

UC Merced

Proceedings of the Annual Meeting of the Cognitive Science Society

Title

What Happened to the Imagery Debate?

Permalink

<https://escholarship.org/uc/item/6bx8x5md>

Journal

Proceedings of the Annual Meeting of the Cognitive Science Society, 24(24)

ISSN

1069-7977

Author

Slezak, Peter P

Publication Date

2002

Peer reviewed

What Happened to the Imagery Debate?

Peter P. Slezak (p.slezak@unsw.edu.au)

Program in Cognitive Science, University of New South Wales
Sydney NSW 2052, AUSTRALIA

Déjà Vu All Over Again?

Zenon Pylyshyn's (2002) recent return to the fray means that at least one thing may be said with certainty about the imagery debate: Despite Kosslyn's (1994) claim to have resolved the controversy, there has been no progress at all. Worse still, if Pylyshyn's null hypothesis is right, we don't have a viable theory of imagery of any kind. The 'tacit knowledge' rival to pictorialism, is not itself an alternative theory but rather an indication of the direction in which an adequate theory might be sought - that is, as a theory of high-level belief or knowledge representation.

Pylyshyn's central criticism of pictorial theories echoes Descartes (1637), who insisted that it is enough that the mind adequately *represent* the properties of the world and does not have to *share* them. In the same vein, S. Edelman (1998), recently says nobody thinks that a mental representation of a cat is furry. Perhaps not, but it is telling that such views must be repeatedly refuted throughout the history of speculation about the mind.

For some reason the case for spatial properties has seemed much more persuasive than the same point regarding furriness. In view of their compellingness, such mistakes evoke Kant's (1781) distinction between mere errors and certain deeper, inherent cognitive illusions. Thus, I disagree with Pylyshyn only regarding his optimism in hoping that, by repeating his powerful arguments loudly and slowly, he might succeed this time where he has failed before. Sufficient grounds for my skepticism is the fact that the Imagery Debate is perhaps the most remarkable modern duplication of controversies concerning the nature of 'ideas' which have persisted not just for thirty years but since the seventeenth century. In this recent re-enactment, Pylyshyn has played Arnauld (1683) against Kosslyn's Malebranche (1712) See Slezak (1992, 1995, 2002).

Of course, Pylyshyn is not vindicated merely because he was anticipated by Descartes and Arnauld. The striking historical parallels suggest that the fundamental problems at stake do not arise in any essential way from the data of modern experiments and computational theories. Indeed, just as we would expect in this case, we see a recurrence of the same perplexities not only throughout history, but also in more or less independent domains of cognitive science today.

What these doctrines have in common is the mistake of assuming that we apprehend our mental states rather than just *have* them. It is clear why such an implicit conception

leads to positing a representational format - sentences or pictures - which is paradigmatically the sort of thing requiring an external, intelligent observer - the notorious homunculus. Computer simulation of certain theories does not necessarily prove pictorialism innocent of this charge. As Rorty put it, there is no advance in replacing the little man in the head by a little machine in the head. As Pylyshyn argues, resort to neuroscience is no help either.

Despite the jaundiced views of "philosophical" arguments (as distinct from "strictly empirical science") expressed by some pictorialists, Pylyshyn's critique suggests there remain grounds for Wittgenstein's (1953) gibe "in psychology there are experimental methods and *conceptual confusion*".

References

- Arnauld, A. (1683/1990). *On True and False Ideas*. Trans. S. Gaukroger, Manchester: Manchester University Press.
- Descartes, R. (1637). *Dioptrics*. *The Philosophical Writings of Descartes*. Trans. J. Cottingham, R. Stoothoff & D. Murdoch, Cambridge: Cambridge University Press.
- Edelman, S. (1998). Representation is Representation of Similarities, *Behavioral and Brain Sciences*, 21, 449-498.
- Kant, I. (1781). *The Critique of Pure Reason*, Trans. N. Kemp Smith, New York: St. Martin's Press.
- Kosslyn, S.M.. (1994). *Image and Brain: The Resolution of the Imagery Debate*. Cambridge, Mass.: MIT Press.
- Malebranche, N. (1712/1997). *The Search After Truth*. Trans. T. Lennon & P. Olscamp, Cambridge: Cambridge University Press.
- Pylyshyn, Z. (2002). Mental Imagery: In Search of a Theory. *Behavioral and Brain Science*, in press.
- Slezak, P. (1992). When Can Images Be Reinterpreted: Non-Chronometric Tests of Pictorialism, *Proceedings of 14th Conference of the Society for Cognitive Science*, Hillsdale, N.J.: Lawrence Erlbaum, 124-129.
- Slezak, P. (1995). The 'Philosophical' Case Against Visual Imagery, in P. Slezak, T. Caelli and R. Clark eds., *Perspectives on Cognitive Science: Theories, Experiments and Foundations*, Norwood, N.J.: Ablex Publishing Corporation, 237-271.
- Slezak, P. (2002). The Tri-Partite Model of Representation *Philosophical Psychology*, In press.
- Wittgenstein, L. (1953). *Philosophical Investigations*, Oxford: Basil Blackwell.