Is Behavioral Economics Doomed?

The ordinary versus the extraordinary

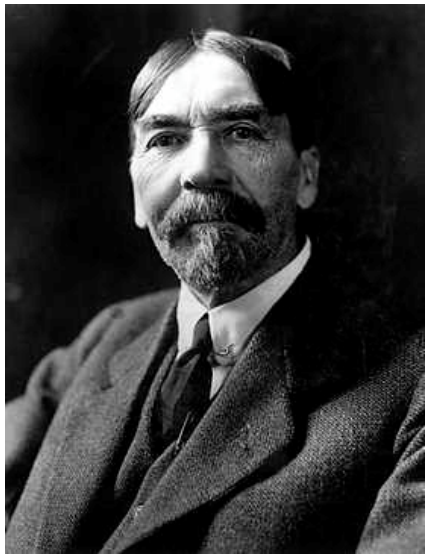
Introductory Lecture

David K. Levine

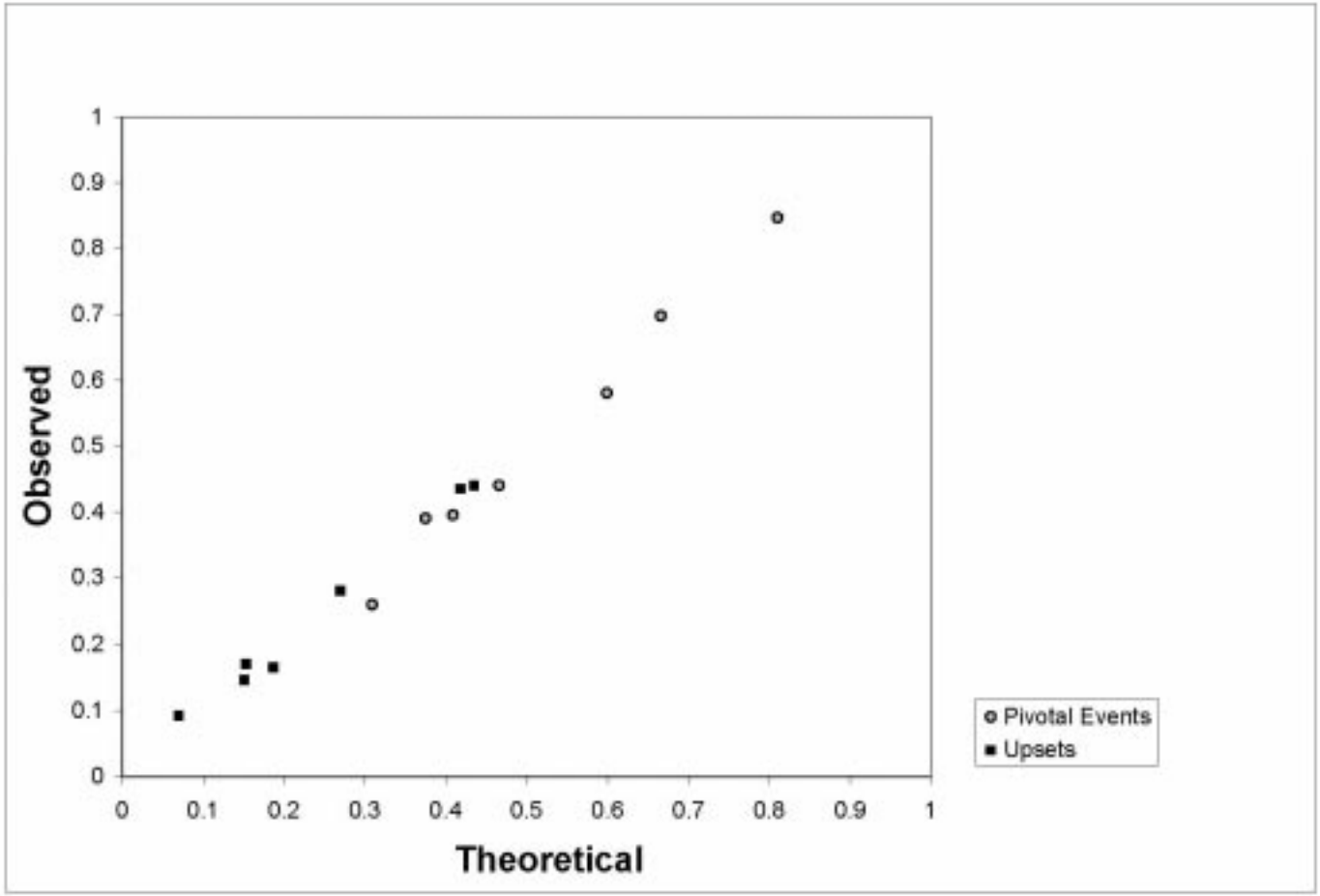
Rational Economic Man

“a lightning calculator of pleasures and pains, who oscillates like a homogenous globule of desire of happiness under the impulse of stimuli” Thorstein Veblen 1899

“The implicit presumption in these … models was that people could be fooled over and over again." Robert Lucas 1995



Theory That Works: Voting



Levine and Palfrey [2007]

Theory That Works? Ultimatum Bargaining

x	Offers	Rejection Probability
$2.00	1	100%
$3.25	2	50%
$4.00	7	14%
$4.25	1	0%
$4.50	2	100%
$4.75	1	0%
$5.00	13	0%
	27	

US $10.00 stake games, round 10

Roth, Prasnikar, Okuno-Fujiwara, Zamir [1991]

What the Theory Tells us: Losses In Ultimatum

Out of $10

	Losses
Knowing	$0.34
Unknowing	$0.99

Fudenberg and Levine [1997]

- Learning and short-term errors are an important part of mainstream economics

Equilibrium: The Weak versus the Strong

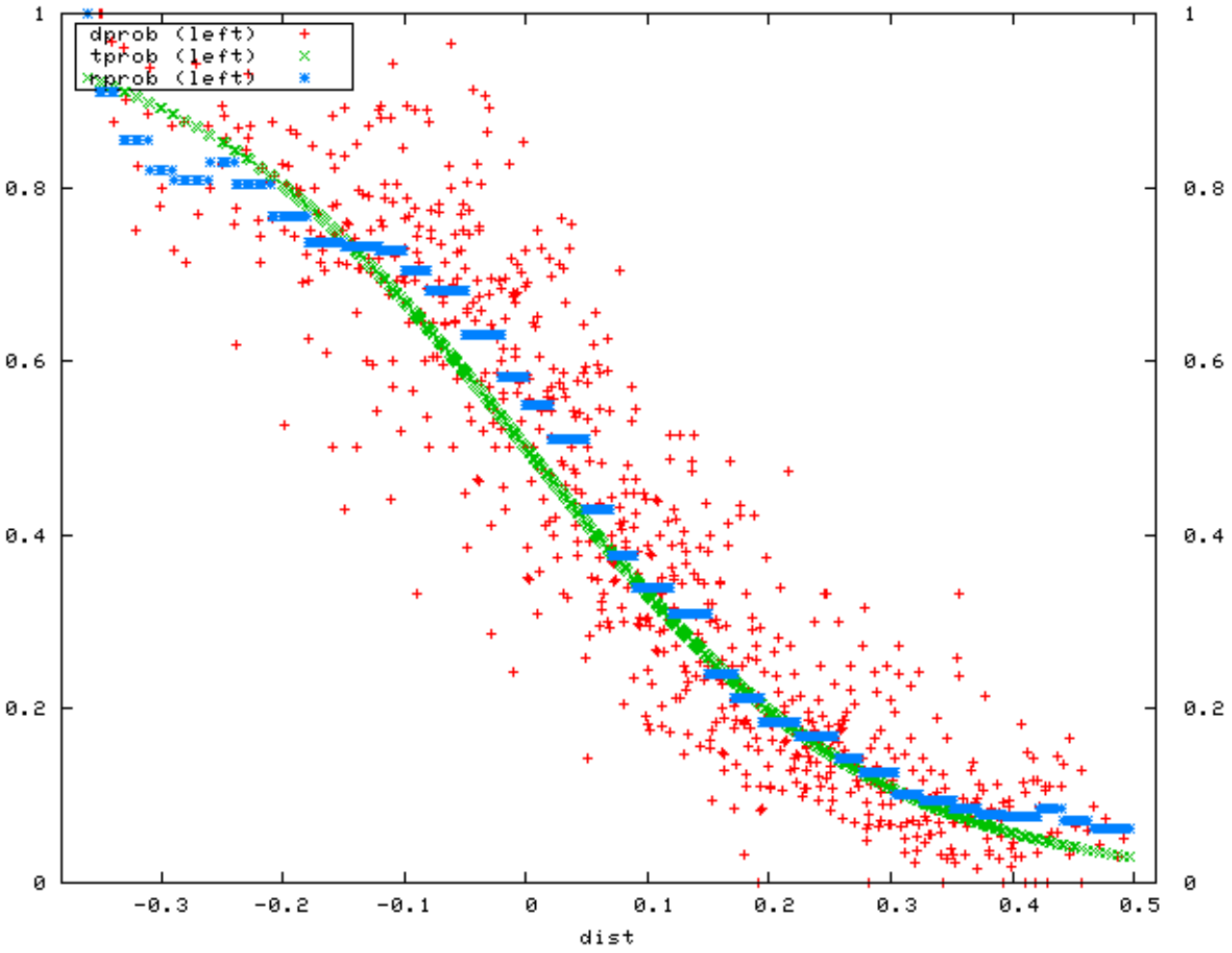
Approximate or ε-equilibrium

s_i strategy choice; μ_i beliefs; u_i utility

$$u_i(s_i \,|\, \mu_i) + \varepsilon \geq u_i(s_i' \,|\, \mu_i)$$

equilibrium: beliefs are correct

Individual Play in Voting



Quantal Response Equilibria

σ_i mixed strategy or probability of play

$\lambda_i > 0$ parameter

$$p_i(s_i) = \exp(\lambda_i u_i(s_i, \sigma_{-i}))$$

$$\sigma_i(s_i) = p_i(s_i) / \sum_{s_i'} p_i(s_i')$$

Games with Strong Equilibria

- voting
- competitive equilibrium

Learning and Self-confirming Equilibrium

government chooses high or low inflation…then in the next stage

consumers choose high or low unemployment; but prefers low unemployment

government gets 2 for low unemployment plus 1 for low inflation

subgame-perfect equilibrium: government chooses low inflation and gets 3

self-confirming equilibrium: government believes that low inflation leads to high unemployment, so chooses high inflation and gets 2

no data is generated about the consequences of low inflation

Sargent, Williams, Zhao 2006: detailed explanation of how learning by the U.S. Federal Reserve led to the conquest of American inflation

The Ordinary, the Extraordinary and the Dishonest

Periodic short crises during which long-run beliefs of consumers are wrong, although short-run beliefs are right

Sargent, Williams, Zha 2008

- The current crisis: the ordinary; the extraordinary and the dishonest

Procrastinating at the Health Club

- people who choose membership pay more than $17, even though a $10-per-visit fee is also available
- agents overestimate … delay contract cancellation whenever renewal is automatic ($70 per month)

DellaVigna, Malmendier 200

Hypothesis 1: people think incorrectly that they will cancel tomorrow

Hypothesis 2: people think it will be an expensive hassle to cancel; wait for “hassle” cost to be low

Takes 2.3 months to cancel after stopping attendance

- Eliot Spitzer, Rush Limbaugh and the Las Vegas vacation

Prospect Theory to the Rescue

Suppose that p_i is the chance of winning one of two prizes $x_i \geq 0$

$$U = \sum_i \frac{.846 {p_i}^{.414}}{.846 {p_i}^{.414} + (1-p_i)^{.414}} {x_i}^{1.056}$$

Bruhin, Fehr-Duda, and Epper [2007]

Would you rather have:

A. $5,000 for sure

B. a 50-50 coin-flip between $9,700 dollars and nothing

and you don't exhibit the Allais paradox

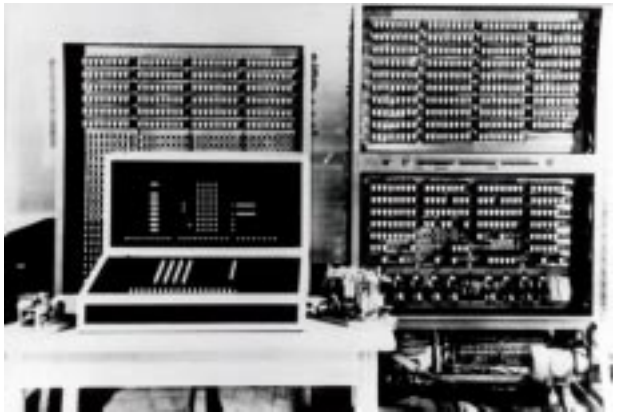
Framing and the Becker Marschak DeGroot Elictation Procedure

- Willingness to pay versus willingness to accept

Zeiler and Plott 2004

Psychology versus Economics

- non-functional versus functional people
- narrow models versus broad models
- individual versus group behavior
- arithmetic versus axiomatic models and the domain of concern
- pieces of paper, computers and neuroeconomics



Strengthening Economic Theory

Mainstream models

- learning
- habit formation
- consumer lock-in

Works in progress

- ambiguity aversion and the dishonest
- level-k thinking and one-off play
- menu choice and self-control
- interpersonal preference

The Rabin Paradox

If you are indifferent between a 70% - 30% chance of

A: $40 and $32

B: $77 and $2

And your lifetime wealth is $860,000 then your coefficient of relative risk aversion is 27,950

If you are indifferent between holding stocks and bonds your coefficient of relative risk aversion is 8.84

- The reference point is real