

# Diffuse Attention

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## I. Introduction



*Attention*, the “the taking possession by the mind, in clear and vivid form, of one of what seem several possible objects” (James 1890), has been studied widely in psychology & cognitive neuroscience. Recently, some philosophers and psychologists have argued for a view which I call Thesis N (for *Necessity*):

**Thesis N:** Attention is necessary for consciousness

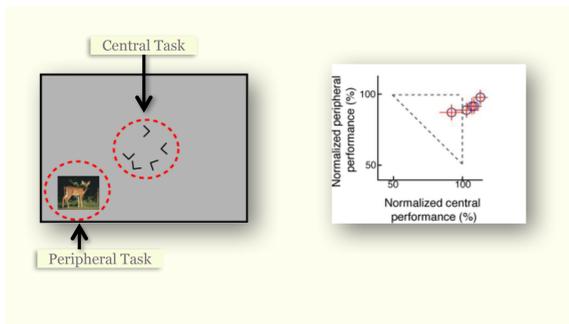
If it can be shown that attention is necessary (and sufficient) for consciousness, this would suggest that consciousness & attention are not distinct phenomena. Thesis N is thus part of a larger challenge to the view that consciousness, including *qualia*, or “what it’s like,” resists full explanation in neuro-cognitive terms. Instead, Thesis N supports a view on which consciousness requires attention to the internal or external world; and attention is, in turn, amenable to scientific explanation.

## II. Consciousness without Attention

Thesis N implies that we cannot be conscious of an object or event without attending to it. But there is evidence that subjects do have conscious experiences of objects or events outside selective attention.

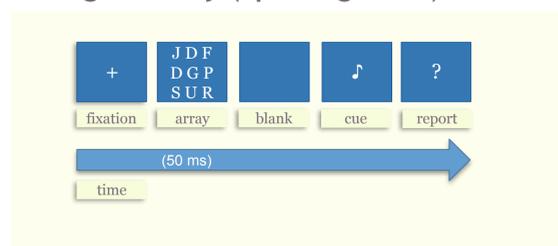
## Dual-Task Performance

Even when performing a central task that exhausts selective attention, subjects can also perform a peripheral task, without increasing their rate of error on either task (Li et al 2002; Koch & Tsuchiya 2006).



## Partial Report

Subjects are conscious of a greater number of stimuli than can be selected by attention for access to working memory (Sperling 1960).

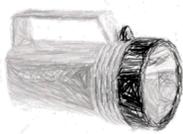


## III. Diffuse Attention

The evidence only challenges Thesis N if ‘attention’ refers only to selective attention.

De Brigard & Prinz (2009) and Cohen & Dennett (2011) have argued that subjects rely on a diffuse or distributed mode of attention in the dual-task and partial report studies.

## What is Diffuse Attention?



**Selective Attention** involves focus on a small number of objects or properties, or a small spatial region.



**Diffuse Attention** involves focus on a broad spatial region; a “lantern attention” (Gopnik 2010).

In the literature, supporters of Thesis N have argued that the evidence for consciousness in the absence of **selective attention** does not challenge Necessity, because subjects could be attending **diffusely**.

**I think that this line of response is vulnerable to an objection, which I’ll call:**

## The Diffuse Consciousness Objection

We shouldn’t posit new ways of attending simply to explain away the evidence against Thesis N!

Instead, we need an independent reason to believe that ‘diffuse attention’ really refers to a way of attending.

Absent a pre-commitment to Thesis N, why think that a subject performs the dual-task and partial report tasks using diffuse attention, rather than a diffuse state of consciousness?

## IV. Responding to the Objection

I think that the Diffuse Consciousness Objection can be met. Diffuse states share two important features with selective attention:

### (1) Intentionality

Like selective attention, diffuse states are typically about some intentional object (the night sky, the landscape, the gist of a problem...)

### (2) Availability

Diffuse states make their object available for guiding thought and action.

In the empirical discussion, diffuse states always meet (2). Some examples:

#### Creative Problem-Solving

Diffuse attention makes seemingly task-irrelevant objects available for performing a task (Finke et al 1992; Martindale et al 1995).

#### Attention during Infancy

Babies rely on diffuse or “lantern” attention to engage with the world (Gopnik 2010).

Diffuse consciousness, in contrast, need not meet (2), since some putative examples of diffuse consciousness don’t involve availability (meditative states; hypnagogic states). So the evidence favors a view on which diffuse states are ways of attending to, rather than merely being conscious of, some object.

## V. Conclusions

- ✓ Defending Thesis N requires a defense of diffuse states as a way of attending, rather than merely being conscious.
- ✓ Diffuse states are intentional and make their object available for guiding thought & action.
- ✓ Given these features of diffuse states, we should accept that diffuse states are ways of attending.

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Thanks for reading! Feel free to seek me out for discussion in person or by email: [adrienne.prettyman@utoronto.ca](mailto:adrienne.prettyman@utoronto.ca)

