

- when asking a witness to pick the perpetrator from a lineup, inform the witness that the perpetrator might not be in the lineup
- when having a lineup, use fillers who are similar to the subject
- when presenting a lineup, use sequential rather than simultaneous representation
 - Simultaneous: choose one from a group
 - Sequential: show one by one
- use a blind lineup administrator and get an immediate confidence rating
- Cognitive interview: letting the witness talk without interruption and using techniques to make them recreate the situation

one detailed point I'll make about lineup construction:

** the text mentions that sequential lineups are superior to simultaneous lineups, and there is a fair bit of (very recent - more recent than the 2011 study Goldstein cites) research that shows that is not true. We won't cover that evidence in depth, but I'd like you to disregard the text's claim that sequential lineups are better than simultaneous lineups. This has been a point of debate in the literature for some time, and I think the evidence has now shifted in favor of showing that simultaneous lineups are better. They aren't perfect, just better.

Ch 10

The basic issue covered in this chapter is the one we'll focus on in lecture: how do we represent mental events -- as images or as symbolic (propositional/tacit knowledge) representations? In reality, most/all of the studies really test the imagery hypothesis, since it makes clear predictions. Thus, you will want to be able to think about the evidence covered in lecture and the text that suggests we use images (and that those images maintain properties of the world, such as spatial relationships and distance), as well as the evidence that images do not represent mental events in exactly the same way as actually experiencing those events. While we'll focus on behavioral evidence in class, the text also

covers brain-based evidence, and it's important to understand how both behavioral and brain-based evidence inform us about the imagery hypothesis.

- Mental imagery: ability to recreate the sensory world in the absence of physical stimuli
 - Happens in all senses
 - Paired associate learning: studying pairs, having to remember a pair
 - Conceptual peg hypothesis: easier to remember concrete nouns over abstract nouns because you can create images
 - Mental chronometry: determining the amount of time needed to carry out various cognitive tasks
- Mental scanning: creating mental images and scanning them in their minds
- Imagery debate: debate if imagery is based on spatial mechanisms, like those involved with perception or mechanisms related to language (propositional mechanisms)
- Is imagery spatial or propositional?
 - Mechanism responsible for imagery involves a spatial representation = a representation in which different parts of an image can be described as corresponding to specific locations in space
 - Just because we experience imagery as spatial, that doesn't mean that the underlying representation is spatial (epiphenomenon)
 - Propositional representation: relationships can be represented by abstract symbols such as an equation or statement
 - Deceptive representations: realistic pictures of the object
 - Tacit knowledge explanation: subjects unconsciously use knowledge about the world in making their judgements
- Comparing imagery and perception
 - Mental walk task: imagine their walking toward their mental image of an animal, found that subjects had to move closer to small animals than for larger animals
 - Shows that images are spatial, just like perception

- Letter visualization experiment: results showed that the target letter was detected more accurately when the subject had been imagining the same letter rather than the different letter
 - Shows perception and imagery share mechanisms
- Imagery and the brain
 - Imagery neurons
 - Some neurons respond to some objects over others
 - The neuron fired in the same way when the person closed his/her eyes and imagined a baseball (good firing) or to a face (no firing)
 - Category-specific neuron that is activated by imagery
 - Physiological mechanism, neurons respond in the same way to perceiving an object and to imagining it
 - Brain imaging
 - Perception and imagery activate the visual cortex
 - Increase in brain activity to when people saw the visual stimuli (perception) and when the person was imagining the stimulus (imagery)
 - Almost complete overlap of the activation caused by perception and imagery in the front of the brain, but some difference near the back of the brain
 - Used transcranial magnetic stimulation to prove that brain activation that occurs in response to imagery is not an epiphenomenon and that brain activity in the visual cortex plays a causal role in both perception and imagery
- Neuropsychological case studies
 - Removing part of the visual cortex increases image size
 - Perceptual problems are accompanied by problems with imagery
 - Dissociations between imagery and perception
 - Making sense of the neuropsychological results