Time Preferences:
Present-biased preferences

EE416 Sem2/2019

Partial naivete(O'Donoghue & Rabin, QJE 2001)

- The person who is "partial naivete" is _____ that she'll have a present bias in the future, but she _____its magnitude.

Partial naivete(O'Donoghue & Rabin, QJE 2001)

- With (β, δ) preferences:
- Since β captures the magnitude of the person's present bias, we can think of the person as having_____.

Partial naivete(O'Donoghue & Rabin, QJE 2001)

- Sophisticates have _____
- Naifs have _____
- Partial naifs have_____
  - They underestimate the extent of their present bias.
  - They perceive that their discount factors are_____

Partial naivete(O'Donoghue & Rabin, QJE 2001)

- Definition of Partial naifs
- A person with perceptions $\hat{\beta}$ believes that in the future she will _____ _____. Given this prediction about future behavior, she chooses her _____to maximize her current preferences, which depend on_____.
- Also assume that the future selves are also sophisticates.

Partial naivete(O'Donoghue & Rabin, QJE 2001)

- Example: Suppose you must complete a task within three days:
- If complete on day 1, $u_1 = -3, u_2 = u_3 = 0$.
- If complete on day 2, $u_2 = -5, u_1 = u_3 = 0$.
- If complete on day 3, $u_3 = -8, u_1 = u_2 = 0$.

- This is equivalent to having the immediate cost schedule:

_____

Partial naivete(O'Donoghue & Rabin, QJE 2001)

- Behave like sophisticates with $\hat{\beta}$
- On day 1, what are your beliefs about day-2 behavior?
  - I will be present bias with_____.
  - $U^2(2|\hat{\beta}) =$ _____
  - $U^2(3|\hat{\beta}) =$ _____

	$\tau = 1$	$\tau = 2$	$\tau = 3$
At t = 1: $U^1(\tau)$			
At t = 2: $U^2(\tau)$		_____	_____
At t = 3: $U^3(\tau)$			

Partial naivete (O'Donoghue & Rabin, QJE 2001)

- Behave like sophisticates with $\hat{\beta}$
- On day 1, what are your beliefs about day-2 behavior?
  - Expect to complete task on day 2 if:
  - _____
  - _____
  - _____

Partial naivete(O'Donoghue & Rabin, QJE 2001)

- Behave like sophisticates with $\hat{\beta}$
- On day 1, what are your beliefs about day-2 behavior?
  - Expect to wait on day 2 and complete task on day 3 if:
  - _____
  - _____
  - _____

Partial naivete(O'Donoghue & Rabin, QJE 2001)

- She chooses her current action to maximize her current preferences, which depend on β.
- What are your day-1 preferences?

	$\tau = 1$	$\tau = 2$	$\tau = 3$
At t = 1: $U^1(\tau)$			
At t = 2: $U^2(\tau)$			
At t = 3: $U^3(\tau)$			

- _____

Partial naivete(O'Donoghue & Rabin, QJE 2001)

- She chooses her current action to maximize her current preferences, which depend on β.
- Conclusion:
- If $\hat{\beta} < \frac{5}{8}$,
  - On day 1,

    _____
  - On day 1,

    _____
  - I complete the task_____

Partial naivete(O'Donoghue & Rabin, QJE 2001)

- She chooses her current action to maximize her current preferences, which depend on β.
- Conclusion:
- If $\hat{\beta} > \frac{5}{8}$,
  - On day 1, _____
  - On day 1, _____
  - I _____
  - When day 2 arrives, _____

_____, $where\ \beta = \frac{1}{2}$