

Session 2: Phenomenal Consciousness and Iconic Memory

Ian Phillips (2011), 'Perception and Iconic Memory: What Sperling Doesn't Show', *Mind & Language*, Vol. 26, pp. 381-411.

Phenomenal Consciousness and Access Consciousness

"P-consciousness is experience" (Block 1995, 230); "I see **A-consciousness** as a cluster concept", "A state is access-conscious (A-conscious) if, in virtue of one's having the state, a representation of its content is (1) inferentially promiscuous (Stich 1978), that is, poised for use as a premise in reasoning, (2) poised for rational control of action, and (3) poised for rational control of speech" (Block 1995, 231).

We can argue for the conceptual distinction between P-consciousness and A-consciousness using our imagination and "fanciful" thought experiments (phenomenal zombies, superblindsight, voodoo zombies). But to show that in humans P-consciousness and A-consciousness are in fact (functionally) different, we need evidence of actual dissociations.

If investigated further, a number of phenomena might lead to evidence for P-consciousness without A-consciousness and thus provide some reason to reject the Figure 2 model in favor of Schacter's model (Fig. 1). (Block 1995, 243)

Sperling's experiments

George Sperling (1960) replicated older studies of the 'span of apprehension'. At that time a common view was that vision only can take in ± 4.3 items. But Sperling not just flashed the letter cards; he also played a high, middle, or low cue tone between 1–300ms after the card had disappeared. Trained subjects showed **partial report superiority**: They were able to report "more letters with respect to a row that has been cued immediately after display offset than with respect to a randomly chosen row in an uncued trial" (Phillips 2011, 383)

"An attractive picture of what is going on here—and one that I think makes the most sense of the data—is that although one can distinctly see all or almost all of the 9–12 objects in an array, the processes that allow one to conceptualize and identify the specific shapes are limited by the capacity of "working memory," allowing reports of only about 4 of them." (Block 2007, 487)

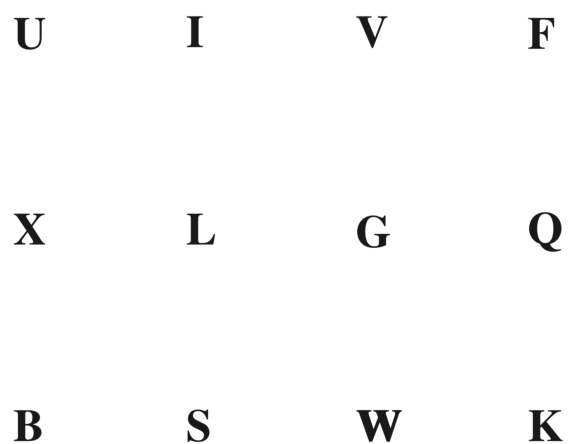


Fig 1. Typical stimulus display used in Sperling's partial report task

Two assumptions

1. **Introspection:** When a subject correctly reports seeing three specific letters in a given row, they have consciously perceived all three letters in that row as the specific letters reported
2. **Counterfactual (CF):** Any aspect of experience present in a partial report condition would have been present even if some other partial report had been cued

“Since in [the PR condition] subjects do not know until the tone sounds which row to report on and the tone does not occur until after the array display is turned off, the fact that the subjects successfully report at least three of the four letters in the appropriate row shows that the sensory memory preserves information about the letter shapes in all the rows.” (Tye 2006, 511)

“In other words, (CF) is grounded in an independence assumption, viz. that a subject’s experience of the stimulus in a PR condition is independent of which report is cued because the cue comes only after display offset.” (Phillips 2011, 386)

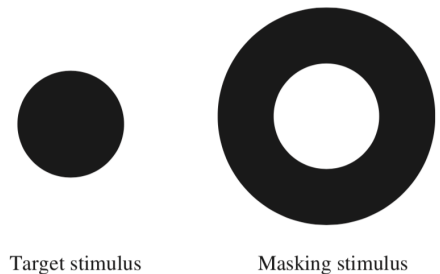


Fig 2. Target and masking stimuli used in masking paradigms

Resisting the independence assumption

There are several good empirical phenomena that cast doubt on the independence assumption.

Backward masking

“For example, a target that is highly visible when presented briefly by itself can be rendered completely invisible by the subsequent presentation of a non-target object in the same (or nearby) spatial location. ‘Backward masking’ of this kind has its strongest influence not when target and mask objects are presented simultaneously, as intuition might suggest, but rather when a brief temporal gap is inserted between the presentation of the target and the mask.” (Enns and Di Lollo 2000, 345)

Three models of postdiction

Extensionalism: “The answer to the question, ‘What was seen at t ’, where t is the time at which the display is presented to subjects, is not answerable independently of what is presented over surrounding periods. Thus, the events ‘display-followed-by-high-tone’ and ‘display-followed-by-low-tone’ must be reckoned as different perceptual events with potentially different visual (as well as auditory) appearances.” (Phillips 2011, 399)

Both on the Stalinesque and Extensionalist models the independence assumption fails. If you want to use Sperling’s findings to argue for an actual dissociation of P-consciousness and A-consciousness, it is not enough merely to show that the Orwellian model is a *possible* model. You need to show it is a *better* model. Phillips suggests that Block has not done this, and perhaps cannot do this.

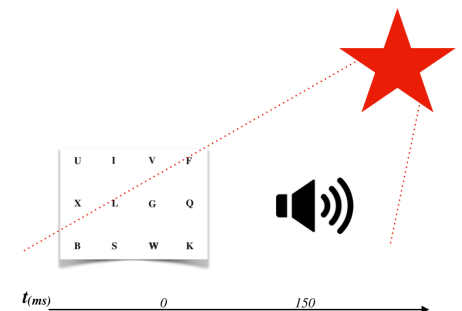


Fig 3. Stalinesque model: an experience at t_2 presents a stimulus that occurred at t_1

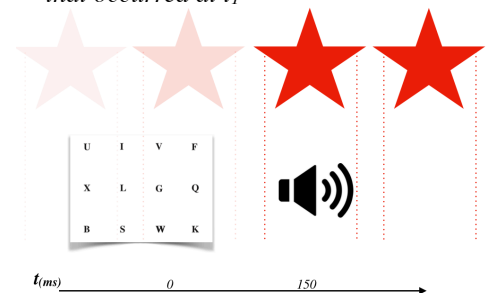


Fig 4. Orwellian model: by t_2 we have forgotten the experience we had at t_1

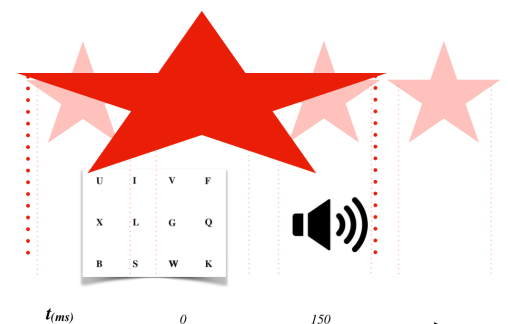


Fig 5. Extensionalist model: already at t_1 we have a display-followed-by-high-tone experience