Chapter 9

**VISUAL ATTENTION**

1. Research on distracted driving has found that handheld and hands-free phones do not differ in terms of how distracting they are. Why do you think this is the case?

*Hints and discussion: The idea is that the “drain” on attention occurs at a cognitive level, not in terms of visual or manual factors. That is, the distraction does not occur necessarily because drivers are looking at the phone instead of the road, or handling the phone instead of the wheel, but because their attention is directed toward the auditory input of the conversation, rather than the visual input relevant to the driving task. Direct the discussion into what other things might cause a similar distraction. Music? Conversation with passengers? (note that research also shows that passengers often modulate their conversation when the driving task becomes demanding).*

1. In one of the earliest experiments on attention, Wilhelm Wundt asked participants to watch a pendulum swinging over a graduated scale and to note the location of the pendulum on the scale at the moment a bell sounded. He noted that his participants were always slightly delayed in their responses, despite never needing to take their eyes off the pendulum. What do you think is the reason for this delay? (hint: consider Posner’s spotlight of attention metaphor).

*Hints and discussion: To use the spotlight metaphor, suggest to the students that Wundt’s participants would have been shining their spotlight toward the auditory input, waiting for the bell to sound, and then shift the spotlight to the visual input to note the location of the pendulum.*

1. Eye trackers have become a popular tool for cognitive psychologists interested in studying attention. As the book notes, most of the time, where we are looking is consistent to what we are attending. But the phenomenon of covert attention shows that sometimes we can attend to things in the visual periphery. In what other situations might attention be directed somewhere other than the location of visual fixation?

*Hints and discussion: This question is designed to helpful students think about attention other than visual attention (The Wundt question above also does this). In addition to Wundt’s experiment, we can attend to any of the various sensory inputs besides vision. Remind students of the distracted driving research. Students might also consider the phenomenon of daydreaming, when we are apparently not attending to any particular sensory input.*

1. Can you draw any connections between visual search, including the Rapid Serial Visual Presentation paradigm, and Signal Detection Theory?

*Hints and discussion: This question encourages students to apply their understanding of previously learned material (SDT) while helping them to better understand the RSVP paradigm. Students should see that RSVP can involve hits and misses, false alarms and correct rejections; and that the attentional blink phenomenon is an example of a miss.*