

My life has been entangled with the computer for most of the last 30 years, first as a research assistant on a project involving thousands of punched cards, and later in other mainframe and then microcomputer projects; I bought a TI-Pro in 1984 and used it in various mapping projects, but moved most of my work to the Macintosh two years ago. I started accumulating material on hypermedia in 1987, when Hypercard was first announced, but did not begin to experiment with the technology myself until about six months ago. In September 1989 I wrote a sabbatical proposal (attached as relevant background to my choice of subject, though I apologise for its length and now disavow some of its content) for this year's activities, predicated on employment that ultimately eluded me. I reorganized my activities to work on hypermedia projects related to my university teaching interests, and spent the months of September through November learning to use Hypercard and working on an encyclopedia of musical instruments and the beginnings of an atlas of Asian history. My inspiration (on New Year's Day) to enroll at Simmons was a direct product of wondering about the hypermedia future of libraries, and this spate of reading has afforded me opportunities to think about wider applications, though at this point my technical expertise is well behind my imagination.

I note three distinct streams of writing on hypermedia, two of which I have explored in the last few weeks: (1) I have followed writing in the popular computer press (*Byte*, *MacWorld*, *MacUser*, *The Active Window*, a few others) for several years and have found articles individually insignificant in the long run, but important in piquing interest among those who have the curiosity and equipment to try out new technologies. Items in this literature are usually machine-specific and are remarkable for their short half-life of usefulness—most of those cited in Franklin 1988 exemplify this, and a number of the companies cited in Cole 1990 are out of business a year later. Beyond an hour spent with the UMI workstation I did not pursue this literature. *good*

(2) Far more valuable to me at this point are several collections of articles that have appeared in book form (Ambron and Hooper 1988, Barrett 1988 and 1989, McAleese 1989, Delany and Landow 1991) which index the development of interest and hypermedia expertise in substantive areas. These are aimed at readers with some level of sophistication in the technology but with

My god, wouldn't one project do?

I agree

Thanks again for the tip.

interests centered in the *applications* of the technology to disciplinary problems; for me the most interesting and valuable have been those concerning the Intermedia project at Brown's IRIS (Yankelovich *et al.* in Ambron and Hooper 1988; Meyrowitz in Barrett 1989; Kahn in Delany and Landow 1991; Yankelovich, Meyrowitz and vanDam in Delany and Landow 1991; and Yankelovich in Delany and Landow 1991), because the Intermedia system successfully realizes the *interactive* potential of the medium—users build (knit? spin?) their own webs of *two-way* interconnections, while in nearly all of the other implementations the user is restricted to *passive* following of (or browsing in) links that already exist. I gather that UNIX (or A/UX at Brown) is the entrée to this potential, though I don't yet understand how or why. I would like to explore this further in LS520G.

(3) Much of the significant writing *within* the realm of hypermedia technology appears in conference proceedings, in specialist periodicals and in semi-internal papers of companies and working groups; sometimes this material is eventually published under (2), but more is think-piece stuff and only available if one is in the network or happens on the material by chance. While examining LISA (for this course) I found a rich vein in this lode by following the references in Nyce and Kahn 1989 to Smith 1981, and thence to other writing about the origins of multimedia concepts in memex which I'll eventually collect and read. I hope to find similar means to explore Ted Nelson's Xanadu. The bibliography in Delany and Landow 1991 includes many sources that I would like to read if I could locate the rather fugitive Proceedings and elusive journals (like *IEEE Computer*, which ought to be easy enough, but isn't) in which they are contained. Parsaye *et al.* 1989 is reasonably effective in linking to developments in database management and expert systems research.

Vannevar Bush's vision of "wholly new forms of encyclopedia... ready made with a mesh of associative trails running through them, ready to be dropped into the memex and there amplified" (Bush 1945:108, cited in Smith 1981:355) can now be realized, though content and details of interface are not agreed; librarians and their allies must contribute to the design and development of these tools, which have the potential to transform education at all levels. I am still looking for the way in, but I'm pretty sure it's one of the places I want to go in the next decade.

Ah, but how
diversive it
all is.

Sources

Ambron, Sueann and Kristina Hooper (eds.)

- 1988 Interactive Multimedia: Visions of Multimedia for Developers, Educators and Information Providers. Redmond, WA:Microsoft Press.
(Stephen Weyer's extension of Bush: "Hypertext systems now coming into use hold the promise of letting us look at the library shelves to perceive neighborhoods of information and many interesting connections within and between subject areas..." (pg 98) has interesting parallels in Clarkson 1991; Cook on encyclopedias and Clarkson on *National Geographic* are less interesting than Frischer on applications to study of Classics)

Barrett, Edward (ed.)

- 1988 Text, ConText, and Hypertext: Writing with and for the Computer. Cambridge:MIT Press.
(though somewhat dated [!] and dominated by material on *technical* writing, this source is significant for legitimizing multimedia as subjects of study; this and the next are spinoff of an MIT summer conference, held for at least 6 years running. The contribution by Slatin is especially interesting)

- 1989 The Society of Text: Hypertext, Hypermedia, and the Social Construction of Information. Cambridge:MIT Press.

yes, good.

("A hypertext is ideally a sort of topography of social construction... fundamentally a linguistic entity that exists to be manipulated, transformed through a series of collaborative acts..." [pg xvii]; Meyrowitz's "The Missing Link" is particularly worthwhile)

Bush, Vannevar

- 1945 As we may think. *Atlantic Monthly* 176(1):101-108.
(Not really the beginning --Nyce and Kahn make it clear that Bush had worked out the essentials before World War II, and that organization of information was the principal inspiration: "Unless we find better ways of handling new knowledge generally as it is developed, we are going to be bogged down..." [Bush in a letter in 1939, cited in Nyce and Kahn 1989:215])

↳ sometimes I doubt this, don't you?

Cole, Bernard C.

- 1990 Hypertext tackles the information glut. *Electronics* February pp 66-68.
(Quotes Kamran Parsaye: "Most of the information we remember is linked in a rich network of cause-and-effect relationships... but the whole idea of traditional database techniques is to break down information into more easily manipulatable records and files. As a result, these associative linkages are lost." [p 67])

Clarkson, Mark A.

- 1991 An easier interface. *Byte* February pp 277-282.
(The prospect of truly browsable on-line catalogs is fascinating to contemplate)

Delany, Paul and George P. Landow (eds.)

- 1991 Hypermedia and Literary Studies. Cambridge:MIT Press.
(I think this is the first source where the *writing* is really good; I especially enjoyed the Introduction and the papers by Slatin, Kahn, Friedlander and Graham, even though my own background in 'literary studies' is pretty piebald. This one is really worth your time because it's—for the moment—pretty much up to date)

Frankin, Carl

- 1988 An annotated hypertext bibliography. *ONLINE* March pp 42-46.
(Of historical interest, and mostly from popular press sources)

McAleese, Ray

- 1989 Hypertext: theory into practice. Oxford: Intellect, Ltd. (Widener QA76.76 .H94 H98)
(papers from a 1988 conference at University of Aberdeen; most of the papers don't hold up very well three years later, but one by Trigg and Suchman on collaborative writing with Xerox PARC's NoteCards is worthwhile. In the Introduction McAleese notes "...there is no common pool of knowledge about hypertext. In deed [sic!] one is sometimes amazed by the lack of cross-referencing between papers in this field" [p 1])

Nyce, James M. and Paul Kahn

- 1989 Innovation, pragmatism, and technological continuity: Vannevar Bush's memex. *Journal of the American Society for Information Science* 40(3):214-220.
(a fine piece of intellectual history research)

Parsaye, Kamran, Mark Chignell, Setrag Khoshafian, Harry Wong

- 1989 Intelligent Databases: Object-oriented, Deductive Hypermedia Technologies. New York: Wiley.
(This seemed the most accessible of the *textbooks* in this realm; the Introduction [pp 1-34] clarified a lot for me, and the chapter on hypermedia [pp 221-291] was easier to follow than the material on relational databases—which I expect will make more sense in a few weeks)

Smith, Linda C.

- 1981 'Memex' as an image of potentiality in information retrieval research and development. in R.N. Oddy (ed.) Information Retrieval Research pp 345-369. (GSLIS Z699 .I472)
(this is wonderful --an exemplary citation study that should be updated to include the last decade, now that the potentials of memex can be realized)