

# **Is Behavioral Economics Doomed?**

*The ordinary versus the extraordinary*

Max Weber Lecture

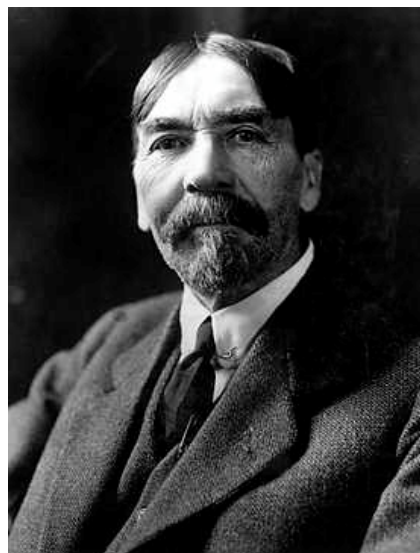
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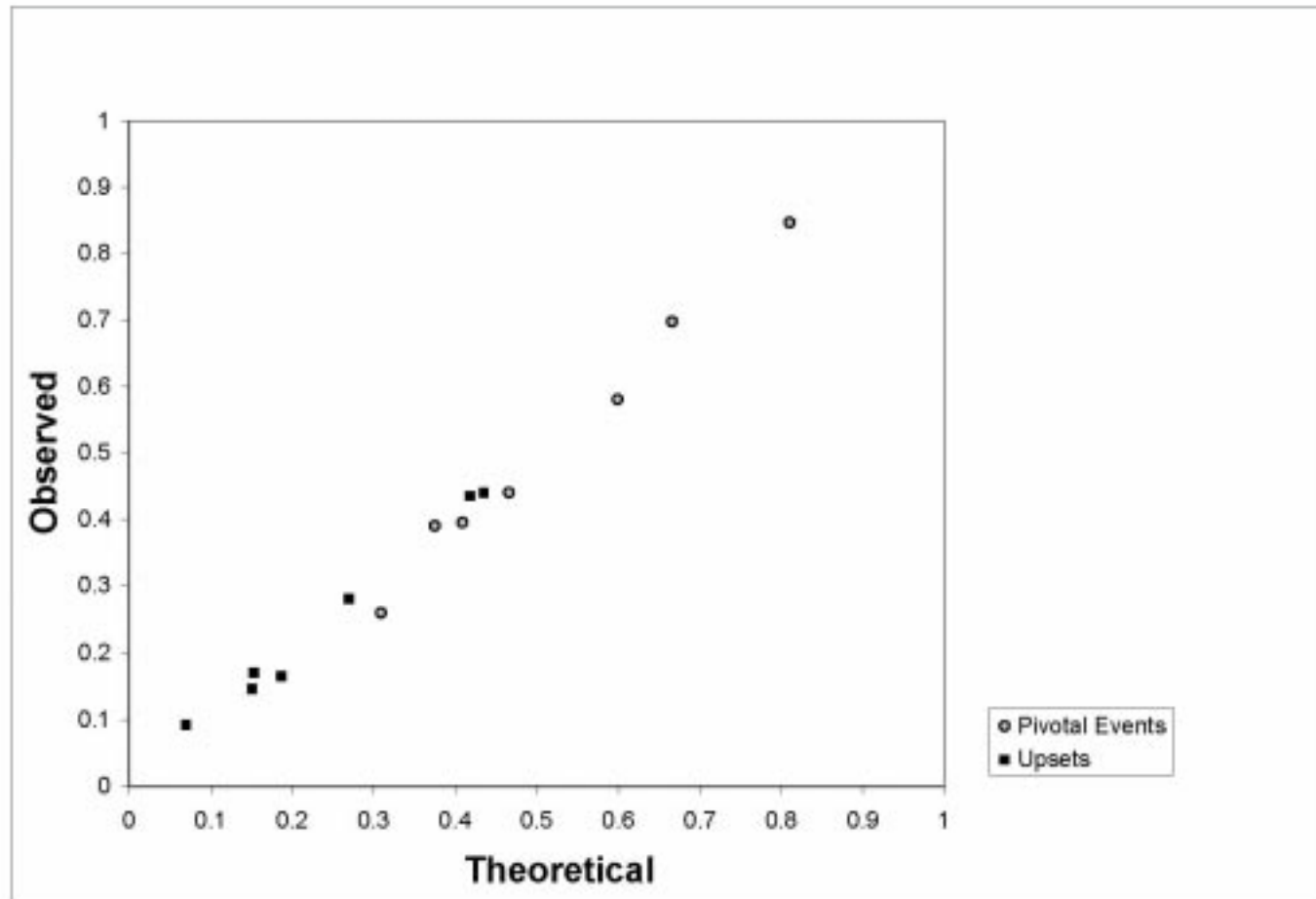
## ***Rational Economic Man***

“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  $\varepsilon$ -equilibrium

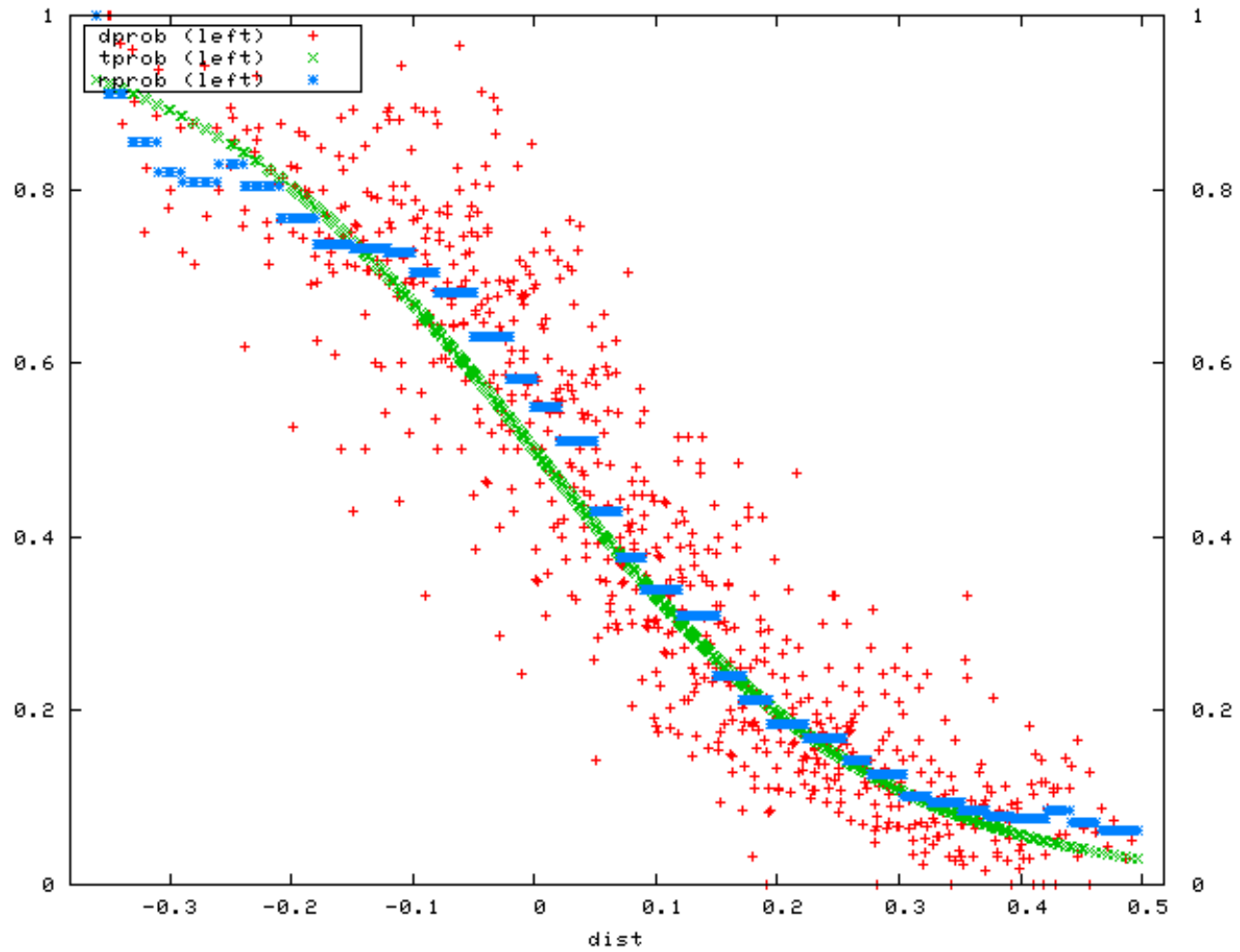
$s_i$  strategy choice;  $\mu_i$  beliefs;  $u_i$  utility

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

equilibrium: beliefs are correct



# Individual Play in Voting



## Quantal Response Equilibria

$\sigma_i$  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 Elicitation Procedure***

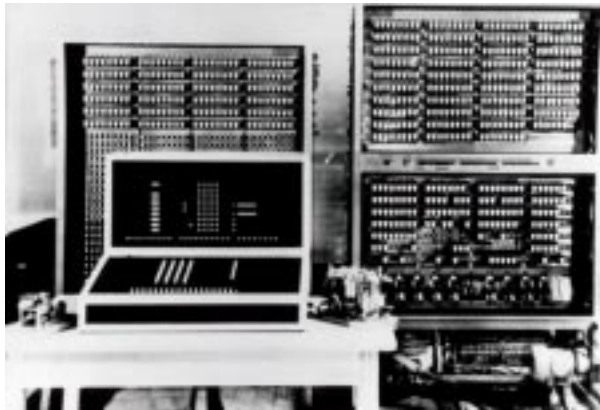
➤ Willingness to pay versus willingness to accept

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

