Consciousness

Unconscious processes

- Lots of examples
- Perception?
  - Interpretation of monocular depth cues
- Selective attention?
  - Effect of expecting to have to find an M
- Memory?
  - Regularization of episodic memories
  - Repetition priming

Conscious processes

- Also lots of examples
  - Perception
  - Conscious of “seeing” a stingray
  - Problem solving
  - Conscious of the goal, of applying operators
- Biologically, there are:
  - Workspace neurons
  - Attentional networks

Causal attribution
(Nisbett & Schacter, 1968)

- Participants asked to take a series of electric shocks of increasing intensity
  - Told they could give up when it was too much
- Conditions:
  - Pill: Given a placebo and told it would cause heart palpitations, hand tremor, etc.
    - I.e., the symptoms caused by electric shock
  - Control: Not given this pill

Results

- Pill condition took more intense shocks
  - Four times the amperage
- Afterwards, participants were asked to make conscious causal attributions
  - Using a funnel technique
    - Start with open questions, so you don't lead people
Pill condition

1. I notice that you took more shock than average. Why do you suppose you did?
   Typical response: I don’t really know... Well, I used to build radios and stuff when I was 13 or 14, and maybe I got used to electric shock.

2. While you were taking the shock, did you think about the pill at all?
   Typical response: No, I was too worried about the shock.

Pill condition

3. Did it occur to you at all that the pill was causing some physical effects?
   Typical response: No, like I said, I was too busy worrying about the shock.
   Only 3 of 12 answered some version of “yes”

Causal attribution

• Happens both consciously and unconsciously
• In the pill condition, how were the symptoms of the shocks attributed ...
  consciously?
    • To the shocks
  unconsciously?
    • To the pill
    • Evidence is that pill condition took more shock

What is reality?

• Associated with our conscious experience
• Often all the evidence converges
  – Perception, memory, all say the same thing
    • If it walks like a duck, and quacks like a duck...
  – And your reality is same as mine
• But if unconscious processes are corrupted...
  – Then our conscious reality can be severely distorted

Delusional misidentification

[Price et al., 2008]

• Patient TH:
  – 77-year old man, well-oriented, not confused, no other delusions, no psychiatric history, normal face recognition
  – Impaired visuo-spatial skills (copying, drawing)

Examiner: What do you see there?
TH: I see my face in there, a reflection of it.
Examiner: And can you describe what that reflection looks like?
TH: Just like that blob there (points to his own reflection).
Examiner: What does he look like?
TH: What does he look like?
Examiner: Yes, how would you describe him?
TH: Well, the only way I could describe him is that he looks like me.
Examiner: He looks like you?
TH: Yes.
Examiner: Does he look a lot like you?
TH: A lot like me.
Examiner: Does he?
TH: Yes.
Examiner: Is he bald?
TH: Is he bald? (Looks at own reflection) He’d have to be wouldn’t he?
Delusional misidentification

- TH also had mirror agnosia
  - Sitting in front of a mirror, with objects held up behind him, he could name them
  - But asked to grab an object, he tried to reach through or behind the mirror (on all 20 trials)