

Lecture 02: Central Themes

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Topic for lectures 02–04: What good is your perceptual awareness of the objects around you?

Simplest Idea:

Perceptual awareness enables control of action.

In this lecture we consider two objections to the Simplest Idea.

1. A Secondary Subwaking Self?

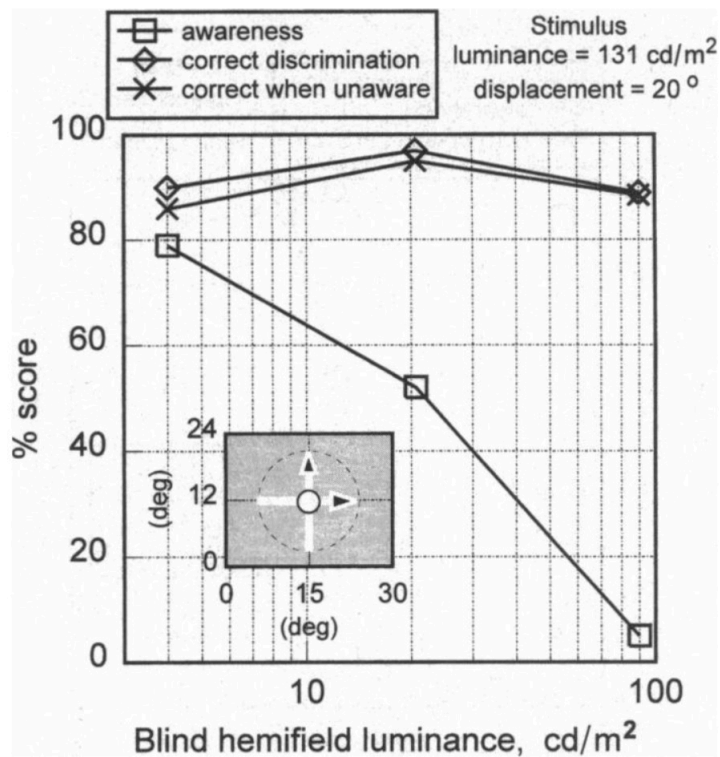
‘the presence within us of a secondary subwaking self that perceives things which the primary waking self is unable to get at’ (Sidis 1898, p. 171).

2. Blindsight

Blindsight is ‘the ability of patients with absolute, clinically established, visual field defects caused by occipital cortical damage to detect, localize, and discriminate visual stimuli despite being phenomenally visually unaware of them’ (Cowey 2010, p. 3)

Weiskrantz et al. (1995) show that a blindsighted patient’s visual discrimination capacities are unaffected by whether the patient is aware of stimuli.

‘there is no clear case of a task for which consciousness is required [...] It is misguided to think that the function of consciousness must consist in tasks that can only be performed with conscious representations’ (Shea & Frith 2016).



Source: Weiskrantz et al. (1995, figure 2)

Figure Caption: ‘Discrimination of horizontal vs. vertical movement [...], as a function of stimulus contrast. The subject had to indicate (by guessing if necessary) whether the presented stimulus was moving horizontally or vertically by pressing the appropriate response key. He also had two commentary keys to use on every trial. Awareness refers to the percentage of trials on which the subject pressed the aware key. Correct when unaware refers to performance

during those trials when the subject pressed the unaware key. The luminance of the test stimulus was held constant at 131 cd/m², and background luminance in the blind hemifield was altered systematically thus changing the contrast of the stimulus. Speed was 150/s, and displacement was 200. Note the relative stability of the high level of performance independent of contrast but with a steep decline in percentage of aware responses at high background luminance level when the contrast decreased’ (Weiskrantz et al. 1995, p. 6123).

3. Summary

Two objections to the Simplest Idea:

1. Sidis’ subjects are not perceptually aware of the letter but can identify and report it.
2. Blindsight reveals that sometimes variations in perceptual awareness of the dot make no measurable difference to action.

References

Cowey, A. (2010). The blindsight saga. *Experimental Brain Research*, 200(1), 3–24.

Shea, N. & Frith, C. D. (2016). Dual-process theories and consciousness: The case for ‘Type Zero’ cognition. *Neuroscience of Consciousness*, 2016(1).

Sidis, B. (1898). *The psychology of suggestion*. New York: Appleton.

Weiskrantz, L., Barbur, J. L., & Sahraie, A. (1995). Parameters affecting conscious versus unconscious visual discrimination with damage to the visual cortex (V1). *Proceedings of the National Academy of Sciences*, 92(13), 6122–6126.