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The language of graphics

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Bibliography

- Arnheim, R. (1969). *Visual thinking*. University of California Press.
- Augustine, Saint (397/1995). *De doctrina Christiana*. Edited and translated by R.P.H. Green. Oxford University Press. Originally written in A.D. 397.
- Barthes, R. (1965). *Éléments de sémiologie*.
- Bertin, J. (1967). *Sémiologie graphique*. Paris: Editions Gauthier-Villars. English translation by W.J. Berg (1983) as *Semiology of graphics*, Madison, WI: University of Wisconsin Press.
- Bertin, J. (1977). *La graphique et le traitement graphique de l'information*. Paris: Flammarion. English translation by W.J. Berg and P. Scott (1981) as *Graphics and graphic information processing*, Berlin: Walter de Gruyter & Co.
- Bertin, J. (2000/2001): Matrix theory of graphics. *Information Design Journal* 10 (1), pp. 5-19.
- Betrò, M.C. (1995). *Geroglifici*. Milano: Mondadori.
- Blackwell, A., and Y. Engelhardt (1998). A taxonomy of diagram taxonomies. In: *Proceedings of Thinking with Diagrams 98: Is there a science of diagrams?*, August 22-23, 1998, Aberystwyth, pp. 60-70.
- Blackwell, A., and Y. Engelhardt (2002). A meta-taxonomy for diagram research. In: M. Anderson, B. Meyer, and P. Olivier (Eds.), *Diagrammatic representation and reasoning*, Springer-Verlag, pp. 47-64.
- Bounford, T. (2000). *Digital diagrams: Effective design and presentation of statistical information*. New York: Watson-Guptill Publications.
- Bowman, W.J. (1968). *Graphic Communication*. New York: John Wiley.
- Brinton, W.C. (1914). *Graphic methods for presenting facts*. New York: McGraw-Hill Book Company / The Engineering Magazine Company.
- Bruijn, W.K. de (1967). *Schematechniek*. Alphen aan den Rijn / Brussel: N. Samson NV.
- Card, S.K., J.D. Mackinlay, and B. Shneiderman (Eds.) (1999). *Readings in information visualization: Using vision to think*. San Francisco: Morgan Stanley Kaufmann Publishers.
- Daru, M., 2000: Jacques Bertin and the graphic essence of data. *Information Design Journal* 10 (1), pp. 20-25.
- Degn, C., E. Eggert, and A. Kolb (1973). *Seydlitz für Gymnasien, Band 3B, Amerika - Ozeane - Polargebiete*. Verlag Ferdinand Hirt, Kiel, and Herman Schroedel Verlag KG, Hannover.
- Dreyfuss, H. (1972). *Symbol sourcebook: An authoritative guide to international graphic symbols*. New York: Van Nostrand Reinhold.

- Eco, U. (1985). Producing signs. In: M. Blonsky (Ed.), *On Signs*. Baltimore: John Hopkins University Press, pp. 176-183.
- Eisner, W. (1985). *Comics and sequential art*. Tamarac, Florida: Poorhouse Press.
- Eisner, W. (1996). *Graphic storytelling*. Tamarac, Florida: Poorhouse Press.
- Elkins, J. (1999). *The domain of images*. Cornell University Press.
- Engelhardt, Y., J. de Bruin, T. Janssen, and R. Scha (1996). The visual grammar of information graphics. In: N. H. Narayanan, and J. Damski (Eds.), *Proceedings of the AID '96 Workshop on Visual Representation, Reasoning and Interaction in Design*, Stanford University.
- Engelhardt, Y. (1996). Towards a design theory for visualization. *Proceedings of Accolade 1996*, Dutch Research School in Logic, University of Amsterdam, The Netherlands, pp. 65-77.
- Engelhardt, Y. (1997). Structure-preserving visualization (extended abstract). *Proceedings of the CODATA Euro-American Workshop on Visualization of Information and Data, 24-25 June 1997, Paris, France*.
- Engelhardt, Y. (1998). Meaningful space: How graphics use space to convey information. In: *Proceedings of Vision Plus 4*, School of Design, Carnegie Mellon University, Pittsburgh, pp. 108-126.
- Engelhardt, Y. (1999). Meaningful space. In: *If/Then: Design implications of new media*, Netherlands Design Institute, pp. 72-74.
- Engelhardt, Y. (2001). Grundprinzipien grafischer Darstellungen. In: *Navigation durch Text, Bild und Raum*, Forum Typografie, Arbeitskreis Hamburg e.V. pp. 124-137.
- Gamut, L.T.F. (1991). *Logic, language and meaning, Volume 2: Intensional logic and logical grammar*. University of Chicago Press.
- Goldwasser, O. (1995). *From icon to metaphor: Studies in the semiotics of the hieroglyphs*. Fribourg, Switzerland: University Press.
- Gonick, L. (1990). *The cartoon history of the universe, Volumes 1-7*. New York: Doubleday.
- Goodman, N. (1976). *Languages of art*. Indianapolis: Hackett.
- Holmes, N. (1991). *Pictorial maps: History, Design, Ideas, Sources*. New York: Watson-Guption Publications.
- Holmes, N. (1993). *The best in diagrammatic graphics*. Mies, Switzerland: Rotovision.
- Holmes, N. (2000/2001). Pictograms: A view from the drawing board or, what I have learned from Otto Neurath and Gerd Arntz (and jazz). *Information Design Journal* 10 (2), pp. 133-143.
- Horn, R.E. (1998). *Visual language: Global communication for the 21st century*. Bainbridge Island, WA: MacroVU, Inc.

- Horton, W.K. (1994). *The icon book: Visual symbols for computer systems and documentation*. John Wiley & Sons.
- Houkes, R. (Ed.) (1993). *Information design and infographics*. Rotterdam: European Institute for Research and Development of Graphic Communication, HR & O.
- Jean, G. (1992). *Writing: The story of alphabets and scripts*. New York: Harry N. Abrams.
- Johnson, M. (1987). *The body in the mind: The bodily basis of meaning, imagination and reason*. Chicago: University of Chicago Press.
- Kepes, G. (1944). *Language of vision*. Chicago: Paul Theobald.
- Knowlton, J.Q. (1966). On the definition of "picture". *AV Communication Review*, 14, pp. 157-183.
- Kosslyn, S.M. (1989). Understanding charts and graphs. *Applied Cognitive Psychology*, 3, pp. 185-225.
- Kosslyn, S.M. (1994). *Elements of graph design*. New York: W.H. Freeman and Company.
- Krampen, M. (1965). Signs and symbols in graphic communication. *Design Quarterly*, 62, pp. 1-31.
- Lakin, F. (1987). Visual grammars for visual languages. In: *Proceedings of AAAI 87, Sixth National Conference on Artificial Intelligence*, Seattle, Washington, July 1987, pp. 683-688.
- Lakoff, G. (1987). *Women, fire, and dangerous things: What categories reveal about the mind*. Chicago: University of Chicago Press.
- Lakoff, G., and M. Johnson (1980). *Metaphors we live by*. Chicago: University of Chicago Press.
- Lohse, G.L., K. Biolisi, N. Walker, and H.H. Rueter (1994). A classification of visual representations. *Communications of the ACM*, 37 (12), pp. 36-49.
- MacEachren, A.M. (1995). *How maps work: Representation, visualization, and design*. Guilford Press.
- MacEachren, A.M. (2000). An evolving cognitive-semiotic approach to geographic visualization and knowledge construction. *Information Design Journal* 10 (1), pp. 26-36.
- Mackinlay, J.D. (1986). Automating the design of graphical presentations. *ACM Transactions on Graphics* 5, 2, pp. 110-141.
- McCloud, S. (1993). *Understanding comics: The invisible art*. Northhampton, MA: Kitchen Sink Press.
- Mijksenaar, P., and P. Westendorp (1999). *Open here: The art of instructional design*. New York: Joost Elffers Books.
- Minsky, M. (1985). *The society of mind*. New York: Simon and Schuster.

- Mullet, K., and D. Sano (1995). *Designing visual interfaces: Communication oriented techniques*. Englewood Cliffs: SunSoft Press - Prentice Hall PTR.
- Norman, D.A. (1990). *The design of everyday things*. New York: Doubleday.
- Peirce, C.S. (1873). On representations. In: C.J.W. Kloesel et al. (Eds.), *Writings of Charles S. Peirce: A chronological edition, Volume 3*, pp. 62-66. Bloomington: Indiana University Press.
- Peirce, C.S. (1932). Elements of logic. In: C. Hartshorne, and P. Weiss (Eds.), *The collected papers of C.S. Peirce*. Cambridge, MA: Harvard University Press.
- Ratté, J. (1924). *Moderne loontechniek*. (No publisher given.)
- Richards, C.J. (1984). *Diagrammatics: An investigation aimed at providing a theoretical framework for studying diagrams and for establishing a taxonomy of their fundamental modes of graphic organization*. Ph.D. thesis, Royal College of Art, London.
- Richards, C.J. (2000). Getting the picture: diagram design and the information revolution. *Information Design Journal* 9 (2/3), pp. 87-110.
- Richards, C.J. (2002). The fundamental design variables of diagramming. In: M. Anderson, B. Meyer, and P. Olivier (Eds): *Diagrammatic representation and reasoning*. London: Springer, pp. 85-102.
- Robinson, A.H., and B.B. Petchenik (1976). *The nature of maps*. Chicago: University of Chicago Press.
- Robinson, A.H., R.D. Sale, J.L. Morrison, and P.C. Muehrcke (1984). *Elements of cartography* (5th ed.). New York: Wiley.
- Rogers, Y. (1989). Icons at the interface: their usefulness. *Interacting with Computers, vol. 1* (1), pp. 105-117.
- Sandison, D. (1997). *The art of Egyptian hieroglyphics*. London: Hamlyn.
- Saussure, F. de. (1986). *Cours de linguistique générale, 25th ed.* (C. Bally, and A. Sechehaye, Eds.). Paris: Payot. Original work published in 1916.
- Silbernagel, S., and A. Despopoulos (1983). *Taschenatlas der Physiologie, 2. Auflage*. New York: Georg Thieme Verlag; München: Deutscher Taschenbuch Verlag.
- Spence, R. (2001). *Information visualization*. ACM Press and Addison-Wesley.
- Strothotte, C., and T. Strothotte (1997). *Seeing between the pixels*. Springer Verlag.
- Tufte, E.R. (1983). *The visual display of quantitative information*. Cheshire, CT: Graphics Press.
- Tufte, E.R. (1990). *Envisioning information*. Cheshire, CT: Graphics Press.
- Tufte, E.R. (1997). *Visual explanations*. Cheshire, CT: Graphics Press.

- Tversky, B. (1995). Cognitive origins of graphic conventions. In: F.T. Marchese (Ed.), *Understanding images*. pp. 29-53. New York: Springer-Verlag.
- Tversky, B. (2001). Spatial schemas in depictions. In: M. Gattis (Ed.), *Spatial schemas and abstract thought*. Cambridge: MIT Press.
- Tversky, B. (in press). Some ways that graphics communicate. Chapter to appear in: *Working with words and images*, edited by Nancy Allen.
- Twyman, M. (1979). A schema for the study of graphic language. In: P.A. Kolers, M.E. Wrolstad, H. Bouma (Eds.). *Processing of visible language. Vol. 1*. pp. 117-150. New York: Plenum Press.
- Wallace, R.A. (1978). *Biology: The world of life*. Santa Monica: Goodyear Publishing Company.
- Wang, D., Y. Engelhardt, H. Zeevat (1997). Formal specification of a graphic design theory. In *Proceedings of TVL 97, International Workshop on Theory of Visual Languages*, September 1997, Capri, Italy, pp. 97-11
- Wexelblat, A. (1991). Giving meaning to place: semantic spaces. In: M. Benedikt (Ed.), *Cyberspace: first steps*, pp. 255-271. Cambridge, MA: MIT Press.
- Wilkinson, L. (1999). *The grammar of graphics*. New York: Springer.

