



SOCIETY OF ACTUARIES

**SOA 09 Annual Meeting & Exhibit
October 25-28, 2009**

Session 53 PD, Modeling Human Behavior

Moderator:

Scott D. Haglund, FSA, MAAA

Presenters:

[Richard Carlson Leavitt, ASA, MAAA](#)

Chris E. Stehno



Modeling Human Behavior

2009 SOA Annual Meeting

Wednesday, October 28

Rick Leavitt -Smith Group, VP Pricing and Consulting Actuary

Chris Stehno - MBA, Senior Manager, Advanced Quantitative Services, Deloitte Consulting



Modeling Human Behavior: Agenda

Rick: The Lure of Irrational Behavior

Understanding the psychological forces that drive decisions

Chris: Modeling in Action

Using the data behind behaviors

Human Behavior: Ruled by Logic?



"Emotions are alien to me. I'm a scientist."

-- Spock, *This Side Of Paradise*

"Without facts, the decision cannot be made logically.
You must rely on your human intuition."

-- Spock, *Assignment: Earth*

"Nowhere am I so desperately needed as among a
shipload of illogical humans."

-- Spock, *I, Mudd*

3

Irrational Decision Making

Humans make irrational decisions:

1. Obvious... Recognized through the ages
2. Only recently incorporated into economic thought:
2002 Nobel Prize in Economics
3. Irrational behavior is predictable and can be studied
Many studies, several popular books
4. Understanding the types of sources of irrational behavior
can aid modeling efforts (and our own decision making)

4



Irrational Decisions

Fooled by Relativity:

- The Salesman's Gambit

Anchoring:

We tend to make estimates based on a number we have been recently exposed to, even when that number is not relevant to the estimate.

Loss Aversion:

We tend to be willing to take more risk to avoid a loss than to acquire a gain

5



Irrational Decisions

Social Norms versus Market Norms

We use a different standard for social and volunteer transactions than for market transactions

The Cost of Free

We tend to overpay for free.

The Cost of Ownership

A bird in the hand is worth more than a bird in the bush

6



Irrational Decisions

The Cost of Price

When price alone affects the recognition of value

Value Attribution

Judging the book by the cover

7



Irrational Decisions

Many other forms of irrational Behavior

Procrastination

Keep Your Options Open: (fear of commitment)

Over-commitment (emotional attachment to positions)

Do not believe everything you think (certainty as emotion)

Sexual Arousal = Poor Judgment

8