



City Research Online

City St George's, University of London

Citation: Bawden, D. (2015). Encounter, synthesis, immersion and construction: information and the gaining of understanding. Paper presented at the ncounter, synthesis, immersion and construction: information and the gaining of understanding.

This is the accepted version of the paper.

This version of the publication may differ from the final published version. To cite this item please consult the publisher's version.

Permanent repository link: <https://city-ref-test.eprints-hosting.org/id/eprint/12150/>

Copyright and Reuse: Copyright and Moral Rights remain with the author(s) and/or copyright holders. Copies of full items can be used for personal research or study, educational, or not-for-profit purposes without prior permission or charge, unless otherwise indicated, provided that the authors, title and full bibliographic details are credited, a hyperlink and/or URL is given for the original metadata page and the content is not changed in any way. For full details of reuse please refer to [City Research Online policy](#).

Encounter, synthesis, immersion and construction: information and the gaining of understanding

David Bawden

City University London

References

Ryan Smyth's discussion of the problem of knowing what understanding is can be found in:

- Ryan Smith, R. Explanation, understanding and control, *Synthese*, 2014, 191(17), 4169-4200

The point that understanding is bound up with an ability to explain is in:

- Wilkenfeld, D.A., Plunkett, D. and Lombrozo, T. Depth and deference: when and why we attribute understanding, *Philosophical Studies*, 2015, in press

The quotation from Winograd and Flores comes from:

- Winograd, T. and Flores, F. (1986). *Understanding computers and cognition: A new foundation for design*. Norwood NJ: Ablex. p. 30.

The original formulation of the DIKW hierarchy, including understanding is in:

- Ackhoff, R. (1989), From data to wisdom, *Journal of Applied Systems Analysis*, 16(1), 3-9

The Floridi quote comes from:

- Floridi, L. (2011). *The philosophy of information*. Oxford: Oxford University Press. p. 288.

Kvanvig's idea of knowledge is set out in:

- Kvanvig, J. L. (2003). *The value of knowledge and the pursuit of understanding*. Cambridge: Cambridge University Press. p. 198.

and de Ridder's in:

- de Ridder, J. (2014) Epistemic dependence and collective scientific knowledge, *Synthese*, 191(1), 37-53

David Deutsch's ideas on understanding are expressed in two popular books:

- Deutsch, D. (1997). *The fabric of reality*, Penguin, London
- Deutsch, D. (2011). *The beginning of infinity*, Penguin, London

Deutsch's 'constructor theory' is set out in reasonably accessible terms in:

- Deutsch, D. (2013). Constructor theory, *Synthese*, 190, 4331-4359

and a short account is given in:

- Deutsch, D. (2014). Why we need to reconstruct the universe. *New Scientist*, 24 May 2014, pp 30-31

Don Swanson's literature discovery work is reviewed and updated in:

- Weeber, M. et al. (2001). Using concepts in literature-based discovery: simulating Swanson's Reynaud-fish oil and migraine-magnesium discoveries. *JASIST*, 52(7), 548-557.

The two systems exemplified are described in:

- S Donne, B Shneiderman, R Gove, J Klavans, and B Dorr (2012). Rapid understanding of scientific paper collections: integrating statistics, text analytics, and visualization, *JASIST*, 63(2), 2351-2369
- M Jahangirian et al. (2011). A rapid review method for extremely large corpora of literature, *International Journal of Information Management*, 2011, 31(3), 234-243

The Informational Balance model is in:

- Poirier, E. and Robinson, L. (2014). Informational balance: Slow principles in the theory and practice of information behaviour. *Journal of Documentation*, 70(4), 687-707

Paul Gilster's book is:

- Gilster, P. (1997). *Digital literacy*. Wiley, New York

A selection of qualitative synthesis methods are covered in:

- Bawden, D. (2012). On the gaining of understanding; syntheses, themes and information analysis, *Library and Information Research*, 36(no. 112), 147-162

Immersive documents are described in:

- Robinson, L. (2015). Multisensory, pervasive, immersive: towards a new generation of documents, *JASIST Earlyview*
- Robinson, L. (2015). Immersive information behaviour: using the documents of the future, *New Library World*, 116(3/4), 112-121