Eliciting Temptation and Self-Control through Menu Choices: A Lab Experiment

Séverine Toussaert

Miguel Acosta

Behavioral Economics w/ Mark Dean

November 2017

Outline

Motivation

- Time-inconsistency doesn't allow for self-control
- Gul-Pesendorfer does
- Empirical relevance of the two models
- Importance for policy: quantity vs. price controls
- Empirical challenge: what people say vs. what they do.
- Solution: elicit preferences over menus. Then randomly assign menus.

Results

- 23%-36% can be classified as self-control types according to their menu preferences.
- Consistent with the GP model, self-control types expect to resist the temptation to learn the story.
- Perceived and actual self-control almost entirely coincide: self-control types indeed resist temptation.
- Yet, facing the choice is associated with a lower productivity, suggesting the presence of self-control costs.

: Thanks to the author for posting her slides

Outline

Gul-Pesendorfer (2001)

- The additional axiom: set betweeness

$$A \succsim_1 B \Rightarrow A \succsim_1 A \cup B \succsim_1 B$$

Let $\{a\} \succ_1 \{b\}$.

  - Standard: $\{a\} \sim_1 \{a, b\} \succ \{b\}$
  - Resistible Temptation: $\{a\} \succ_1 \{a, b\} \sim \{b\}$
  - Overwhelming Temptation: $\{a\} \succ_1 \{a, b\} \succ \{b\}$

- Expressing resistible temptation $\equiv$ self-control type.
- Recall the representation:

$$V(A) \equiv \max_{x \in A} [u(x) + v(x)] - \max_{x \in A} v(y)$$

  - u is commitment utility: $V(\{a\}) = u(a)$.
  - v is temptation utility: $u(a) > u(b)$ and $v(b) > v(a)$, then $V(\{a\}) > V(\{a, b\})$.

Ready for an exciting story?

- Friend committing suicide while everyone else drunk

Ready for an exciting story?

- Friend committing suicide while everyone else drunk
- Ditching someone then sleeping at their house

Ready for an exciting story?

- Friend committing suicide while everyone else drunk
- Ditching someone then sleeping at their house
- Meeting Jonah Hill

Ready for an exciting story?

- Friend committing suicide while everyone else drunk
- Ditching someone then sleeping at their house
- Meeting Jonah Hill

Ready for an exciting story?

- Friend committing suicide while everyone else drunk
- Ditching someone then sleeping at their house
- Meeting Jonah Hill
- Creepy cab driver

Ready for an exciting story?

- Friend committing suicide while everyone else drunk
- Ditching someone then sleeping at their house
- Meeting Jonah Hill
- Creepy cab driver
- Bombing and drying friend

Ready for an exciting story?

- Friend committing suicide while everyone else drunk
- Ditching someone then sleeping at their house
- Meeting Jonah Hill
- Creepy cab driver
- Bombing and drying friend
- Bombing

Gul-Pesendorfer (2001)

- The additional axiom: set betweeness

$$A \succsim_1 B \Rightarrow A \succsim_1 A \cup B \succsim_1 B$$

Gul-Pesendorfer (2001)

- The additional axiom: set betweeness

$$A \succsim_1 B \Rightarrow A \succsim_1 A \cup B \succsim_1 B$$

- Suppose $\{a\} \succ_1 \{b\}$.
  - Standard: $\{a\} \sim_1 \{a, b\} \succ \{b\}$
  - Resistible Temptation: $\{a\} \succ_1 \{a, b\} \sim \{b\}$
  - Overwhelming Temptation: $\{a\} \succ_1 \{a, b\} \succ \{b\}$

Gul-Pesendorfer (2001)

- The additional axiom: set betweeness

$$A \succsim_1 B \Rightarrow A \succsim_1 A \cup B \succsim_1 B$$

- Suppose $\{a\} \succ_1 \{b\}$.
  - Standard: $\{a\} \sim_1 \{a, b\} \succ \{b\}$
  - Resistible Temptation: $\{a\} \succ_1 \{a, b\} \sim \{b\}$
  - Overwhelming Temptation: $\{a\} \succ_1 \{a, b\} \succ \{b\}$
- Expressing resistible temptation $\equiv$ self-control type.

Gul-Pesendorfer (2001)

- The additional axiom: set betweeness

$$A \succsim_1 B \Rightarrow A \succsim_1 A \cup B \succsim_1 B$$

- Suppose $\{a\} \succ_1 \{b\}$.
  - Standard: $\{a\} \sim_1 \{a, b\} \succ \{b\}$
  - Resistible Temptation: $\{a\} \succ_1 \{a, b\} \sim \{b\}$
  - Overwhelming Temptation: $\{a\} \succ_1 \{a, b\} \succ \{b\}$
- Expressing resistible temptation $\equiv$ self-control type.
- Recall the representation:

$$V(A) \equiv \max_{x \in A}[u(x) + v(x)] - \max_{x \in A} v(y)$$

  - u is commitment utility: $V(\{a\}) = u(a)$.
  - v is temptation utility: $u(a) > u(b)$ and $v(b) > v(a)$, then $V(\{a\}) > V(\{a, b\})$.

Complications

- Observing $\{a\} \succ_1 \{a, b\} \succ \{b\}$ generally distinguishes self-control from dynamic inconsistency (no room for self-control: only can rationalize overwhelming temptation; doesn't depend on set). Not true if probability of succumbing is random. *Need expectations.*
- Sophistication:

$$A \cup \{x\} \succ_1 A \Rightarrow x \succ_2 y$$

  necessary for representation. Partial naïveté:

$$\{a\} \succsim_1 \{a, b\} \succ \{b\} \text{ and } b \succ_2 a$$

  (person weakly *thinks* she won't be tempted, but is). Have to *distinguish between perceived and actual self-control.*
- Cannot capture *guilt* ($\{a\} \succ_1 \{b\} \succ_1 \{a, b\}$) and *preference for flexibility* ($\{a, b\} \succ_1 \{a\}, \{b\}$)

Outline

Experiment

- Story selection
- Task description
- Menu ranking
- Belief elicitation
- Attention task
- Exit survey

Questions

- Incentive compatibility
- Probability of menu a function of ranking
- Willingness to pay
- Instrument for testing priors