sentiments* explain the earlier two-person game outcomes that had falsified the standard socioeconomic model of science while fully accommodating market Max-U analysis. This book develops that resolution but also offers several new experimental designs based on *Sentiments* that yield robust results commensurate with the predictions or that rationally reconstruct the outcomes in terms of sources of error or uncertainty in the model.

This new synthesis, made of old elements, points to a neoclassical tradition that swung too far in displacing, rather than more modestly supplementing, Smith's classical systems-oriented thinking. The new equilibrium concepts were defined too narrowly over outcomes, a substitution that seemed superior in the context of institution-free general equilibrium market analysis and the partial-partial equilibrium analysis of game theory. At some point even the human being was dropped as the subject of our general inquiry as a social science. Whereas the opening sentence of *Sentiments* situates the entire project as about humankind, rarely in almost any graduate or intermediate level textbook in economics can you find something that distinguishes in kind its application of consumer theory to humans, chimpanzees, or pigeons. As long as the choices are consistent with a set of axioms, everything follows for any species. In contrast, the opening title of book 1 of Smith's other great book, published to broad acclaim in 1776, is universally about people, not any or all beings, but human beings. Even his little known essay which only Smithian scholars read, "The History of Astronomy," opens with twenty pages not about astronomy, the science, but about humankind and why there is indeed such a line of inquiry called astronomy (our curious disposition and our sentiments of wonder, surprise, and admiration). We economists have lost sight of an elementary understanding of the social and economic range of human action. We have lost sight of the fellow feeling by which human beings gravitate toward one another, and we have lost sight of the sentiments that excite human beings to act and by which human beings judge their own and one another's conduct. Studying Adam Smith has humanized our study of economics as we hope it will do for yours, for much work remains to examine the potential for applying modern (equilibrium) analysis to the rule-space of human conduct, both social and economic, but which is moral all the way down.

Acknowledgments

Many events and people were in the background that has culminated in our contributions to the content and form of this book. We should first mention the Liberty Fund colloquia that concentrated on Adam Smith's *The Theory of Moral Sentiments* in which we have been privileged to participate for many years. These probing discussions of Smith's first book eventually awakened in us the unexpected prospect that Smith's penetrating work on moral sentiments could illuminate our comprehension of the mainsprings of human action and its expression in experimental economics. In these colloquia we met Adam Smith scholars like Ryan Hanley, Daniel Klein, Leonidas Montes, James Otteson, Maria Pia Paganelli, Eric Schliesser, Michelle Schwarze, and other participants who made their mark on us. We have also been privileged to read and discuss Adam Smith's ideas with many undergraduate, graduate, and law students at George Mason University and Chapman University. Their refreshing observations and dedication to reading eighteenth century texts made for stimulating learning experiences all around.

VERNON SMITH

Ryan Hanley invited me to contribute to his masterful collection, *Adam Smith: His Life, Thought and Legacy* (Princeton: Princeton University Press, 2016). My essay, "Adam Smith and Experimental Economics: *Sentiments to Wealth*" (pp. 262–279), speaks to some aspects of my coming of age with Adam Smith. I am indebted to a great many individuals, universities, and conference organizers who invited me to give public lectures on Adam Smith. These adventures contributed to my gradual comprehension and development of Smith's way of thinking about the human social enterprise. One such occasion was a Mises Conference in

Sestri Levante in October 2011, arranged by Alberto Mingardi, director of the Bruno Leoni Institute, where I chose the title “How Social Norms Emerge Spontaneously: Adam Smith, Moral Sentiments and Property.” There, I had the great pleasure of meeting Nick Phillipson, who remarked that he had never heard anyone offer these particular observations on Smith’s contributions. If such be the case, it derived from unanswered questions arising from what Bart and I felt was the failure of economists, cognitive psychologists, experimentalists, and behaviorists to account for the experimental games and results that constitute much of this book.

BART WILSON

In 2013 Pat Lynch invited me to co-lead with David Alvis a weeklong Liberty Fund colloquium on Adam Smith’s entire corpus of writing. Those formal and informal discussions left me with an indelible understanding of Adam Smith as a systems thinker and polymath. Pete Calcagno twice invited me to the College of Charleston to lecture during Adam Smith Week, which provided timely opportunities in 2017 and 2018 to experiment with and rework our ideas. I was fortunate in January 2017 to co-teach an intensive four-week course on Adam Smith with my colleague Keith Hankins, who helped me see new things right when I needed to see them. During the spring and summer of 2017, Jim Murphy and the Department of Economics at the University of Alaska Anchorage generously hosted me as the Rasmuson Chair in Economics while I worked on substantial portions of the book. There is nothing like a “spring” trip to Nome and Utqiagvik to see and hear firsthand how people interweave the social and the economic.

Finally, both of us would like to sincerely thank Gabriele Camera, Yvonne Durham, Deirdre McCloskey, Andreas Ortmann, Jan Osborn, and Maria Pia Paganelli for carefully reading and comprehensively commenting on early and late drafts of the book.

Cover Art Note

The Age of Enlightenment – Adam Smith is one of five pieces in Yinka Shonibare's 2008 series of life-size fiberglass mannequins with Dutch wax printed cotton. His sculpture is as legible as it is beautiful. The vivid colors and meticulous print finish catch our eyes, and with a momentary hold on our gaze, Shonibare reveals an uncomfortable truth in visual metaphor: Adam Smith has a hunched back. In Smith's reaching for his magnum opus, *An Inquiry into the Nature and Causes of the Wealth of Nations*, Shonibare suggests that the rationality of classical economics is subject to the frailties of being human. Shonibare also uses the physical disability, in his own words, "as a device for showing how these figures, who were partly responsible for defining otherness in the context of the Enlightenment, could also be 'othered' in the context of disability."^{*} With a close reading of Adam Smith's other great but not well-known book, *The Theory of Moral Sentiments*, we endeavor to add exclamation points – and question marks – to both thought-provoking ideas.

^{*} Downey, Anthony. 2008. "Setting the Stage," in *Yinka Shonibare MBE*. Rachel Kent, Robert Hobbs, and Anthony Downey. New York, NY: Prestel Verlag, p. 45.

Note on the Text

We have reused, reconsidered, and reworked the following papers in writing this book:

- Osborn, Jan, Bart J. Wilson, and Bradley R. Sherwood. 2015. “Conduct in Narrativized Trust Games,” *Southern Economic Journal* 81(3): 562–597 (in Chapter 12). Reprinted with permission.
- Smith, Vernon L. and Bart J. Wilson. 2014. “Fair and Impartial Spectators in Experimental Economic Behavior,” *Review of Behavioral Economics* 1(1–2): 1–26 (in Chapters 1, 7–9, 11). <http://dx.doi.org/10.1561/105.00000001>. Reprinted with permission.
- Smith, Vernon L. and Bart J. Wilson. 2017. “Sentiments, Conduct, and Trust in the Laboratory,” *Social Philosophy and Policy* 34(1): 25–55 (in Chapters 3–4, 6). Reprinted with permission.
- Smith, Vernon L. and Bart J. Wilson. 2018. “Equilibrium Play in Voluntary Ultimatum Games: Beneficence Cannot be Extorted,” *Games and Economic Behavior* 109: 452–464 (in Chapter 9). Reprinted with permission.
- Wilson, Bart J. 2010. “Social Preferences Aren’t Preferences,” *Journal of Economic Behavior and Organization* 73(1): 77–82 (in Chapter 3). Reprinted with permission.