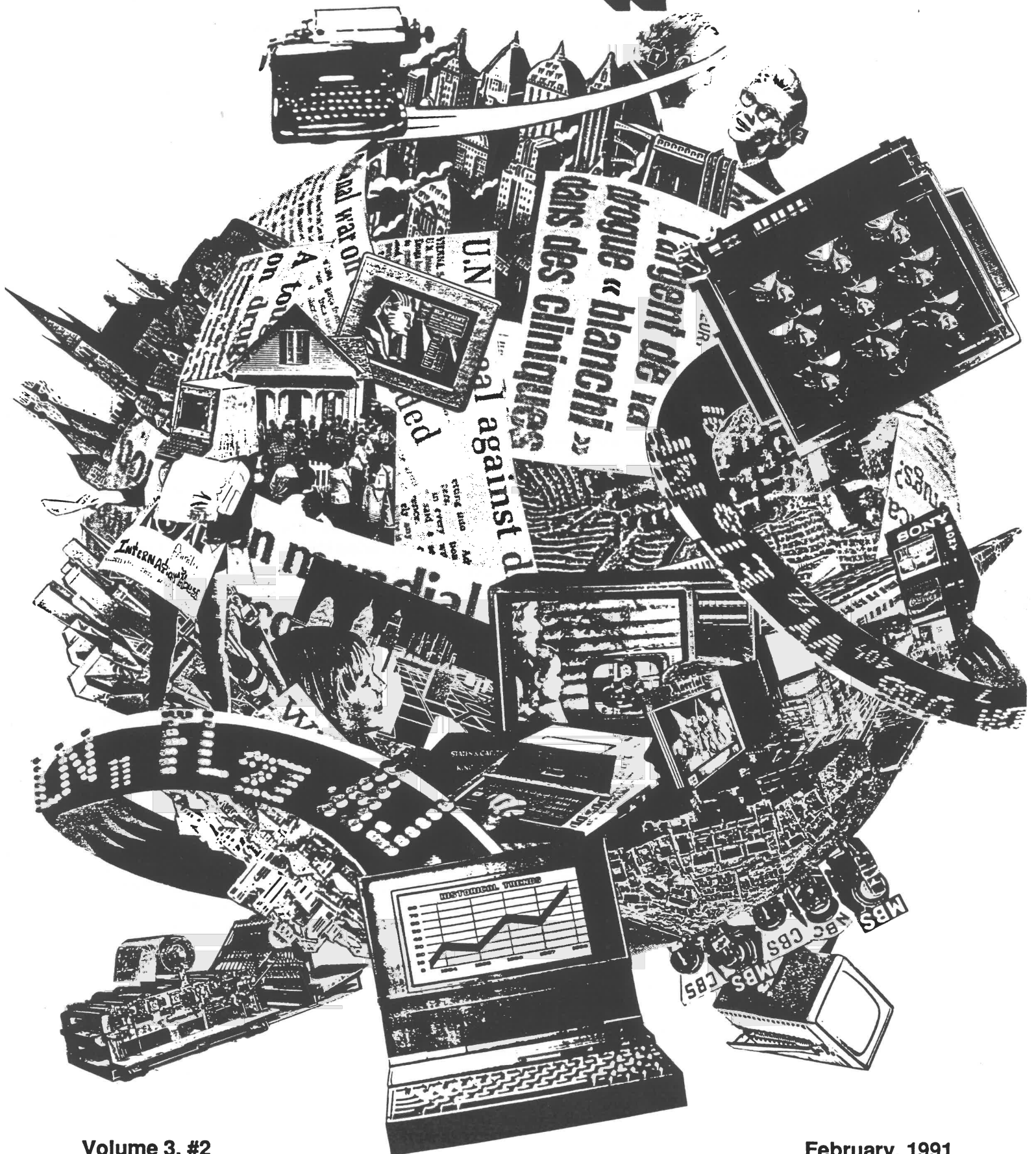# AnTeNNa

SHOT In Cleveland

General Business

Once again a well-attended Mercurians' business meeting reflected the growing diversity of interests in the history and impact of communication technologies. Participants from France, Germany and Canada gave the meeting an international breadth which we all appreciated and which bodes well for the 1992 SHOT meeting in Sweden as well as for the future development of the SIG in general.

Among the questions we discussed was the sponsorship of sessions at upcoming SHOT meetings. A rough consensus was reached on the idea of a historiographic session that would emphasize both the major themes of the field and indicate current directions of research. Please see the call for papers elsewhere in this issue of *Antenna*. We also discussed the request from *Technology and Culture's* Editorial Committee for feedback from SIG's and their members regarding *T&C's* coverage of our specialized areas. The committee is open to suggestions and comments on articles as well as book reviews. Please send your comments to Pamela Laird who has been newly elected to the Editorial Committee and will be happy to communicate your thoughts to its members.

Other announcements included reminders about the importance of sending exhibit reviews and information about upcoming conferences and exhibitions to *Antenna's* editors or to Pamela Laird. We also reaffirmed our interest in receiving brief professional biographies (one paragraph) or queries for information for publication in *Antenna*. The editors also followed up their suggestion announced in the last issue for a forum in the newsletter that would bring together differing views on issues and themes in the study of the history and social impact of communication technologies. This offers an exciting potential for exploring and debating issues, and interested parties should contact them.

Perhaps the most important question discussed is the upcoming need to find new editors for *Antenna,* as Lane Browning and Pam Inglesby cannot commit themselves past the fall issue and the Annenberg School for Communication at the University of Pennsylvania, where the newsletter is published, has guaranteed funding only through the current academic year. We have been extremely fortunate for the time the current editorial staff has devoted to *Antenna* and it is urgent that new volunteers step forward to maintain the newsletter's quality and continuity.

Finally, the move of the I.E.E.E.'s Center for the History of Electrical Engineering to Rutgers University was enthusiastically noted at the meeting. The move will allow this important resource center to expand its facilities. The Center can be contacted at Rutgers University, 39 Union Street, New Brunswick, NJ 08903-5062; (908) 932-1066. It publishes a newsletter and would be happy to add Mercurians to its mailing list.

—submitted by Pamela Laird and Jonathan Coopersmith

Panels and Presentations

Several panels at the conference included papers of interest to Mercurians, and two sessions focused specifically on communication. The session entitled "The Politics of Mass Media" addressed important applications of communication technologies. It featured "No Panacea: Radio in the Presidential Campaigns, 1932-1944" by Gil Troy, McGill University, "Reading Publics: Monotype Corporation and the Politics of Typographic Innovation, 1922-1932," by Claire Badaracco, Marquette University, and "The Press-Radio War, 1925-1937," by Gwenyth Jackaway, Fordham University. Susan Douglas' very insightful critiques and comments completed this instructive meeting.

The panel entitled "Nationalism and International Cooperation in Media and Telecommunications, 1900-1950" was of special interest to Mercurians. Brigitte Schroeder-Gudehus of the Universite de Montreal and the Cite des Sciences et de l'Industrie in Paris chaired the session and introduced the speakers, the first of whom was Daniel Headrick of Roosevelt University (Chicago) whose paper was entitled "Nationalism and International Rivalries in the Telecommunications Industry, 1900-1945." He argued that telecommunications were caught between the violent divisive nationalisms of that era of world wars and the tendency towards mergers, cartels, and cooperative arrangements that characterize networks. Because telecommunications were vital to political and military strategy, governments sought to nurture independent national networks. By 1945, however, only two major powers remained in international telecommunications — the United States and Great Britain — and their victory, in war as in communications, was the result of cooperation.

The second paper, entitled "Telecommunications Networks in Europe, 1900-1945: Technical Problems, Nationalism, and Cultural Obstacles," was read by Patrice Carre, curator of the historical collection of the Centre National d'Etude des Telecommunications in Paris. In his paper he described the slow growth of long-distance telephony in Europe before 1914, and the leadership position of Germany. In the First World War, when the French telephone network proved unable to satisfy its requirements, the French army developed tactical radio. The U.S. Army Signal Corps created a network of telephone lines to bypass the French lines, and even laid lines for the French government. After the war, the spread of international telephony was hindered by national bureaucracies and politics, not by a lack of demand or technology. Technical problems were slowly resolved, and by the 1930's, most European telephone systems were interconnected. Nonetheless, international telephony was a low priority among European countries until the 1960's. A Europe of Telecommunications is only now beginning to emerge.

Pascal Griset of the Institut d'Histoire Moderne et Contemporaine in Paris, who organized the panel, commented on the papers. In his remarks, he pointed out the contrasts

between the European and American experiences, and stressed the importance of cultural and political factors in explaining the history of telecommunications.

The second year of Alternative Media Presentations at SHOT gave John E. O'Connor the opportunity to present some of his recent work on visual literacy. John showed segments of several historical films in "Image as Artifact," arguing effectively that educators who use video materials should be especially aware of the power of editing as a "software of moving images."

— *submitted by Pamela Laird and Daniel Headrick*

Miscellaneous News

☞ The program committee for the Annual Meeting of the Renaissance Society of America seeks papers on all subjects, but particularly encourages submissions on the theme of cross-cultural encounters. Scholars from history, literature, art, anthropology, cultural geography and the history of science (and, we assume, communication) are encouraged to participate. For information, contact the Renaissance Society Program Committee, History Department, Stanford University, Stanford, CA 94305. Abstracts and proposals for full panels are due April 30, 1991.

☞ The Popular Culture Association and the American Culture Association will meet jointly for their annual meetings in San Antonio, TX from March 27th to 30th, 1991.

☞ The Women's Committee of the History of Science Society maintains a directory of women active in the history of science, medicine and technology. A new edition is now being compiled and a questionnaire is being distributed to women scholars who would like to be included. For copies of the questionnaire (which is due April 1st, 1991) or more information, contact Professor Alice Stroup, Department of History, Bard College, Annandale-on-Hudson, NY 12504; (914) 758-6822.

☞ The 5th Annual Visual Communication Conference will be held in Breckenridge, CO from June 27th to 29th, 1991. Conference themes will include research methods for visual communication, new communication technology, and cultural differences in visual presentation, among others. For information, write Steve Acker, Dept. of Communication, The Ohio State University, 205 Derby, 154 N. Oval Mall, Columbus, OH 43210; (614)292-3400; ACKER.1 @OSU.EDU.

☞ The annual meeting of the American Studies Association in 1991 will focus on examining and reconsidering questions of rights in American culture, on the occasion of the 200th anniversary of the Bill of Rights. The meeting will be held in Baltimore from October 31 to to November 3rd. For more information, contact ASA, Office of the Executive Director, 2140 Taliaferro Hall, University of Maryland, College Park, MD 20742; (301) 405-1364.

➡ The American Antiquarian Society will hold a conference on "Iconography and the Culture of the Book," June 14-15. For information, write the Society at 185 Salisbury Street, Worcester, MA 01609-1634; (508) 755-5221 or 752-5813.

New SIG Directory Planned

The first membership directory for SHOT's Special Interest Group in Communication Technologies was completed in 1989, thanks to the efforts of John E. O'Connor. Because we Mercurians are such active folks, and because the SIG has grown since names were collected in 1988, those of us who met at the 1990 annual meeting decided that we need a new directory. In order to facilitate this project, we agreed to a new format that will categorize members by their interests and disciplines. Do we also want to include information about recent and ongoing projects, given that Mercurians were reluctant to write the brief essays requested for the first directory? A questionnaire to be sent to members is being prepared, and any suggestions are appreciated. Please contact Pamela Laird, P.O. Box 6972, Denver, CO 80206, (303) 722-7951.

Call for Papers, 1991 & 1992

This double call for papers asks you to plan for the next two years. Please note that because the 1992 meeting will be in Sweden, SHOT has waived the normal policy that prohibits presentation of a paper two years in a row for 1992 and 1993 only. This year SHOT will meet jointly with the History of Science Society from October 30 through November 3 in Madison, WI. If you would like to present your work there, you may propose papers in one of two ways. If your work relates to the history of communication technologies, you can send five copies of a 150-word abstract and a one-page curriculum vitae for consideration by the Mercurians' session committee to Pamela Laird, P.O. Box 6972, Denver, CO 80206; (303) 722-7951. The committee is also interested in suggestions for entire sessions. All material is needed by March 8th. The committee would be happy to forward to SHOT's program committee any proposals that it cannot fit into a cohesive panel.

If you would like to submit an abstract or session proposal directly to the SHOT program committee, send five copies of the materials by April 1 to Deborah Fitzgerald, 1225 Orchard Drive, Ames, IA 50010; (515) 232-5809. Keep in mind that the program committee will consider programs for SHOT's third year of Alternative Media Presentations as well. These exhibits can display and interpret visual materials or artifacts, and can use video, computer or film to present work. Please contact Pamela Laird or Deborah Fitzgerald for more details.

SHOT will be meeting at Uppsala University in Uppsala, Sweden from August 16th to 21st in 1992; the deadline for proposals will be October 1, 1991. The program chair for that meeting is Hakon With Andersen, and proposals should be sent directly to him as Mercurians will not be involved in organizing sessions for the 1992 meeting. He can be contacted at the Center for Technology and Society, University of Trondheim at Lade, N-7055 Dragvoll, NORWAY; telephone 47 7 591789; Fax 47 7 922580 or 47 7 591327; E-mail (Bitnet) H_Anderson @avh.unit.uninett@norunix.

BOOKS BOOKS BOOKS

McLuhan x 5: The Guru Grown Up?

The Gobal Village: Transformations In World Life and Media In the 21st Century.   Marshall McLuhan & Bruce R. Powers. New York: Oxford University Press, 1989.

McLuhan: The Man and His Message. George Sanderson and Frank MacDonald, eds.; introduction by John Cage. Golden, CO: Fulcrum, 1989.

Marshall McLuhan: the Medium and the Messenger. Philip Marchand. New York: Ticknor & Fields, 1989.

Laws of Media: The New Science. Marshall and Eric McLuhan . Toronto: University of Toronto, 1988.

Letters of Marshall McLuhan. Selected and edited by Matie Molinaro, Corinne McLuhan, William Toye. New York: Oxford University Press, 1987.

Recently there has been renewed interest in coming to grips with possible deterministic properties of media. For example, at the International Communication Association conference in Dublin this year James Beniger suggested that perhaps we have concentrated too exclusively on social context in the establishment of media practices, and that we might again (tentatively) venture to consider more innate media properties. With this in mind, McLuhan's recently-published later works should command a closer look. During the 1960s McLuhan was called a media prophet for his idea that "the medium is the message," i.e., that the formal qualities and processes of a medium itself have determined effects far beyond individual content. He suggested media are extensions of the senses, of the body. As new media succeed one another, so general consciousness and practices also change.

Whereas television's critics saw the medium simply as a threat to literate, critical awareness, McLuhan saw in television the emergence, or re-emergence, of a more tribal, intuitive awareness. In turn he postulated the eventual emergence of the "global village" imbued with this new shared perspective. All this had a salutary effect on media studies. His perspective engendered greater respect for the electronic media, inspired a generation of media scholars, and suggested new lines of research to many historical scholars. Despite the fact that many have taken him to task for his flagrant violation of historical fact and misleading historical periodization (cf. Elizabeth

Recent Books of Interest to Mercurians

The editors of *Antenna* would be interested in receiving reviews from readers of the following recently-published books:

Communication and Control: Networks and the New Economies of Communication, by G.J. Mulgan, Centre for Communications and Information Studies and the Polytechnic of Central London, Guilford Publications. The publisher writes: "This book analyzes the ways in which new technologies are transforming the nature of, and capacity for, control in social life — in the home, the factory, in politics and warfare."

The Passing of Modernity: Communication and the Transformation of Society, by Hamid Mowlana of the American University and Laurie J. Wilson of Brigham Young University, Longman Publishing. The publisher claims that "this book is the first comprehensive study of the global ramifications resulting from the relationship between communication and the evolution of society," and that it "defines the technological dimensions of this phenomenon and lays a foundation for identifying and critically evaluating major approaches, theories, concepts, propositions and issues."

Technology Transfer: A Communication Perspective, edited by Frederick Williams and David V. Gibson, University of Texas at Austin, Sage Publications. The publisher says: "Recognizing the multidimensional dynamics of the technology transfer process, this unique volume examines the challenges of technology innovation and transfer within the increasingly competitive global marketplace; the environments of technology transfer as they occur within and outside of organizational structures; and specific contexts of technology transfer, including a study of the first major R&D consortium of the high tech era, the importance of university-wide linkages, and the distance-cancelling uses of telecommunications networks."

Media, Consciousness, and Culture: Walter Ong's Theory of Communication, Rhetoric and Criticism, edited by Bruce E. Gronbeck, University of Iowa, Thomas J. Farrell, University of Minnesota, and Paul A. Soukup, Santa Clara University, Sage Publications. This anthology includes diverse discussions on the controversial theorist's work and its relation "to Third World rhetoric, to feminist theory, to broadcast television, to the current critical conversation about voice, and to current theories of the dialogic self."

The Invisible Weapon: Telecommunications and International Politics, 1851-1945, by Mercurian Daniel Headrick, Oxford University Press.

Eisenstein), and that others have made revisionist readings of the "global village," speaking of "global cities with their attendant global ghettos," he has nonetheless served to initiate a new debate.

His celebrity went into eclipse not too long after the '70s began. Some felt that he was a casualty of slow-thinking critics who were unused to his interdisciplinary, "non-linear," intuitive argumentation. As McLuhan once said to *The New York Times*, "I don't want them to believe me; I just want them to think." Unbuoyed by any real theoretical justification for his method of pastiche, a growing number of scholars such as critic Northrop Frye became convinced that the "difficulty" in understanding Mcluhan lay in an underlying lack of clear concepts. Further, as McLuhan's generalizations reached out to grab more and more material, they appeared to explain less and less. Finally, as James Carey has pointed out, McLuhan appeared increasingly insulated from acknowledging the political and economic dimensions of the development and consequences of new media.

The sudden appearance of several new books by and about McLuhan provides a new chapter in McLuhan studies, both for those interested in the man and in his ideas. Marchand's biography , as well as Sanderson and MacDonald's anthology,

Control through Communication: The Rise of System in American Management. JoAnne Yates. Baltimore: The Johns Hopkins University Press, 1989.

Typewriters, carbon paper, and vertical files are chief among the communication technologies that enabled the revolution in management that JoAnne Yates analyzes in *Control through Communication: The Rise of System in American Management.* In his classic, *The Visible Hand: The Managerial Revolution in American Business* (Cambridge: The Belknap Press of the Harvard University Press, 1977), Alfred D. Chandler explained why American businesses developed managerial capitalism between 1850 and 1920. However he left many questions unanswered about how and with what effects that reshaping occurred. Yates answers several essential questions about how managers developed the formal, internal communication procedures at the core of modern, systematic management, "substituting managerially mandated systems for ad hoc decisions by individuals" (p.xvii).

Yates argues that systematic management evolved in a gradual, instrumental fashion as managers solved specific problems that forced them out of traditional ad hoc procedures. She carefully and explicitly demonstrates that neither the growth of American businesses nor the availability of new communication technologies sufficed to cause managers to change their practices. Rather, specific concerns, such as safety, geographic dispersion of facilities, or governmental regulation, created conditions best resolved by internal communications. She concludes that the only consistent factor in successful transitions to systematic management is the intervention of forceful managers who applied innovative internal communication systems to their firms' problems.

Control through Communication is well organized, documented, and illustrated to develop Yates' thesis. The introduction and first three chapters build the historical and technological foundations for her work. In these she explains the context for the transformation of business techniques between 1850 and 1920, managerial methods before and during the transition, communication technologies and their roles in the transformation, and the new genres of internal communication, such as memos, that facilitated it. Interestingly, technologies that helped to increase the efficiency of producing, transmitting, storing, and retrieving *written* communications were more critical than the telephone or telegraph in establishing modern management.

Yates carefully shows the reciprocal nature of procedural and technological developments. For example, typewriters sold slowly for almost a decade after they were first marketed in 1874. As businesses increasingly sought efficiency in the 1880s by subdividing labor and expanding the managerial level, they discovered typewriting's capacity to separate management from the production of correspondence. Specialized typists gradually assumed the tasks of letter production and increased the efficient use of executives' time. Moreover, the advantages of readable text that could be copied easily with carbon paper or stencil duplicators and then stored for easy retrieval out of vertical filing cabinets all fit into the system of communication that characterizes the modern bureaucracy. Increased demand for these technologies accelerated innovations in the reciprocal relationship between technologies and their uses that Yates describes.

Three case studies make up the remainder of Yates' research: the Illinois Central Railroad, Scovill Manufacturing Company, and E.I. du Pont de Nemours and Company. Each of these companies came to systematic management in response to different needs, fulfilling what Yates refers to as "the insatiable desire for efficiency" (p.63).

One aspect of Yates' arguments raises serious questions that deserve debate. Throughout, she evaluates systematic management's depersonalization of business practices in terms of its instrumentality alone: both systematic management and its uses of communication technologies enhanced efficiency, and that was that. She addresses the human costs only insofar as managers learned to use internal public relations communications to minimize discontent and resistance. Furthermore, she explicitly dismisses David Noble's critique of the deliberate elimination of individuality in the workplace by pointing out that managers also became interchangeable personnel. Has systematic control in business evolved entirely to enhance efficiency and productivity or also to render individuals powerless? Such issues position *Control through Communication* within an important debate and increase its contribution to our understanding of the dramatic transformations that shaped the modern business world and its conditions.

— submitted by Pamela Laird

reveal the extent of McLuhan's Roman Catholicism and his deep conservatism, even if, as Louis Forsdale says, his writings appear to suggest just the opposite. He was, in any event, an intensely oral person, a stimulating teacher, even if he was not the theoretician many sought.

Like many of his earlier books, his final two works (*The Global Village* and *Laws of Media*) are so "co-authored" that it is difficult to understand who wrote what. Parts of *The Global Village* are so muddled that they must rest as a blot on the name of whomever wrote them, particularly the offensive section on "Oriental" culture, and the vapid section on cerebral bi-polarity. As always, there are interesting speculations, although the basic points of *The Global Village*, for example, the nature of cognitive polarities and the "Tetralology," are never adequately explained. For that we can turn to *Laws of Media*, a work which truly has the stamp of Marshall McLuhan on it.

Here the McLuhans argue that they have uncovered basic laws about the workings of media throughout history. This is their attempt to explicate the intuitions that lay behind their earlier symbolist strategy of "invoking" and suggesting understandings. These laws, or "heuristic devices" are presented as four questions ("We have been unable to find a fifth"): 1) What does the medium enhance or intensify; 2) What does it obsolete or displace; 3) What does it retrieve that was previously obsolesced; and 4) What does it produce or become when pressed to the extreme?

There is still little sensibility here that media and their uses might be socially defined or constrained, or that changes can occur at different rates within a society or between regions, or that these differentials can have profound social and economic consequences. What's more, certain meanings might depend on the interactions involved in more than one medium. While the issue of displacement is crucial to any investigation of cultural transformation, it can only be explored within the context of the pre-existing mix of media and their uses. He wants to describe something ideal about each medium, a kind of inventory of all possible effects and interactions, but he never describes how these ideal features are made manifest, how he discovered them, or how different media work and are produced in terms of one another.

McLuhan describes the ideal nature of a medium as the "ground" to which content, or figures, are added. He does hint that these grounds might not be absolute: "The tetrad includes the ground of the user, as utterer; and paradoxically, includes the user as ground. We make ourselves and what we make is perceived as reality. For example, an analysis of the effects of the printed word on another environment usually engenders quite different results. The tetrads for print in the United States, China, or Africa would have three different grounds" (*The Global Village*, p. 10-11). How are these differences between grounds worked out — between cultures, and between different social groups? In order to begin to approach these questions, we need much social and historical detail , yet McLuhan never proposes this, perhaps in part because his rules already abstractly explain what he seeks to find.

The McLuhans and their supporters have attempted to reduce the study of media to four basic questions. I can think of additional questions, however, that would attempt to get at differences in ground — questions about not just how a meaning "fits" into a medium, but about how a medium comes to be inflected in different societies and social groups, and how it comes to be defined, rejected, supported, used, and redefined. Yet McLuhan has much more to offer than a simple foil to social context theories. His idea, for example, that the ground of one medium can become the content of a "succeeding" medium is thought-provoking. As an oberver, McLuhan is still fascinating, picking out the significant details of media use and expressing them in memorable and special ways. But when he tries to put it all together in a logical whole, it still makes me shiver.

— submitted by Willard Uncapher, Annenberg School for Communication, University of Pennsylvania

PC Software:
The New Incunabula?

Old personal computing software may be disappearing faster than the disintegrating books of the last century. Unlike old books, old software requires both an appropriate machine and operating system before it can be used. As machines become obsolete and operating systems are upgraded to handle the complexity and graphics handling of new technology, old programs no longer work. Old software is supplanted by new software, and earlier applications are rarely saved. This is natural selection in the electronic information ecosystem, but for those who want to preserve examples of what computer software technology was like years ago, or to study how software influenced diffusion of innovation in information, much may already be lost.

Until October 16, 1989, U.S. copyright law did not require (as it did with books) that a copy of the software be deposited in the Library of Congress. Prior to this date, including a copy of the software with the copyright application was voluntary. As a result, few were deposited. Tens of thousands of commercially available software packages are now "in print." Many more have gone out of print. The entire Library of Congress software collection, however, contains approximately 1,400 pieces today, with the earliest dating from 1980. In slightly more than a dozen years, PC software has become the new incunabula.

If you are interested in learning more about this issue, visit or call the Machine-Readable Collections Room at the Library of Congress (202-707-5278), and read "Collecting Software: A New Challenge for Archives & Museums" (Vol. 1, #2, 1987) by David Bearman, an 80-page Archival Informatics Technical Report available for $20 from Archives & Museum Informatics, 5600 Northumberland Street, Pittsburgh, PA 15217; (412) 421-4638. This report is a thorough study of the

many problems involved in preserving the history of personal computer software as a cultural record, and is an excellent background source for anyone studying personal computing and related historical topics.

If you are interested in the history of personal computing software, or in related studies of the development of the personal computer audience, or in the transition from traditional print technology into electronic text, and would like to network with others who have similar interests, contact Jerry McCarthy, Text Media Futures, Inc., P.O. Box 4504, Boulder, CO 80306.

– submitted by Jerry McCarthy

At the Museum

The core collection of the Pavek Wireless Museum was assembled by the late Joseph Pavek, and the museum was established as a non-profit organization in 1987. The artifacts range from early wireless-telegraphy equipment up through about the 1940's, and they're all in excellent condition. The serried ranks of equipment are reminiscent, on a smaller scale, of the older displays in the Henry Ford Museum. One group of items I found personally affecting was the "silent keys" of deceased ham radio operators.

The people now in charge of the museum, Carl Nelson and Steve Ramer, are eager to make it a first-rate educational resource. They have displayed the artifacts beautifully. There is almost no label text, but this lack is made up a bit by their own knowledgeability — especially since a large portion of their non-buff audience consists of school groups who get guided tours. Nelson and Ramer are working towards improving the labels and augmenting the collection in some areas, and they are eager for comments from museum professionals and other scholars. They are particularly interested in contact with members of SHOT and the Mercurians.

The museum is located at 3515 Raleigh Avenue, in an industrial/office complex in St. Louis Park, MN 55416, a suburb just west of Minneapolis. The telephone number is (612) 926-8198, and they are usually open in the afternoons. It is suggested that visitors call ahead for directions.

— submitted by Bayla Singer of Wilmette, IL

Forum to Bring Together Scholars and Policy-Makers

The 19th Annual Telecommunications Policy Research Conference will be held September 28-30, 1991, in Solomons, MD. This is an annual forum that brings together scholars engaged in research on policy-related telecommunications issues and decision-makers from the public and private telecommunications sectors. A call for papers has been issued for work addressing issues including Cable Television and Local Exchange Carriers, International Communications and Comparative Systems, Privacy in Personal Communications, Networking Standards, Operations Research, Models and Data Exchanges, Diversification of the Local Exchange, and Telecommunications and Education. Submissions should consist only of abstracts of the proposed papers, typewritten, double-spaced, and no more than 250 words. They must be received no later than April 1, 1991. Send proposals to Conference Coordinator, TPRC, Inc., P.O. Box 19203, Washington D.C., 20036.

TPRC is also holding a competition for student papers, open to scholars who were graduate students on October 1, 1990. Papers may be based on research undertaken for coursework, the dissertation, or seminars. The award recipient will be invited to present his or her paper at the upcoming conference in September. Three copies of completed papers, typewritten and double-spaced, must be received at the above address by June 3, 1991. The selection committee will announce its decision by August 25.

Tech Syllabi Sought

SHOT's Technology Studies and Education Group (TS&E) is collecting materials for a third edition of *The Machine in the University*. Although the previous editions are still valuable, the vitality and growth of the field call for a new edition. TS&E seeks new and updated syllabi describing courses in any aspect of history of technology or technology studies. Non-traditional and non-Western approaches and perspectives will be welcomed.

Course materials submitted for consideration should include a statement of the course's goals, a list of topics covered on a daily or a weekly basis, and readings assigned or recommended for each topic. Study and exam questions or paper topics would also be appreciated. All bibliographical materials should include complete citations. Please include full references to any films, videotapes, slide sets, working models, or other instructional materials used in the course, as TS&E hopes to incorporate an annotated list of such materials.

Submissions may be either hard copy or electronic. If hard copy, please send standard paper (8.5" x 11" or A4), double-spaced, eight (8) copies, and either typewritten or other letter-quality. Files on electronic media (5.25" or 3.5" disks) or sent via electronic mail may be in any version of WordPerfect (preferably), Word 4.0, or ASCII; if the material is in another format, please consult before sending. The Steering Committee of TS&E will review the submissions and make selections for inclusion.

Please forward all materials immediately to: Dr. Robert Rosenberg, Thomas A. Edison Papers, Rutgers University, New Brunswick, NJ 08903; E-mail RAROSENB @ELBERETH.RUTGERS.EDU.

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notices

Kenneth Lipartito, a new member of the Mercurians, has written a book on the development of the U.S. telecommunications industry between 1877 and 1920 entitled *The Bell System and Regional Business: The Telephone in the South, 1877-1920* (Baltimore: Johns Hopkins Press, 1989). The book looks at regional telephone system growth, comparing and contrasting the experiences of the American South, Midwest and Northeast. Kenneth is currently working on a new project entitled "Origins of the Information Age: Telecommunications in Industrial Society, 1890-1990," which will compare the telecommunications history of the U.S., France, Great Britain, and Japan, concentrating on issues of technological innovation, public policy , and corporate management. He received a Ph.D. in history from the Johns Hopkins University in 1986, and is currently an Assistant Professor of History at the University of Houston, TX, 77204.

The 41st annual conference of the International Communication Association will be held May 23rd to 29th, 1991 at the Chicago Hilton and Towers Hotel. For registration information, write ICA Headquarters, P.O. Box 9589, Austin, TX 78766; (512) 454-8299, fax (512) 454-4221. The ICA is publishing a new journal, *Communication Theory*, "an international, interdisciplinary forum for theory and theoretically oriented research on all aspects of communication," edited by Robert T. Craig, Professor of Communication at the University of Colorado at Boulder, Campus Box 270, Boulder, CO 80309. The journal is seeking articles, symposia, and reviews on all aspects of communication, including Mercurian concerns such as cybernetics, information systems, mass communication, and technology. A sample copy of the first issue is available from Guilford Publications, Inc., Dept. #MM 12345, 72 Spring Street, New York, NY 10012.