1. Consciousness

- **definition:** the subjective impression we have of our world
- includes the external world (objects, etc) and internal world (perceptions, thoughts, etc.)

**What is It?**
- **dualism:** it’s a different “stuff”; not like matter at all
- **monism:** it’s not different; just an aspect of matter & energy (like life)
- “Nobody has the slightest idea how anything material could be conscious…” —Fodor
- rather than ask what it is, ask how it **works**
- at least three aspects can be distinguished:
  - awareness of things (external reference)
    - e.g., awareness that a cat is there
    - not tied to a sensory modality
  - awareness of self (internal reference)
    - e.g. awareness that you are here
    - not tied to a sensory modality; disembodied
      - not the same as a body image
  - awareness of sensory qualities (qualia)
    - e.g. the “redness” of red, the feel of silk
    - e.g., the feeling of your body (tensions, etc)

2. Qualia

- qualia = sensory qualities
  - e.g., the “redness” of red, the feel of silk
- initial attempt: psychophysics
  - relation between conscious percepts and reality
    - e.g., if something is bigger in reality, does conscious percept capture this?
  - this approach captures how qualia vary with reality
    - information used
      - does not let us know about the “absolute” structure of qualia themselves

### Dependence of Sensory Experience on Task

- for some situations, qualia are created
  - “regular” vision
  - blindspot completion, modal completion
- for other situations, no qualia at all
  - back of your head
  - amodal completion
- for yet other situations, there is a “ghost” qualia
  - mental imagery
- why do qualia exist in some situations and not in others?
  Rama: depends on *status of construct* Qualia are present when
  o construct is *irrevocable, inflexible*
    ▪ cannot interpret any other way
      • e.g., see finger as a finger
  o construct supports the *choice of an action*
    ▪ can act on construct one way or another
      • e.g., can move finger up, bend it, etc
  o construct lasts long enough to act on
    ▪ have it in short-term memory
      • can initiate action when eyes closed
- mental imagery – also a form of qualia
  o less intense so that it’s not confused with qualia based on sensory input?

3. Sensory Experience and Time
- time is a part of conscious experience
  o conscious experience always has a “now”
- subjective time is not just correlated with physical time - *it is the same kind of thing*
- look at how the subjective “now” depends on the physical “now”
- experiment: flash-lag effect
  o show observer moving object
  o while object moves, briefly flash a static test item at its location
  o percept: static and moving items *are not at the same location*
    ▪ static item lags behind moving one

*Possible explanation:*
  o it takes time for neural signals to travel along a visual pathway
    ▪ from retina to IT: 80 ms
  o thus, perception is delayed with respect to reality
    ▪ delay is about 80 ms
  o visual system therefore needs to “predict the present”
    ▪ can predict location of moving item
      • hallucinate where it ought to be
    ▪ cannot predict location of item that suddenly appears
      • percept = location where it really appeared
  o mismatch produce flash-lag effect

*Sensory Experience and Prediction*
- if there were no compensation for delay:

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<tr>
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- perceived moment of contact later than actual contact
- if perceived location is *advanced along path*, will see (estimated) collision when it actually happens. (Can then, e.g., start appropriate motor response)

- perceived moment of contact close to “real” moment

- individuals differ in the amount of prediction used
  - some individuals can “see” things happen before they actually occur

- major role of consciousness is prediction (Hawkins)