



Access

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COLLOQUIUM ON LIBRARY AUTOMATION

FRIENDS OF THE LIBRARY SPONSOR SEMINAR

At the recent Friends of the Library Colloquium, philosopher John Haugeland, systems analyst Charles Hildreth and automated systems expert (and Notre Dame Assistant Director for Automated Systems) Lawrence Woods spoke on artificial intelligence, the information "revolution," and library automation.

The purpose of these colloquia is to bring together scholars and professionals from various fields to discuss the ideas that underpin current key issues in the library world, and to promote examination of these issues in light of the new perspectives. Through their contributions, Haugeland, Hildreth and Woods contributed to a broader understanding of the impact of electronic information upon the library.

Professor Haugeland, of the University of Pittsburgh, is a scholar of national reputation in the area of artificial intelligence. He is a former research fellow in Cognitive Science at Berkeley's Institute of Human Learning and co-organizer of the Council for Philosophical Studies 1980 Summer Institute. He has written widely on artificial intelligence and on Martin Heidegger. Calling the study of artificial intelligence "the most exciting mistake in the history of Western philosophy of the mind" (and ranking it, in "excitement," slightly ahead of another "mistake," transcendental idealism), he dealt with historical aspects of the predecessors of contemporary philosophers. By exploring the ideas of Hobbes and Descartes, he addressed the notion of thinking as

ratiocination or computation, and outlined a perspective of artificial intelligence research as a study of the mind.

Haugeland argued the significance of artificial intelligence work from the position: (1) that thoughts, unlike language for example, have original meaning; (2) that reasoning is computational (it is the manipulation of meaningful symbols according to rational rules); and (3) that if the manipulator of the symbols recognizes meanings, it cannot be deemed entirely mechanical. Any understanding of the computer as a thinking device rests upon whether or not it is capable of actively producing "original meaning." This in turn depends upon one's definition of reason (whether or not the definition includes the ability to manipulate symbols as well as tokens). For, if one defines reasoning as the manipulation of tokens, that is as an abstract, totally formal process (the syntax not semantics, if you will) then Western culture has already produced such thinking machines. However, if thinking implies manipulation of symbols (i.e., awareness of the meanings of the tokens) then the fully capable thinking machine, a machine with a personality, has not yet been produced (although Haugeland could foresee no barrier to the production of such a machine or machine culture).

Professor Haugeland was followed by Charles Hildreth, a research scientist and systems analyst with OCLC (the online library information network) and author

Online Public Access Catalogs: The User Interface. Hildreth's thesis was prompted by a somewhat naive question that had been asked of him: the new information society, will it be human? By responding to each element in this question Hildreth outlined the dimensions of the information revolution. He discussed the predecessors of the current "information society," gave evidence establishing the existence of such a society, described the society, and assessed its impact upon man and upon the library as a social institution.

Hildreth referred to post-industrial society as that society in which the sources of innovation and power arise out of the codification and distribution of theoretical knowledge, hence he termed it an information society. In such a society the foundations for economic transactions are exchanges of information. Thus, not raw materials, such as minerals or oil but data transmission systems become the transferring resource of society, and the strategic resource not money capital but theoretical knowledge. Value is increased by information, not by labor, leading to a "knowledge theory of value." This new society does not displace traditional cultures, rather it exists as a superimposed layer upon traditional societies. This new age is characterized by: (1) computer technology and decreasing cost of this technology; (2) increased expenditures on information activity; (3) need for reliable, timely information; and (4) a technological chain reaction process involving: (a) domestic use of satellites, (b) video recordings, (c) expansion and diffusion of computer services, (d) cable television. An example of the impact of this technological age upon the marketplace is the statistic that 90% of the new jobs added to the economy are in service industries as opposed to manufacturing or farming.

In spite of its potential for misuse, its potential for invasion of privacy and curtailment of personal liberty, the advanced electronic information society with its ever more sophisticated problem-solving and diverse communications technology will be less likely to produce information injustice, and there will be a decrease in opportunities for dehumanization through mechanization of our work and leisure activities.

Machines in the past often determined how men acted and related to one another, but in the new machine age this relationship between man and machine has been inverted. Humans will determine how machines think. In this sense the machine will be a "reflection of our intelligence," and "an extension of our highest conceptual abilities."

This new electronic age will affect the entire range of services which the library performs and every element of its technology. It has obvious implications for how we collect, organize, store and provide access to information. The library as a workplace will be altered to adapt to new technologies such as all-digital common carrier networks, direct broadcast satellites, broad-band optical fiber lines, videotexts, digital facsimile transmission, and personal computers.

The near and practical implications of such an electronic revolution were the subject of Larry Woods' presentation. Woods began his discussion of the present state of the art at Notre Dame by describing in detail his pattern of response to a recent research problem he faced. Discussing what appeared to be his progress through a number of sophisticated databases, he revealed that the databases in question were those manual systems currently available to the library. The description of this process was relevant in two ways. It clearly demonstrated that: (1) the systems currently available in libraries are indeed a discrete technology (demonstrating to those who view the coming automated system as hostile and "technological" that the familiar systems already in use were also "technological"); and that (2) the current system is imperfect and the proposed automated system incomplete (in the sense in which it is the initial step in a process leading to electronic text delivery). Woods closed by emphasizing that we are only at the beginning of a cybernetic revolution that will radically alter our present concept of libraries.

Through their presentations, Haugeland, Hildreth and Woods have given the library community at Notre Dame a unique opportunity to phrase the questions they must ask themselves in anticipation of transforming traditional structures into more effective, modern forms.

JOHN ZAHM AND THE DANTE COLLECTION

HISTORY OF A LIFETIME DEVOTION

The Dante Collection in Memorial Library incorporates the John A. Zahm Collection dating primarily from before 1921 and including books purchased since 1921 thanks to the Zahm Endowment.

John A. Zahm, C.S.C., was one of Notre Dame's most remarkable sons, as peripatetic as Father Hesburgh and like him the acquaintance of Popes and Presidents. Zahm first came to the University in 1867 as a student, then attended seminary, and stayed on to head the Science Department here for twenty years, which included seven as Vice-President. During those years he became internationally renowned for books such as The Bible, Science, and Faith, which attempted to reconcile Christian and Catholic beliefs with modern science, particularly evolutionary theory.

According to John Cavanaugh, C.S.C., who knew him personally, Zahm was an intimate friend of Father Sorin himself. His life is presently the focus of an extensive exhibit prepared by Assistant Archivist Michele Pacifico and on view for the next few months in the Archives on the sixth floor of Memorial Library. He is also the subject of a 214 page book entitled, Notre Dame's John Zahm: American Catholic Apologist and Educator, by Ralph E. Weber.

From 1896 to 1898 Father Zahm lived in Rome as Procurator, and there cultivated what became a life-long devotion to the Divine Comedy and to the avid collecting of rare editions of Dante's masterpiece. Cavanaugh commented that Zahm read a canto of the original work every day for over 30 years. As early as 1896 he thought about publishing an annotated edition of the Divine Comedy "that will appeal to Catholics more than any edition that has yet appeared in English." He never fulfilled either this intention nor that of writing a life of Dante, although he did publish Great Inspirers, part of which discussed Dante's real-life Beatrice. In an introduction to one of Zahm's books Theodore Roosevelt ascribed their acquaintance to a mutual interest in Dante. This friendship plus a mutual spirit of adventure led to their joint exploration of the Amazon River in South America.

Father Zahm became Provincial in 1898 and continued exploring the American continents and publishing books about his travels until his death in 1921. He also continued ransacking the book stalls of Europe for editions of the Divine Comedy. In a series of articles about Zahm in The Ave Maria in 1946, Patrick Carroll, C.S.C., quoted former Notre Dame president, Father John O'Hara, as saying:

"He had what might be called a bibliographical instinct. His experience with books was very wide, of course, but he seemed to have in addition a sixth sense for judging what was worthwhile. He followed the catalogs of second-hand books and knew values. He delighted to tell stories of bargains picked up here and there over the world. He waited thirty years, he said, for a set of Boydell's Shakespeare, and then secured the twenty volumes of this exquisite work for twenty dollars."

According to Father Carroll, Zahm collected Dante while he was Procurator in Rome, by correspondence as Provincial, during later trips to Europe, and while living in Washington, D.C. The nucleus of his Dante library, however, was the collection of the famous Dantophile, Giulio Acquaticci, whose treasures included no fewer than eight incunabular editions of the Divine Comedy.

Before John Zahm died in 1921, he gave his Dante collection of some 3,000 books to the University. His "Last Will and Testament" bequeathes an endowment of over \$4,000 "to enlarge the Dante collection... by the purchase of such books, magazines and works of art, all treating of or illustrating the divine poet, as do not already exist in said collection, as it has always been my ardent desire to see my alma mater have the largest and most valuable Dante collection in existence."

The Notre Dame collection has never surpassed that of Cornell, but some authorities believe it vies with Harvard for second place in both quantity and quality. Today the entire Dante collection numbers between five and six thousand volumes, including

translations of the masterpiece in over 40 languages. Father Carroll noted that Zahm regretted the absence of an extant translation in Irish, and quoted him as saying, "I have tried several times to get Gaelic scholars to undertake this work but so far without success."

Among the treasures of the collection are its oldest copy of the Divine Comedy, published in Venice by Vindelino de Spira in 1477. It incorporates a commentary by the work's first commentator, Jacopo della Lana, the first printing of Boccaccio's Vita di Dante, and verses by Dante's son, Jacobo Alighieri. The 1481 edition is significant for being the first Florentine edition, the first illustrated Divine Comedy, and the first printing of the commentary and life of Dante by Christoforo Landino. Anton Masin, Head of Rare Books and Special Collections, describes all the Zahm/Acquaticci incunabula in his compilation, Incunabula Typographica: Catalog of Fifteenth-Century Books Held by the Memorial Library of the University of Notre Dame.

To jump four centuries to the 400th anniversary of the poet's death, another treasure is the three-volume elephant folio illustrated by Amos Natini. A single massive volume of this limited edition is almost too heavy for one person to lift.

The rarest and most valuable editions are housed in Rare Books and Special Collections. Commoner editions and secondary works are located in the Tower. The entire collection is accessible through the public card catalog, and the treasures also appear in a card catalog in Rare Books and Special Collections.

Thanks to the Zahm endowment the collection is a scholarly one that grows continually with selections made by Professor Dino Cervigni of the Modern and Classical Languages Department. Over the past five years his policy has been to try to acquire every edition of Dante's works, and most secondary works in European languages, particularly English, Italian, German, and French, in that priority. He says the current endowment does not cover all the

acquisitions that would be possible if it were larger.

Professor Cervigni continues a long-standing Notre Dame tradition of teaching a course on Dante. The significance of the Dante Collection for scholars is immeasurable because of the extraordinary influence of the Italian master; his work generated more literature through the ages than has that of any other writer. The collection bears not only on most fields of creative literature from the Renaissance to the present, but also on the fields of history and theology as well. Besides the literary content, the illustrations of the Divine Comedy throughout its publishing history constitute a topic of study themselves, ranging as they do from drawings by Botticelli to engravings by William Blake, and, of course, Gustave Dore.

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WRIGHT'S AMERICAN FICTION

STANDARD BIBLIOGRAPHY TO BE PUT INTO DATABASE

Lyle Wright's bibliography, American Fiction, 1774-1900, lists "American editions of prose fiction written by Americans and published between 1774 and 1900." It is a monumental and exhaustive collection of data intended to capture all American titles in the genre.

The work was originally intended to cover the period from the Revolution to 1850, but came to encompass, through two extensions of 1851-1875 and 1876-1900, the entire 19th century as well as the Federal Period. In its final form, Wright's bibliography cites over 11,200 works.

Lyle Henry Wright, the famous librarian of the Huntington Library in San Marino, California, began his work on American fiction in the late 1920's. He had noted and appreciated the pioneer work of Oscar Wegelin, Early American Fiction, 1774-1820, and with the encouragement of W. G. Vail, the librarian of the American Antiquarian Society, decided to extend that list to 1850. The work was begun in the early 1930's and the first edition completed in 1939. The two subsequent extensions were completed in 1957 and 1966. Regarding this later effort, Wright has said: "Volume two seemed to be a natural, because I had so much material on hand; but I recorded only the first or earliest edition found, omitting later editions... I have no explanation as to how I became involved in volume three. And retirement has provided a ready answer to any question of a volume four."

Originally, Wright intended to list only novels, romances, tales and short stories.

The scope was broadened during the process of compilation to include fictitious biographies, travels, sketches, allegories, tract-like tales and other similar writings. In general, the bibliography omits annuals and gift books, publications of the American Tract Society and the Sunday School Union, juveniles, Indian captivities, jest books, folklore, anthologies, collection of anecdotes and periodicals. Within its limitations of scope, however, it is a very valuable source for the study of American literature.

This useful research tool was made even more useful in the 1970's by the initiative of Research Publications, Inc. who sought out, in dozens of American and British libraries, the 11,200 titles and microfilmed them. Approximately 1,400 reels of microfilm were produced in this project and this entire corpus is available in the Microtext Reading Room in the Memorial Library.

More recently, under the aegis of the Association of Research Libraries, a program has been launched to catalog all 11,200 titles in Wright's American Fiction in the national bibliographical database in the Online Computer Library Center (OCLC). Notre Dame is participating in this project together with 12 other university libraries. As a result of participation in this project, the University Libraries will acquire a complete set of the computer records in MARC format for our database.

Our program in American literature will be greatly strengthened through this project.

David E. Sparks

MAGAZINE INDEX

NEW INFORMATION TOOL AVAILABLE

Through the courtesy (and luck) of Lorry Zeugner, the Reference Department in the Memorial Library has a new reference tool, at least for a limited time. Zeugner, Acquisitions Department head, won a three month subscription to the Magazine Index at the ALA Midwinter Conference in San Antonio.

The Magazine Index is a periodical index on microfilm produced by the Information Access Corporation. It indexes all the journals in Readers Guide plus an additional 180, for a total of almost 400 popular magazines. The coverage is for 5 years. Each monthly microfilm is a full cumulation with

the earliest month's citation dropped. The index in the Reference Department covers 1/1/79-1/1/83.

Information on how to use the index and the list of magazines indexed appear at the beginning of the microfilm reel. The index has two parts: an alphabetical listing A-Z, filed character by character and following this a numerical list from 1 to 1 million. The alphabetical listing has two groups of data: (1) subject headings (LC subject headings enhanced by natural language terms for new items), titles of reviewed materials and product names; and (2) names of persons in the news and product names. The most recent article appears first.

The index includes reviews of books, movies, performances, restaurants, exhibits. Reviews can be found either by looking under the proper subject category, name of performer, movie, or restaurant or the name of the reviewer. The citation indicates what the reviewer thought of the item being reviewed through a reading scale A-F.

The subscription also includes two loose-leaf services: Hot Topics lists recent articles on subjects of current topical interest (January 1983 lists subjects such as the movie Gandhi, unemployment, Social Security); Product Evaluations lists recent product reviews found in the microfilm index (various makes of automobiles, video tape players and recorders).

Some of the benefits of Magazine Index are currency, ease of usage, inclusion of rated reviews and the fact that the complete title of the cited magazine appears in the citation. Drawbacks are the lack of retrospective coverage and subscription price (\$1,700/year).

After having used the index for a month both reference staff and patrons are pleased with it. It has proven to be a useful addition to the Reference Department. Whether it will be a permanent part of the department remains to be decided.

Margaret O. Porter