

Telling More Than You Can Know

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Overview

People routinely asked about their judgements

Why did you blow up at your mom?

Why did you choose pasta over pizza?

Why do you like *Desperate Housewives*?

What access do we have to the mental processes underlying these judgements?

higher order mental processes, in contrast to perception and memory

Overview (Cont.)

Hypothesis: People have no direct awareness of *processes*

not only perception, but ...
decision making / choice
judgement
problem solving
initiation of behavior

People have awareness only of the *results* of processes



e.g., video game: what do we know about what's going on inside?

Evidence

People often cannot report accurately on the effects of particular stimuli on higher-order reasoning and judgements.

Overview (Cont.)

Challenges

People are happy to give you reasons
(in contrast to perception and memory, e.g., “mother’s maiden name?”)

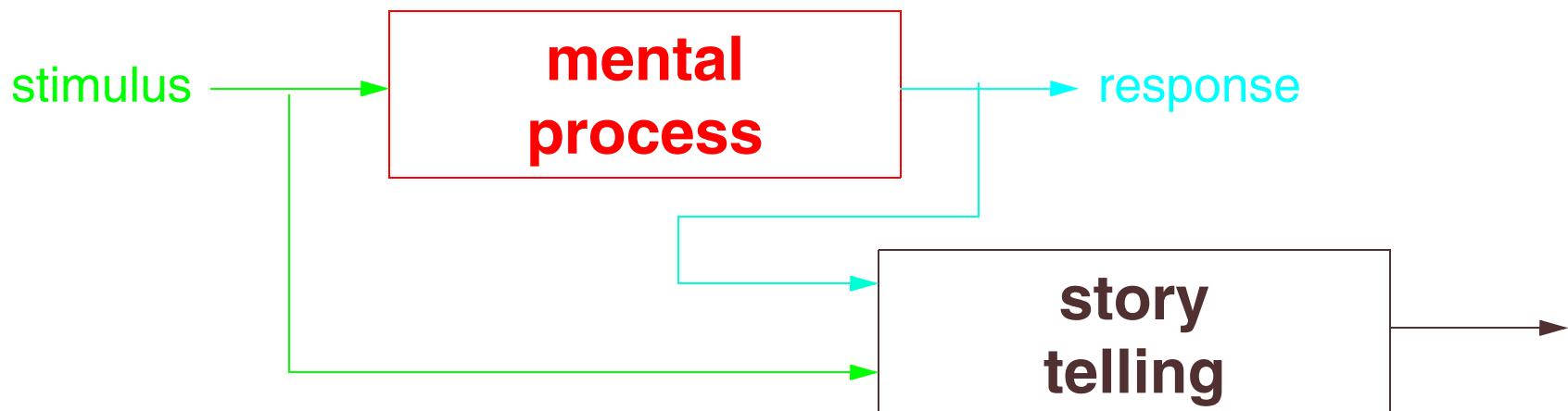
People are often correct in their reports.

Conclusions

Subjective reports are not based on records of the cognitive processes.

Instead, reports are based on implicit, a priori causal theories.

Reports are often correct because a priori causal theories are correct.



PART I: Previous Experiments

Cognitive Dissonance (“Insufficient Justification”)

If required to perform an undesirable task, you'll perceive it as being less unpleasant if you're given *inadequate* reasons than if you're given *adequate* reasons.

e.g., electric shock experiment

After performing experiment, Ss asked to repeat with or without adequate justification.

adequate: “research was very important, and nothing could be learned unless the shocks were administered again”

inadequate: “experimenter wanted to satisfy his idle curiosity”

With insufficient justification...

lower GSR

better learning on secondary task
rating of painfulness was *not* affected

Attribution Theory

Attributions people make concerning causes and effects determine subsequent behaviors and attitude adjustments.

e.g., snake-phobic subjects

Some wired for what they believed was heart rate, others told sounds extraneous.

Shown series of slides, some with “SHOCK” paired with shock.

“SHOCK” slides associated with “heart rate” increase, snake slides *not*.

“Heart rate” subjects more willing to approach boa

Behavior and beliefs are not necessarily consistent.

In direct questioning, “heart rate” subjects indicated no less fear of snakes.

Dissonance and Attribution Studies

Subjects frequently cannot report on the existence of the chief effect produced by a manipulation.

Either no difference in verbal report, or behavioral effects much stronger than verbal report

Even when they are aware of responses, subjects do not report a change in attitude or evaluation.

e.g., write an essay opposing their own view on some topic

Insufficient justification subjects shift evaluations toward position advocated by the essay.

Subjects asked after writing essay what their attitude had been a week earlier.

Control subject had no difficulty reporting on their previous opinions, but Insufficient justification subjects indicated current attitude = previous.

Dissonance and Attribution Studies (Cont.)

Subjects cannot correctly identify the stimuli that produced the response.

e.g., study with insomniacs and placebo pill

Some Ss told placebo would *increase* heart rate, alertness, etc.

Others told it would *decrease* heart rate, alertness

Ss required less time to fall asleep in increase condition.

Explanation: (unconscious) attribution of arousal symptoms to pill (vs. work anxiety, etc.) -> less time to get to sleep.

Ss asked afterward why, and none believed pill was relevant

Problem Solving (Maier)

Two hanging cords far apart

goal to tie cords together

Maier cues: swing one cord vs. twirl weight on one cord

Swing helpful, twirl not, but Ss reported just the opposite usefulness

Effect of Presence of Others on Helping Behavior

People are less likely to help in presence of others.

People deny this factor affects their behavior.

PART II: New Experiments

Criteria

routine tasks

no deception

Ss had to be aware of critical stimulus and their own responses

New Experiments (Cont.)

Failure to report influence of effective stimulus factor

Erroneous reports about stimuli influencing associative behavior

- study “ocean-moon” paired associate
- “name a detergent?”
- Tide twice as likely after ocean-moon study

Erroneous reports about position effects on appraisal and choice

Erroneous reports about anchoring effects on predictions

- Task: guess behavior of college student
- shown “anchor” tape of randomly selected student
- Ss belief in influence of anchor had little relationship to the actual influence of anchor.

Erroneous reports about the influence of an individual’s personality on reactions to physical characteristics

- manipulated “warmth” or “coldness” of individual’s personality
- large effect on ratings of attractiveness of appearance, etc.
- Ss believed cause/effect in opposite direction

New Experiments (Cont.)

Reporting influence of ineffective stimulus factor

Erroneous reports about the emotional impact of literary passages

- passages removed from section of novel
- Ss asked to rate emotional impact
- Ss asked after the fact how passage would have affected the emotional impact of the passage

Erroneous reports of effects of distractions on reactions to film

- Ss see film, some with noise outside or out-of-focus
- Ss asked to rate film on 3 dim (interestingness, effect, sympathy for main character)
- Ss also asked how much their ratings would have been affected had there been no noise, or projector was in focus
- Ss judged an impact, whereas there was actually none

Erroneous reports about the effects of reassurance on the willingness to take electric shocks

- Ss predicted magnitude of electric shock they'd be willing to take
- Instructions about “no permanent damage” had no effect on prediction
- Ss claimed that instructions would have an effect

No Introspective Access to Mental Events

If we had access,

- we would not make incorrect assertions about these mental events.
- our explanations of our own behavior should be consistently more accurate than other's explanations

If no privileged access, then what drives verbal report?

Where Do Verbal Reports Come From?

A-priori causal theories

formal education/training (“stop at lights”)

culturally supplied rules (“people are happy when you give them flowers”)

past experience (“I’m grouchy when I don’t get enough sleep”)

generic inference processes (“how representative is worry/concern as a source of insomnia?”)

If a priori theories are correct, reports will often be correct.

If a priori theories are used, individuals’ reports of their higher mental processes will neither be more nor less accurate than predictions made by observers.

Caveat: We have lots more practice observing ourselves than others have observing us.

Where Do Verbal Reports Come From? (Cont.)

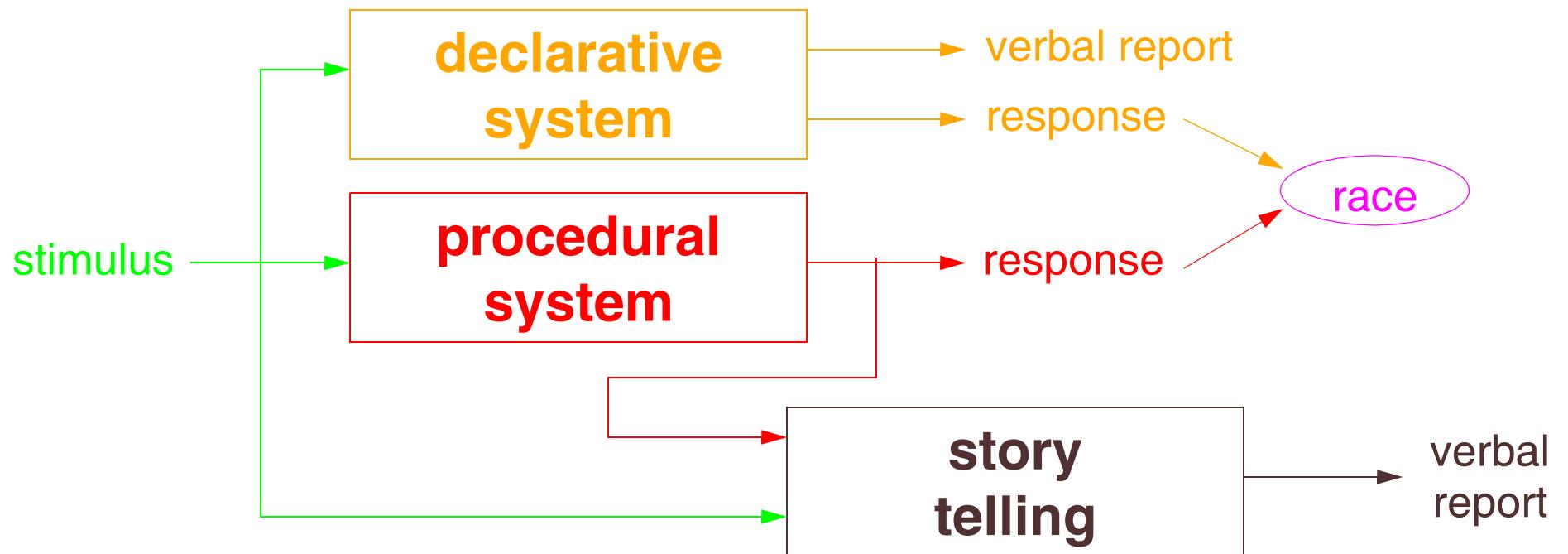
When will we be wrong?

- removal in time between the report and actual occurrence of the process (subjects have the best chance of reporting that a stimulus is influential if it just occurred and is still available)
- when factors involve “mechanics of judgement”
e.g., serial order effects, position effects, anchoring effects
- when factor is the nonoccurrence of an event
- nonverbal behaviors (posture, gaze, etc.) — less available
- discrepancy between magnitudes of cause and effect (e.g., insomnia must be due to important life situations, not minor causes such as room-too-cold)

Should we change definition of awareness?

Awareness = verbal report which exceeds in accuracy that obtained from observers provided with a general description of the stimulus and response in question.”

Verbal Report and Cognition



Declarative (explicit) system is slow, flexible

Procedural system is fast, inflexible

Is story telling system distinct from declarative system?

Learning

Procedural system learns:

- (1) to produce responses that declarative system would have produced (compilation of knowledge)
- (2) to maximize reward (reinforcement learning)

Declarative system learns:

- (1) new explicit knowledge/rules based on stories told
 - e.g., Narcissist who does something kind to get attention -> considers themselves generous

