Decision Making and Projection

Neoclassical Assumptions About Preferences

- The chosen option in a decision problem should remain the same even if the surface description of the problem changes (descriptive invariance)
  - Contradicted by pseudo-certainty and framing effects
- The chosen option should depend only on the outcomes that will obtain after the decision is made, not on differences between those outcomes and
  - the status quo: Contradicted by endowment effect
  - what one expects: Contradicted by mental accounts
  - the overall magnitude of the decision: Contradicted by ratio effect

More Neoclassical Assumptions About Preferences

- Preferences over future options should not depend on the transient emotional state of the decision maker at the time of the choice (state independence)

Endowment Effect Revisited (Van Boven, Dunning, and Loewenstein, 2000)

- Replicated coffee mug endowment effect
  - Avg. selling price: $6.37
  - Avg. buying price: $1.85
- Sellers [Buyers] asked to estimate how much buyers [sellers] would pay, and rewarded for accurate predictions
  - Sellers' estimate of buying price: $3.93
  - Buyers' estimate of selling price: $4.39
- Result shows "projection bias": estimates are biased toward Ps emotional state at the time of estimate (attached or unattached to mug)
- Validated for predicting one's own selling price before owning a mug (Loewenstein & Adler, 1995)

Why you shouldn't shop on an empty stomach (Read & Van Leeuwen, 1998)

- Office workers choose between healthy and unhealthy snacks to be received in a week
- Decision times and projected snack reception times either when
  - hungry (late in afternoon)
  - satiated (right after lunch)
- Results: % choosing unhealthy snack:

		Future Hunger	
		Hungry	Satiated
Current Hunger	Hungry	78%	42%
	Satiated	56%	26%

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- Preferences between future outcomes should not vary systematically as a function of the time until the outcomes (delay independence)

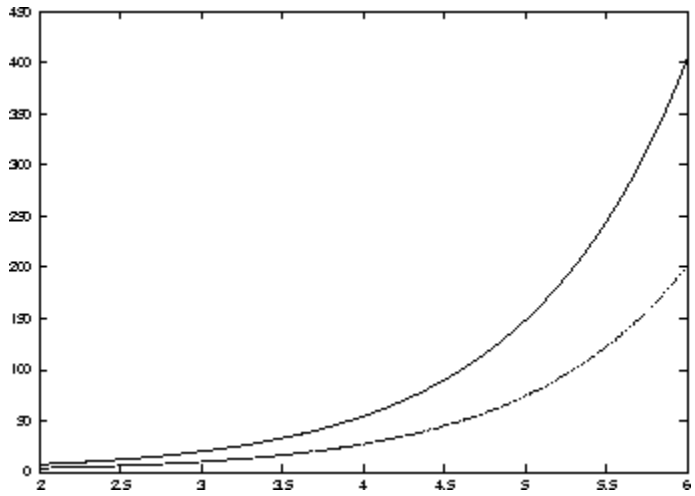
Testing Delay Independence (Ainslie and Haendel, 1983)

- Ps chose between two prizes to be paid by reputable company:
  - 1. $50 today versus $100 in 6 months
  - 2. $50 in 12 months versus $100 in 18 months

Testing Delay Independence (Ainslie and Haendel, 1983)

- Ps chose between two prizes to be paid by reputable company:
  - 1. $50 today versus $100 in 6 months
  - 2. $50 in 12 months versus $100 in 18 months
- Most chose $50 today in problem 1, but $100 in 18 months in problem 2
- Violates delay independence – illustrates hyperbolic discounting

Temporal Discounting



Normative Theory: exponential discounting (constant discount rate)

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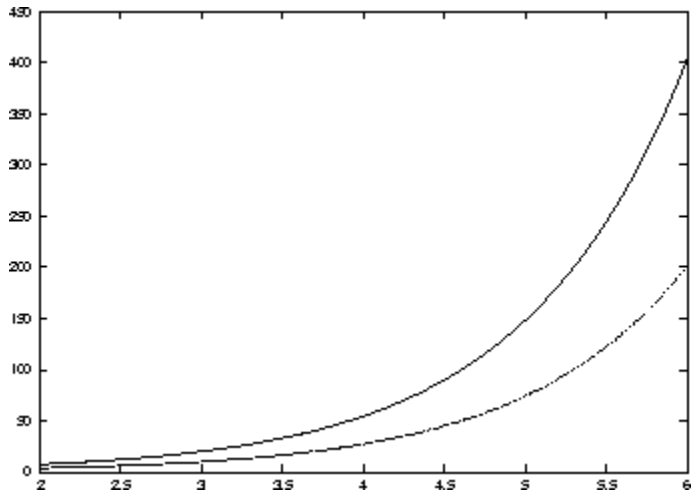

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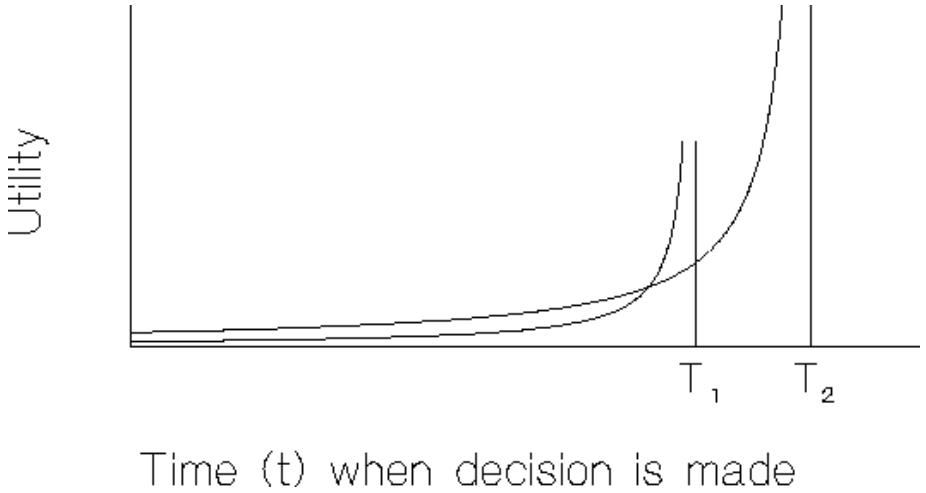

Descriptive Theory: hyperbolic discounting (temporal myopia/impulsiveness)

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  - Contradicted by hyperbolic discounting/impulsiveness
- Experienced utility should not differ systematically from
  - decision utility
  - predicted utility
  - retrospective utility

The Harvard/Yale Assistant Professor's Problem (Anecdotal)

- Harvard and Yale grant tenure to very few junior faculty
- But prestige considerations often cause acceptance of job offers over schools more likely to grant tenure (e.g. Michigan)
- Result can be a miserable experience: drop in status, feeling of failure when assistant professorship is over
- Possibly an instance of decision utility (revealed by choice) being inconsistent with experienced (and even predicted) utility
- Anticipated by Adam Smith: people exaggerate importance of social status

Failures of Hedonic Prediction

- People neglect effects of adaptation to surroundings in predicting future utility
  - Misprediction, after initial (unpleasant) exposure, of (non)enjoyment of plain yogurt after 8 daily episodes of consumption (Kahneman & Snell, 1992)
  - Change in social comparison group (e.g. teaching at Harvard/Yale, moving to a new neighborhood)
  - Weariness with travel – planning overly long vacations, too much time at the beach
- Assistant professors overestimate effects of tenure decision on happiness one year later (Gilbert and Wilson, 2000)

A Test of Hedonic Memory (Kahneman et al., 1993)

- Ps given two unpleasant experiences:
  - Short trial: Hold hand in 14°C water for 60s
  - Long trial: Hold hand in water for 90s; 14°C for 60s, followed by gradual rise to 15°C over next 30s
- After second trial, Ps called in to repeat one of the two trials exactly
  - 65% chose to repeat the long trial
- Interpretation: “duration neglect” – people remember and overweight the end of the experience (a gradual decline in pain)

Application in Clinical Setting (Redelmeier and Kahneman, 1996)

- Patients undergoing colonoscopy reported intensity of pain every 60s
- Later provided several measures of remembered utility for the whole experience
- Remembered utility ratings reflected not total utility (addition of pain ratings) but a “peak and end” rule: highest and last pain ratings dominated memory
- Failure to integrate moment utilities: may account for difference in reported happiness between French and U.S. survey-takers

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- Experienced utility should not differ systematically from
  - decision utility: Harvard/Yale junior faculty problem
  - predicted utility: Contradicted by failure to predict adaptation
  - retrospective utility: Contradicted by duration neglect and failure to integrate moment utilities