

The Flaws in Our Perception and Memory

Quote of the day:

“Instead of reality being passively recorded by the brain, it is actively constructed by it.”

-- neuroscientist David Eagleman

Mid-quarter evaluations

Final paper will be assigned soon, and the second paper shortly thereafter.

Readings for next class.

**recommended to watch sometime during the quarter:
The Social Dilemma, available on Netflix**

naïve realism: the belief that we see, experience, and remember the world as it really is



However, expectancy effects (“believing is seeing”) undermine naïve realism. Our expectations influence our perceptions.



David Rosenhan, “On Being Sane in Insane Places” (1973). Researchers sent into psychiatric hospitals eight healthy individuals who fabricated hallucinations that then subsided. The hospital staff stuck with their initial diagnoses (schizophrenia) even though the patients’ later behaviors did not match the illness.



Robert Rosenthal and Lenore Jacobson, *Pygmalion in the Classroom* (1968). Researchers randomly selected 20% of students, then told their teachers that an IQ test revealed they were ready for an intellectual growth spurt. At the end of the year, the children had improved relative to their peers on a subsequent IQ test.

Backmasking: Most people can't hear the alleged messages on their own, but they can when told what they are supposed to hear.

Maybe naïve realism is accurate with respect to objective attributes of objects such as color?



In reality, however, we construct colors through our visual system. Each object absorbs certain wavelengths of light and reflects others, which our brains *interpret* as a certain color.

<https://www2.lbl.gov/MicroWorlds/ALSTool/EMSpec/EMSpec2.html>

Different languages slice up the color spectrum somewhat differently, which affects how fast people can distinguish one color from another.



Within a given society, there is strong but not universal agreement on colors. Some exceptions:

- **color blindness (most commonly in distinguishing reds and greens, or less often blues and greens, or yellows and reds, or total color blindness)**

- What color is this dress?
Blue and black, white and
gold, or something else?



Naïve realism is false, but we shouldn't, replace it with cynicism and despair. Our perceptions are usually good enough.

Rather than throwing perceptions (ours or someone else's) into the trash, we need to check them against other forms of evidence and what we already know. (The same applies to intuition.)



The workings of memory provide the final nail in the coffin of naïve realism. Most people (63% in a representative survey) erroneously think that memory works like a videorecorder.



In reality, we construct our memories anew every time we recall an incident. We often correctly recall the gist but change or invent the details. Different incidents sometimes get meshed together, and we occasionally “remember” something that actually happened to someone else.

An example of someone remembering the gist (about my dad) but misremembering details.

Elizabeth Loftus has shown that (a) leading questions and misleading information can cause people to alter their memories, and (b) people can be induced to hold a false memory.

Her research is relevant to the controversial phenomenon of “recovered memories,” which were part of the Satanic ritual abuse allegations of the 1980s.



Ulric Neisser, study of memories of the Challenger space shuttle explosion. Students gave different accounts 2 ½ years later than they gave the day after the explosion, and yet they insisted that their later memories of the details were accurate.

In Neisser's and other studies, there is no relationship between a person's confidence in the details of their memories and the accuracy thereof.

A large body of research thus indicates that some of our memories—yours and mine—are flawed.

The fallibility of perception and memory has obvious applications for eyewitness testimony. Subsequent evidence from DNA and other sources has exonerated over 1500 people in the U.S., most of them convicted based on eyewitness testimony.



Once again, the point is not to throw out memories and eyewitness testimony, but to corroborate them against other forms of evidence. All forms of evidence, including DNA evidence, have limits.

Better criminal justice procedures could improve (and have improved) the value of eyewitness testimony.

Christine Blasey Ford and Brett Kavanaugh



https://en.wikipedia.org/wiki/Christine_Blasey_Ford



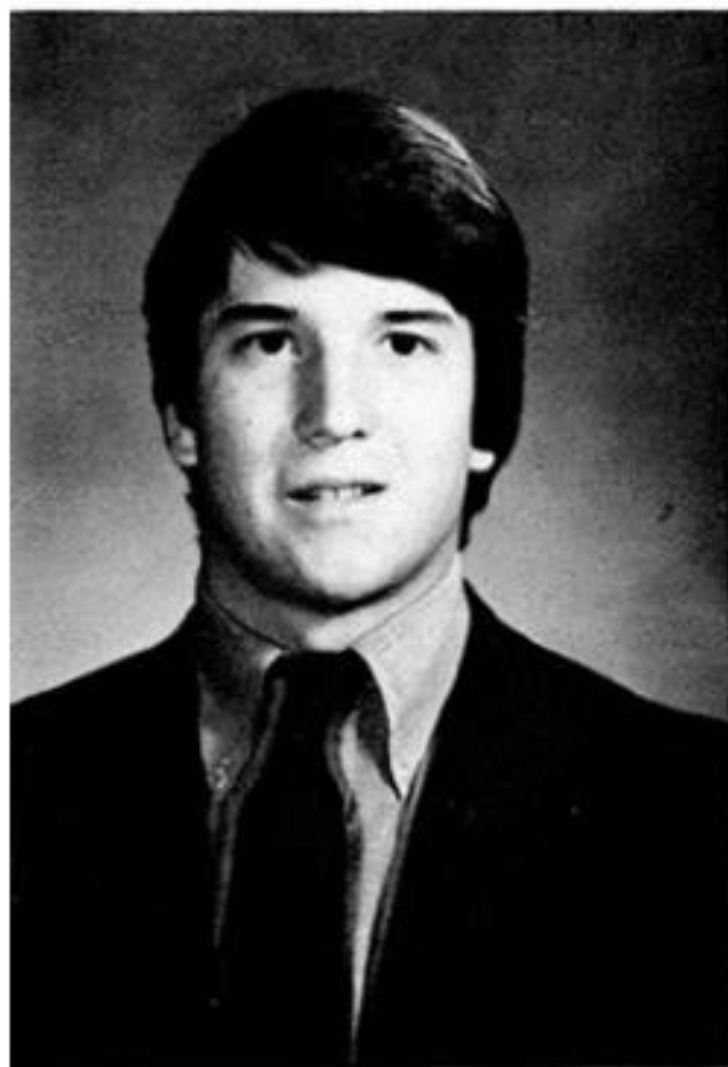
Possibilities with respect to Ford:

- **She told the truth**
- **She told the truth as she recalled it, but her memory is entirely fabricated (e.g., a recovered memory)**
- **She told the truth as she recalled it, but she misremembered the perpetrator**
- **She told the truth as she recalled it, but she misremembered some of the lesser details**
- **She lied**



Possibilities with respect to Kavanaugh:

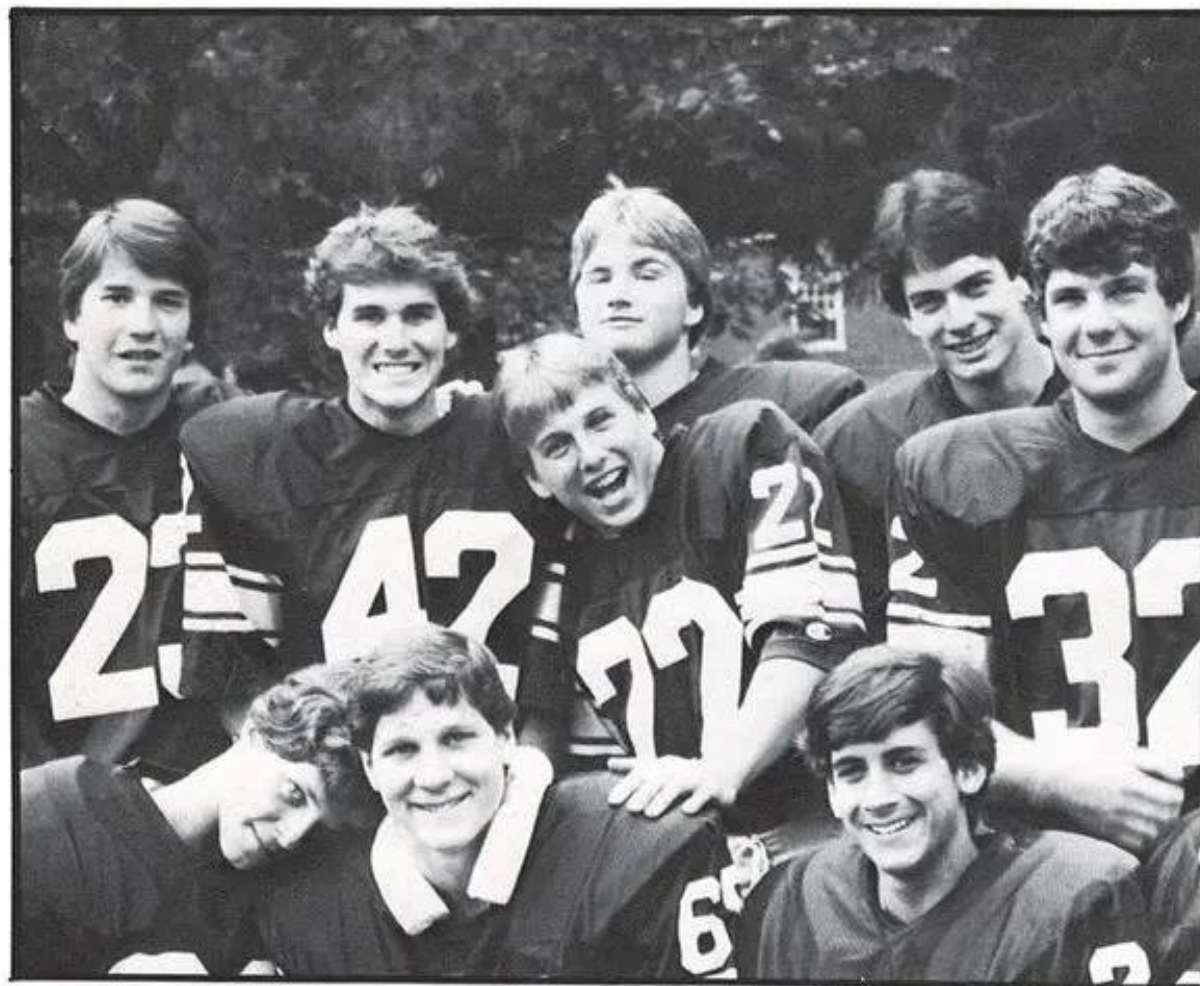
- **He told the truth**
- **He told the truth as he recalled it, but he actually did sexually assault Ford**
- **He lied**



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Varsity Football 3, 4; J.V. Football 2; Freshman Football 1; Varsity Basketball 3, 4 (Captain); Frosh Basketball (Captain); J.V. Basketball (Captain); Varsity Spring Track 3; *Little Hoya* 3, 4*** Landon Rocks and Bowling Alley Assault — What a Night; Georgetown vs. Louisville — Who Won That Game Anyway?; Extinguisher; Summer of '82 — Total Spins (Rehobeth 10, 9 . . .); Orioles vs. Red Sox — Who Won, Anyway?; Keg City Club (Treasurer) — 100 Kegs or Bust; Anne Daugherty's — I Survived the FFFFFFFFourth of July; Renate Alumnus; Malibu Fan Club; Ow, Neatness 2, 3; Devil's Triangle; Down Geezer, Easy, Spike, How ya' doin', Errr Ah; Rehobeth Police Fan Club (with Shorty); St. Michael's . . . This is a Whack; Wendy Whitney Fan Club; Judge — Have You Boofed Yet?; Beach Week Ralph Club — Biggest Contributor; Maureen — Tainted Whack; George Hyman; Beach Week 3-107th Street; Those Prep Guys are the Biggest . . .; GONZAGA YOU'RE LUCKY.

FALL



Renate Alumni (missing: Pres. J.C. Del Real)

<https://www.youtube.com/watch?v=Ex323Hx5lbQ>