



The Charles Babbage Institute
For the History of Information Processing
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The Charles Babbage Institute Newsletter

Volume 3, Number 1

1 March 1981

CBI ARCHIVAL PROGRAM: NEW PROJECTS

The Charles Babbage Institute's archive activities have heretofore been limited to accepting occasional donations of historical materials from individuals, operating always as a repository of last resort for collections that might otherwise be lost. Much of interest has been gathered in this fashion, but a serious effort to preserve and document the development of computers and information processing requires a more formal, concerted, professional approach. Now that CBI has established a permanent home at the University of Minnesota, we can begin to extend our archival program.

During the upcoming months, CBI will conduct a national survey of archival sources related to the history of computer science and technology. A first of its kind in the area of science and technology documentation, the goal of the survey project is to assess the extent and nature of records generation and preservation in the computing field. The survey will also seek to identify the location of computer artifacts. By the end of March, questionnaires will be sent to 14,000 institutions across the country, including archives and manuscript repositories, government agencies, research laboratories, and computer corporations.

CBI intends to publish the findings of the survey as a reference guide to enhance history of computing scholarship. In addition, survey results will be incorporated into a database that will provide researchers with extensive information on computer-related records and manuscript holdings throughout the United States. Information on the physical location of a manuscript collection, its size and scope, whether or not a finding aid or guide to the collection exists, and any restrictions on the use of the collection will be accessible to the potential researcher as a result of the data collected during the survey.

CBI's Acting Archivist, Maria Woroby, is conducting the survey in consultation with the Institute's directors, Roger H. Stuewer and Paul Armer. Andrea Hinding, a noted archivist and editor of *Bowker's Womens History Sources*, and Arnold Cohen, CBF

Trustee and CBI Senior Fellow, are advisors to the project.

In conjunction with the national mail survey, the CBI staff will be conducting an "in-house" survey of the records of a local Twin Cities computer company. The results of this case study should provide an indication of the volume of computing documentation and the extent to which the archival record of industrial research and development is preserved.

Twenty-four individual collections, or approximately 200 linear feet of archival materials were transferred to Minnesota from CBI's Palo Alto office. Establishing preliminary intellectual control over currently-held acquisitions is a prime objective of the archival program. In Palo Alto, Reddy Dively had already made an inventory of these materials. As standard archival procedures for the physical processing, arrangement, description, and conservation of CBI's archival holdings are being implemented, careful consideration is being given to the special subject content peculiar to computer-related records. The importance of the historical processes of computer and computing development advocates preservation of a wide variety of materials, including unpublished reports, obsolete manuals, and even photographs. The archival procedures adopted by CBI could contribute toward establishing a much-needed national standard in the collecting and appraisal of science and technology records.

CBF BOARD OF TRUSTEES MEETING

"I can think of no other instance in which a major industry has taken the initiative to establish and foster an historical activity based on its own origins and contributions to society. We applaud the dedication of you, the members of the Board of Trustees, especially Mr. Tomash. And we enter into this joint venture with warmth and enthusiasm. Welcome to the University of Minnesota!"

—University of Minnesota Regent Michael Unger

The Charles Babbage Foundation Board of Trustees met on the campus of the University of Minnesota on

October 31, 1980. Actions taken by the Board are as follows:

- The first item of business was the formal approval of the contract between the Charles Babbage Foundation and the Regents of the University of Minnesota creating the Charles Babbage Institute for the History of Information Processing on the University's Minneapolis campus. The U of M Regents had earlier approved the contract at their October 16 meeting. (A side effect of the contract negotiations has been some organization name changes which are explained elsewhere in this *Newsletter*.) University of Minnesota President C. Peter Magrath, Institute of Technology Dean Roger Staehle, and Regent Michael Unger gave speeches of welcome.
- The Charles Babbage Foundation elected the following officers for the 1981 year: Erwin Tomash, Chairman of the Board; Clarence W. Spangle, President; Adelle Tomash, Vice President and Secretary; Paul Armer, Vice President and Executive Secretary; Roger H. Stuewer, Vice President; William T. Price, Treasurer; and Philip W. Rootes, Assistant Treasurer.
- The Board approved a program of financial support to the Contemporary Science Archives Centre in Oxford, England. (See article below.)
- A series of suggestions from Trustee James Birkenstock has now led to the formation of a CBI History Council whose purpose will be to further develop the relationship between CBI and the computer industry.

The rest of the Board's agenda was filled with "housekeeping" matters in the morning session, and discussions on history of information processing activities inside and outside CBI during the afternoon. Trustee Paul Berthiaume of the New York Times Information Bank demonstrated a prototype historical database retrieval system by performing interactive keyword searches on nine historical documents provided by Nancy Stern.

There was a long discussion on the continually troublesome topic of computer artifact preservation. The Board once again resolved that it was impossible for CBI to start or run a museum. However, during the discussions it became clear that there was much that CBI could conceivably do to encourage artifact preservation, short of going into the business itself. Ideas centered around CBI taking on the role of intermediary between potential donors and science museums, and on having CBI compile a "union catalog" of historically-significant computer artifact collections already in existence. No specific action was taken on these proposals, but the projects are likely candidates for implementation when CBI's resources permit.

Other subjects touched upon during the meeting included CBI's archive program, the activities of the DEC Museum and Digital Press, and a catalog of Charles Babbage's papers under preparation by the Science Museum in London.

After the meeting adjourned, the Trustees reassembled for an evening reception at the Bakken Museum of Electricity in Life. The Bakken Museum was formed by Earl Bakken, Founder and Chairman of the Board of Medtronic, Inc., to foster awareness of the importance that electricity has had in medicine and life. The museum is housed in a beautiful Tudor mansion on the shores of Lake Calhoun. Officials of the University of Minnesota, members of the AFIPS History of Computing Committee, and figures from the Twin Cities computer industry had a chance to meet one another amidst a delightful atmosphere made up of Leyden jars, wine, cheese, oak panelled walls, hot hors d'oeuvres, electric chairs, first edition folios, and live chamber music.

The day concluded with dinner at Charlie's, a popular Minneapolis restaurant, where the Trustees found themselves listed as the "Charlie Babbage Party."

"CHARLES BABBAGE FOUNDATION" VS. "CHARLES BABBAGE INSTITUTE"

The organization that has been known as the Charles Babbage *Institute* for the History of Information Processing has been renamed the Charles Babbage *Foundation* for the History of Information Processing. What has been referred to as "a center for the history of computing that will be located on the campus of some major university" has now assumed the name The Charles Babbage Institute for the History of Information Processing.

This was done for practical reasons, essentially to clarify the difference between the administrative, policy, and fund-raising responsibilities of the parent body (which remains an independent, unaffiliated non-profit corporation); and the programmatic body now formally in existence at the University of Minnesota under Acting Director Roger H. Stuewer. The words "foundation" and "institute" intuitively reflect these distinct roles, which our growing development has now made important.

Thus, Sponsors, Founders, Trustees, and Members of the Charles Babbage "Institute" are now properly Sponsors, Founders, Trustees, and Members of the Charles Babbage "Foundation." On the practical level, continue to write and phone whom you have been accustomed to in the past. First contacts are best made by writing to Roger H. Stuewer at the address given on the masthead.

CBI'S ARCHIVAL COLLECTION GROWS

Willis H. Ware of The RAND Corporation has presented to CBI a valuable and well-preserved collection of material documenting the work of the Privacy Protection Study Commission, of which he was Vice-Chairman. The Commission was established in 1975 pursuant to the Privacy Act of 1974, and for two years studied the use of data banks and information systems in the public and private sectors to determine what standards and procedures existed for the protection of personal privacy. The final report, "Personal Privacy in an Information Society," presented to the President on July 12, 1977, contained 162 recommendations to protect individual privacy.

The papers donated by Ware include not only the transcripts and supporting documents from over 60 days of hearings from over 300 witnesses, but also his personal annotations and correspondence with the Commission members. In addition, his gift includes the formal reports of the Commission as printed for public distribution.

In a second donation, Ware has sent the Institute the transcripts of the 1972-73 HEW study on Automated Personal Data Systems, of which he was chairman, and which resulted in the report *Records, Computers, and the Rights of Citizens*.

A catalog (21 pages) describing the Ware collection is available to anyone sending us a stamped (\$.54 for U.S. addresses) self-addressed 9" x 12" envelope.

CLARIFICATION

In our last *Newsletter*, we announced that Daniel McCracken had been named to the CBF Board of Trustees. We neglected to mention, however, that Mr. McCracken is the new Chairman of the AFIPS History of Computing Committee. Dr. Albert Hoagland, (AFIPS President at that time) asked Mr. McCracken to be one of the Trustees nominated by AFIPS for the CBF Board.

NEW FOUNDER AND CORPORATE SPONSOR

Mr. Clarence W. Spangle, former President of Honeywell Information Systems and now Chairman of Memorex Corporation, has become a CBF Founder. Mr. Spangle has been a CBF Trustee since 1978, and has been elected President of the Charles Babbage Foundation for the 1981 year.

Our new Corporate Sponsor is the Perkin-Elmer Corporation, a Norwalk, Connecticut-based manufacturer of high technology equipment, including minicomputers and peripherals.

1981-1982 FELLOWSHIP

The Charles Babbage Foundation for the History of Information Processing is accepting applications for a Graduate Fellowship to be awarded for the 1981-1982 academic year to a graduate student whose dissertation will be on some aspect of the history of computers and information processing. The stipend will be \$5,000.00 plus an amount up to \$2,500.00 for tuition and fees. Priority will be given to students who have completed all course work and have completed all requirements for the doctoral degree except the research and writing of the dissertation. However, even incoming graduate students will be considered. The Fellowship may be extended for a period of one to three years if continued support is merited in the eyes of the Selection Committee.

Appropriate thesis topics might be concerned with aspects of the development of the information processing industry and its infrastructure; with specific technological developments in the information sciences, including both hardware and software, especially if they also deal with the economic or organizational milieu of the developments; or with the economic, legal or social history of computing. There are no restrictions on the location of the academic institution which will be the venue for the Fellowship.

Applications should be sent to Professor Roger H. Stuewer, Acting Director, at the address on this masthead, by *April 15, 1981*. Applications should include biographical data and a research plan or design. Applicants should arrange for three letters of reference, certified transcripts of college credits and GRE scores (or their equivalents abroad) to be sent directly to Professor Stuewer.

CBF SUPPORTS CONTEMPORARY SCIENCE ARCHIVES CENTRE

The Charles Babbage Foundation Board of Trustees has voted to provide financial support to the Contemporary Science Archives Centre (CSAC) in Oxford, England, in the sum of \$5,000 each year for five years beginning next July. We first reported on the CSAC in the "Invisible College" section of our June 30, 1980 issue.

This action was taken because the CSAC, which has cataloged the papers of half a dozen important figures in the British development of computing, had been relying upon a grant from a trust for approximately half of its budget. This grant expires in 1981. Using CBF's pledge of support, CSAC's Director Margaret Gowing and Deputy Director Jeannine Alton have been able to find additional sources of funds to make up for the loss of their grant money.

HISTORY OF COMPUTING AT NCC '81

Issues in the history of information processing will be highlighted in several events at the 1981 National Computer Conference in Chicago, May 4-7.

The fourth annual Pioneer Day session will focus on the development of UNIVAC I. There will be two conference sessions held Wednesday afternoon, May 6. The first will give the insiders view on development of UNIVAC I by the Eckert and Mauchly Computer Company/Remington Rand. The second session will focus on what it was like to be users of UNIVAC I, featuring employees of the Census Bureau. The Census Bureau accepted UNIVAC I, Serial Number 1, in March, 1951.

These public sessions will be followed by an invitational banquet honoring UNIVAC I pioneers that same evening at the Chicago Museum of Science and Technology. All conference visitors will have a chance to sample a bit of the past by walking through a mock-up of the UNIVAC I CPU that will be set up in the NCC registration area. Inside the "UNIVAC" will be artifacts of the original equipment. Pioneer Day '81 is being sponsored by the AFIPS History of Computing Committee, with additional support from Sperry Univac. Carl Hammer of Sperry Univac is the Pioneer Day organizer.

1980 saw three PhDs awarded in the history of information processing, roughly doubling the number of people holding such specialized degrees. All three, Martin Campbell-Kelly of the University of Warwick, William Aspray of Williams College, and Paul Ceruzzi of Texas Tech will present papers based upon their research in a special session during the 1981 NCC. Check your conference program for the day, time, and room. This session was organized by CBI Associate Director Paul Armer.

ERRATA

June 30, 1980 issue, page 4: The photograph of the device is captioned, "Charles Babbage's Analytical Engine." As Dr. Anthony Hyman pointed out to us, this caption is misleading. Babbage never constructed a working version of his analytical engine; it remained a "paper computer" only during his lifetime. Philip and Emily Morrison, in their book on Babbage, identify the device as follows:

"This machine is held in the Science Museum, London, S.W.7. It was made from the drawings of the Analytical Engine left by Charles Babbage and was constructed partly by his son (Major General Henry Provost Babbage) and partly by the firm of R.W. Monro. It is the "mill" and printing mechanism, capable of performing the four arithmetical operations and printing the result to 29 places."¹

continued on page 8 . . .

NEW STAFF

Arnold A. Cohen has accepted a part-time appointment as Senior Fellow on the CBI staff. Dr. Cohen was in electron tube development with RCA before joining Engineering Research Associates at St. Paul in 1946. (ERA, one of the major predecessors of today's Sperry Univac, is the grandfather of Minnesota's substantial computer industry.) His responsibilities in ERA's early years included development of magnetic drum storage techniques, and system design of the 1101 and 1103 computers. He continued in technical management until 1971, when he left Sperry Univac to join the University of Minnesota's Institute of Technology as Assistant Dean for Industry and Professional Relations.

Arnold Cohen has long been involved in activities in the history of information processing. He was Chairman of the AFIPS History of Computing Committee's Subcommittee on Archives. The report produced by that committee served as the blueprint for CBI's archival program. He has been a CBI Trustee since 1978, and is Chairman of the CBI Policy Council at the University of Minnesota. With Erwin Tomash, he co-authored a provocative paper on "The Birth of an ERA" which appeared in the October, 1979 issue of the *Annals*. As a CBI Senior Fellow, Dr. Cohen will assist in implementing the programs of the Institute in its new home.

Linda B. Merims has been hired on a part-time basis as CBI's new Assistant to the Director. Like Paul Armer, Linda is an import from California, having obtained her B.A. degree in History from UCLA in 1979. At UCLA, she was active in the local Computer Club, worked as a technical writer for UCLA's Office of Academic Computing, and did research into the history of UCLA's Bush differential analyzer, Institute for Numerical Analysis, and SWAC computer. She will edit the *CBI Newsletter*, prepare promotional literature, and work to formalize CBI's programs for gathering and re-distributing information on computer history.

Maria Woroby is CBI's new Acting Archivist. Ms. Woroby holds an M.S. degree in Library Science from the University of Minnesota. She has several years of archival experience including work at the Immigration History Research Center (U of M) and the University Archives. She is co-author of a sourcebook on Slavic Americans in the U.S., and other publications dealing with Slavic immigration and guides to ethnic archival and manuscript collections. As CBI's Acting Archivist, Ms. Woroby will administer CBI's archival collection, answering questions on holdings and prospective donations, and will be conducting the national survey of sources in the history of information processing described elsewhere in this *Newsletter*.

PUBLICATIONS

- AFIPS, *The Annals of the History of Computing*. The Table of Contents of the October, 1980 issue is:

Eloge: Antonin Svoboda, 1907-1980—Jan G. Oblonsky

Lady Lovelace and Charles Babbage—Velma R. Huskey and Harry D. Huskey

Some Important Computers of Japanese Design—Hidetosi Takahasi

The CDC 6600 Project—James E. Thornton

John von Neumann's Influence on Electronic Digital Computing, 1944-1946—Nancy Stern

Meetings in Retrospect: The Founding of SHARE, NCC '80 Pioneer Day—Morton Bernstein and Bobbi Mapstone

Anecdotes: Pickrell's Recollections of Herman Hollerith

Comments, Queries, and Debate: Stern on Atanasoff; Mauchly on von Neumann and ENIAC

Reviews

The January, 1981 issue of the *Annals*, scheduled for publication in March, will contain articles highlighting the development of theoretical computer science, an elege to Harold L. Hazen, and a comprehensive index to Volumes 1 and 2.

- Martin Campbell-Kelly, *Foundations of Computer Programming in Britain (1945-1955)*, PhD thesis, Sunderland Polytechnic, England, 1980.

"By 1950, there were three influential centres of programming in Britain where working stored-program computers had been constructed:

Cambridge University (EDSAC), Manchester University (Mark I), and the National Physical Laboratory at Teddington (Pilot ACE). At each of these three centres distinctive styles of programming evolved, largely independently of each other. This thesis explores how the three schools of programming developed, and how they affected programming for other early British computers...

"...Simulator programs have been developed for each of these machines and, to provide a simple means of comparison, the same algorithm has been coded using the different programming systems for each machine."

Includes a narrative bibliography very useful to researchers interested in the state of documentation existing on these early machines in British libraries, archives, and private hands. The thesis was supervised by Brian Randell and A.P. Steward, and examined by Randell and Maurice Wilkes. Arrangements are now being made to publish Dr. Campbell-Kelly's thesis. We will inform our readers when these arrangements are complete.

- Steve J. Heims, *John von Neumann and Norbert Wiener: From Mathematics to the Technologies of Life and Death*. (MIT Press, Cambridge, Massachusetts, 1980.)

A biography of von Neumann and Wiener, describing their youth, intellectual development, major early mathematical contributions, and finally concentrating in detail upon the different positions the two men assumed after World War II on the question of a scientist's involvement with military research. The principals' computer work is mentioned, but is not the focus of the book. (547 pages, photographs, \$19.95.)

Reviews: *The New Yorker*, December 8, 1980.

Freeman J. Dyson, *Technology Review*, Feb/Mar, 1981, p. 17.

- N. Metropolis, J. Howlett, Gian-Carlo Rota (editors), *A History of Computing in the Twentieth Century: A Collection of Essays*. (New York, Academic Press, 1980, ISBN 0-12-491650-3.)

"This book contains the edited versions of the papers presented at the International Research Conference on the History of Computing, held at the Los Alamos Scientific Laboratory, 10-15 June 1976.

"The book provides an account of the development of the first large-scale computers in the first half of the twentieth century. Each chapter describes one phase of the development and is written by either a participant or a witness to these events." (659 pages, many illustrations and photographs, \$29.50.)

- Richard L. Wexelblat (editor), *History of Programming Languages*, (New York, Academic Press, 1980.) Scheduled for publication in March, 1981.

The proceedings of the ACM History of Programming Languages Conference, held June 1-3, 1978, in Los Angeles, and chaired by Jean E. Sammet. Languages covered are FORTRAN, ALGOL, LISP, COBOL, APT, JOVIAL, GPSS, SIMULA, JOSS, BASIC, PL/I, SNOBOL, and APL. Papers are by major participants in each language's development, e.g. John McCarthy on LISP, Peter Naur and Al Perlis on ALGOL, etc. In addition to the formal papers, each chapter contains a transcript of the conference session, text of all submitted questions, transcripts of the question and answer session, and biographies of the authors.

Multiple appendices, photographs, illustrations. Over 750 pages in length. The volume is priced at \$45.00. However, Academic Press will be sending all ACM members and all people on the CBI mailing list a special promotional flier offering the volume at a 20% discount.

INVISIBLE COLLEGE DEPARTMENT

"Invisible College" is a term which refers to a set of individuals working in a specialized field of knowledge who, despite varied geographical locations, slowly get to know one another and begin exchanging ideas and information about their field. As a clearinghouse, the Charles Babbage Institute has catalyzed the growth of the invisible college of individuals interested in the history of computing. This department of the Newsletter is designed to introduce our readers to the work of other individuals in the field. We hope that you will get in touch with each other directly, or by writing to the Institute about a particular item.

Teaching the History of Computing. In our January, 1980, issue we asked people who teach courses in the history of information processing to send us their course syllabi and reading lists. We have been pleased to discover that such courses, although still rare and widely scattered, are being offered.

Within university settings, we have heard from the following people:

- Allan Bromley, University of Sydney, Australia—"History of Scientific Calculating Devices"
- Martin Campbell-Kelly, University of Warwick, England—"History of Computing"
- I. Bernard Cohen, Harvard University, USA—"Origins of the Computer and of Data Processing and Applied Statistics"
- David Lee, South Australia Institute of Technology—"History of Computation and Computers"
- William Luebbert, Dartmouth College, USA—"The Cultural Heritage of Computing"
- Seymour Pollack, Washington University, USA—"Computer Archaeology"

Five of these six courses were taught for the first time during the last year. Even in this short list, a considerable diversity is showing up in course content as their instructors incorporate their own interests into their syllabi. Four are taught as electives through the computer science department. However, Dr. Luebbert's course is specifically directed towards freshman liberal arts majors, using an historical perspective to create computer literacy. Dr. Cohen's course is taught as an undergraduate seminar through the history of science department.

Some interesting resources have been mentioned that could be shared among the instructors, including an online database of sources in the history of computing, films, slide collections, an anthology of cartoons illustrating society's perceptions of computers, and even an EDSAC simulator!

Two other people wrote to tell us about lectures that they have developed. Jack Worlton of Los Alamos Scientific Laboratory has developed an illustrated presentation on the "Roots of Computing" designed for

the general audience. Worlton served as an ACM National Lecturer on this subject from 1972-1973. Mr. W. E. Stumpf teaches three in-company courses on the history of computing for IBM that incorporate material from both Charles Babbage and Lewis Carroll's *Alice in Wonderland*.

Taking "information processing" in a broader sense, Denise Schmandt-Bresserat of the University of Texas at Austin teaches a course in the "Symbols and Origins of Writing." Dr. Schmandt-Bresserat has been doing research showing the connection between the development of symbols for reckoning that later evolved into more sophisticated phonetic writing systems. Reports of her results have appeared in *Scientific American* (June, 1978 and March, 1980).

Information on these courses is still coming in. We will wait until we have a better grasp of the situation, and then report again in more detail. We encourage anyone else who is teaching the history of information processing to contact us. One area we are anxious to hear about are courses in "Computers and Society" where some effort is being made to trace sociological effects historically.

Readers are reminded that CBI is supported solely through private financing. If you would like to contribute to the promotion of the history of computing, join our Associates program. Associates receive at no charge a subscription to the *AFIPS Annals of the History of Computing*. The schedule for contributions is as follows:

Associate Member Category	Minimum Annual Tax-Deductible Contribution	Cost of Lifetime Membership at the Category Level (one time payment)
Regular	\$ 40	\$ 650
Participating	\$ 100	\$1,000
Sustaining	\$ 500	\$3,000
Patron	\$1,000	\$5,000

Please make your check payable to the Charles Babbage Institute and mail to: CBI, University of Minnesota, 104 Walter Library, 117 Pleasant Street, S.E., Minneapolis, MN 55455.

Steve J. Heims, whose biography of von Neumann and Wiener has just been published by the MIT Press, is looking for a collaborator to work with him on a book about the "Cybernetics" conferences sponsored by the Macy Foundation and chaired by Warren McCulloch, during the years 1946-1953. These semiannual interdisciplinary gatherings sought to apply ideas originating in communications engineering and computer technology to problems in neurophysiology, psychology, and even sociology and philosophy. Wiener and von Neumann were pivotal participants.

Interested persons should contact Mr. Heims directly at: 160 East Main Street, Gloucester, Massachusetts 01930.



Five papers pertinent to the history of information processing were presented during the joint meeting of the History of Science Society, the Philosophy of Science Association, the Society for the History of Technology, and the Society for the Social Studies of Science, held in Toronto on October 17-19, 1980.

Philip C. Enros of the University of Toronto spoke on "The Analytic Society of Cambridge in the Early 19th Century" during a session on *Mathematics in its Social and Historical Context*. William Aspray of Williams College spoke on "Machines for Computing or Machines for Thinking."

In a session titled *Electronic Computer History: Research and Development at Its Creative Best*, chaired by I. B. Cohen, Nancy Stern (Hofstra University) presented a paper on "The Eckert-Mauchly Computer Organization Under Public and Private Sponsorship." Thomas Smith (University of Oklahoma) discussed "When Engineers and Mathematicians Disagreed Over the Conduct of Computer R & D," and CBI Acting Director Roger H. Stuewer spoke on "The Plans and Programs of the Charles Babbage Institute."



Herman H. Goldstine, noted figure in the history of computing, author of *The Computer from Pascal to von Neumann*, and a fellow of the Institute for Advanced Study visited the University of Minnesota recently. On December 3, Dr. Goldstine spoke before the Computer Science Department on "A Short History of Computing." The following day, he gave some personal recollections of his former colleague, John von Neumann, as part of a lecture series on the "Springs of Scientific Creativity." The entire series will be published under this title by the University of Minnesota Press in a book edited by Rutherford Aris, H. Ted Davis, and Roger H. Stuewer.

All Points Bulletin: IBM Card Programmed Calculator—We have a party who is very interested in locating an IBM Card Programmed Calculator. The original CPC was built by IBM in cooperation with Northrup Aircraft in 1948. By combining a 402 Accounting Machine, a 604 Electronic Calculating Unit, a 521 Gang Summary Punch, and a 941 Auxiliary Storage Unit, there resulted a flexible, programmable computing system useful in technical, scientific, business, and educational applications. The CPC quickly became a very popular machine. It was available before most commercial stored program computers, and comparatively inexpensive to lease. Dr. Cuthbert C. Hurd states, "There were several significant results of the CPC program. First, it gave widespread experience in the preparation and solution of problems that frequently required long sequences of operations...Of greatest importance, however, in my view, was the beginning of a formal and informal information exchange between CPC customers..."¹

Unfortunately, time has taken its usual toll on this influential machine. It is not known how many, if any, Card Programmed Calculators are still extant, saved from the scrap heap by fortuitous neglect. We encourage you to get on your pith helmets and start digging.

According to Weik's *Second Survey of Domestic Electronic Digital Computing Systems*, 693 CPCs were produced before the line was discontinued in 1956. It appears that all of these machines were installed on a lease basis. Prospects are diverse, including companies, universities, or government agencies who had CPCs in their computing departments during the 1950's, or organizations who might have been given a CPC second or third hand. Chances may be better in Europe, Asia, Africa, and South America than in the United States. Although the party would naturally prefer that the machine be whole and refurbishable, news of any CPC components would be welcome. There is also some interest in CPC documents. The party is willing to pay all shipping charges, including air freight if necessary.

If you know of a surviving Card Programmed Calculator, contact Mr. Ted Olack, RR3, Box 469, New Fairfield, Connecticut 06810. Phone (914) 765-7328 days, or (203) 746-5576 evenings. You may call collect.

¹Cuthbert C. Hurd, "Computer Development at IBM," *A History of Computing in the Twentieth Century* (Metropolis, Howlett, Rota, eds.), Academic Press, New York, 1980, p. 400.



CBF Founder and Trustee Walter F. Bauer has been named Chairman of the Board of Informatics, Inc. He will hold this title in addition to his responsibilities as President of Informatics.

continued from page 4 . . .

October 20, 1980 issue, page 3, column 2: In our discussion of the correct date and place of Charles Babbage's birth, a line of text reads, "The entry for 6 January, 1972 in the Baptismal Register of St. Mary Newington..." The year should be, of course, "1792," not "1972."

¹P. Morrison and E. Morrison (Editors), *Charles Babbage and his Calculating Engines: Selected Writings by Charles Babbage and Others*. Dover Publications, New York, 1961.

CBI POLICY COUNCIL

A six member Policy Council will oversee the Charles Babbage Institute at the University of Minnesota. Three members are appointed by the Charles Babbage Foundation Board; three by the University. The Council members are: (from CBF) Arnold Cohen (chair), Albert Hoagland, Erwin Tomash; and (from the University) Thomas Hoffmann, Management Sciences, Walter Johnson, Physics and Astronomy, and Richard Kain, Electrical Engineering.

The Charles Babbage Institute *Newsletter* is a quarterly publication of the Charles Babbage Institute for the History of Information Processing, University of Minnesota, 104 Walter Library, 117 Pleasant Street, S.E., Minneapolis, Minnesota 55455, telephone (612) 376-9336. The *Newsletter* reports on Institute activities and on other developments in the history of information processing. Permission to copy without fee all or part of this material is granted provided that a copy of the publication containing the copied material is sent to the Institute.

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FROM THE EDITOR

Now that the Charles Babbage Institute has arrived at its permanent home at the University of Minnesota, we plan to put the *CBI Newsletter* on a regular quarterly production schedule. (In the past, the *Newsletter* has appeared on an "as needed" basis.) Newsletters will be published in March, June, September, and December of each year. Timely announcements from readers that are intended for a particular *Newsletter* should be received two months in advance, e.g., April 1 for the June 1 issue.

Associate Director Paul Armer has arrived with his family from Palo Alto. Paul has taken to shaking his head and exclaiming, "I can't get over how much the sun shines here!" Indeed, the infamous Minnesota weather has been gentle to CBI so far. This has been one of the mildest winters on record, with no more than three inches of snow on the ground at any one time, and frequent "heat waves" when temperatures have climbed into the 40's. It may not last, but has helped Minnesota make a good first impression on the out-of-staters on the CBI staff, already pleased with the warmth and friendliness of the local populace, and with the myriad cultural and educational activities available in the Twin Cities area.

Linda B. Merims
Editor

The Charles Babbage Foundation
for the History of Information Processing



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