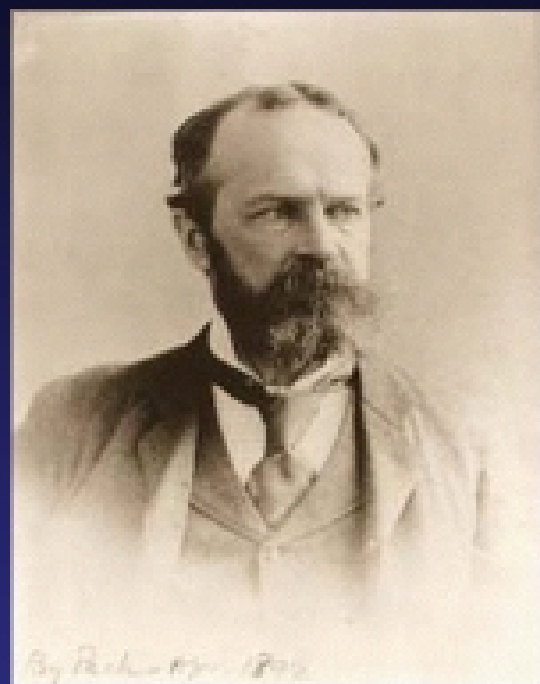


Visual Attention

- ✓ We use our visual system to provide us with information to accomplish some behavioral goal.
- ✓ How does the brain represent information about the visual scene AND its behavioral context?



"Every one knows what attention is. It is the taking possession by the mind, in clear and vivid form, of one out of what seem several simultaneously possible objects or trains of thought. Focalization, concentration, of consciousness are of its essence. It implies withdrawal from some things in order to deal effectively with others, and is a condition which has a real opposite in the confused, dazed, scatterbrained state ..."

Our attention is sensitive to, and captured by, "...strange things, moving things, wild animals, bright things, pretty things, metallic things, words, blows, blood, etc".

William James (1890), *The Principles of Psychology*

Visual Attention

- ✓ Is guided through voluntary and involuntary mechanisms (aka endogenous, exogenous; top-down, bottom-up)
- ✓ Can be overt or covert. Integral to oculomotor control
- ✓ Sensory benefits: Increased sensitivity, more accurate, and respond more rapidly to attended items.
- ✓ Has limited capacity. Difficult to attend to multiple items simultaneously.
- ✓ Attention acts as a gatekeeper to memory and cognitive control.