

SCIENCE HISTORY INSTITUTE

JOHN WOOLSTON

Transcript of an Interview
Conducted by

W. Boyd Rayward

at

CIMMYT
Texcoco de Mora, Mexico
on

19 and 21 November 2001

(With Subsequent Corrections and Additions)

CHEMICAL HERITAGE FOUNDATION
Oral History Program
FINAL RELEASE FORM

This document contains my understanding and agreement with the Chemical Heritage Foundation with respect to my participation in the audio- and/or video-recorded interview conducted by W. Boyd Rayward on 19 & 21 November 2001. I have read the transcript supplied by the Chemical Heritage Foundation.

1. The recordings, transcripts, photographs, research materials, and memorabilia (collectively called the "Work") will be maintained by the Chemical Heritage Foundation and made available in accordance with general policies for research and other scholarly purposes.
2. I hereby grant, assign, and transfer to the Chemical Heritage Foundation all right, title, and interest in the Work, including the literary rights and the copyright, except that I shall retain the right to copy, use, and publish the Work in part or in full until my death.
3. The manuscript may be read and the recording(s) heard/viewed by scholars approved by the Chemical Heritage Foundation unless restrictions are placed on the transcript as listed below.

This constitutes my entire and complete understanding.

(Signature) _____

John Woolston

(Date) _____

2013-02-17

OPTIONAL: I wish to place the following restrictions on the use of this interview:

Regardless of any restrictions that may be placed on the transcript of the interview, the Chemical Heritage Foundation retains the rights to all materials generated about my oral history interview, including the title page, abstract, table of contents, chronology, index, et cetera (collectively called the "Front Matter and Index"), all of which will be made available on the Chemical Heritage Foundation's website. Should the Chemical Heritage Foundation wish to post to the Internet the content of the oral history interview, that is, direct quotations, audio clips, video clips, or other material from the oral history recordings or the transcription of the recordings, the Chemical Heritage Foundation will be bound by the restrictions for use placed on the Work as detailed above. Should the Chemical Heritage Foundation wish to post to the Internet the entire oral history interview during my lifetime, I will have the opportunity to permit or deny this posting.

I understand that the Chemical Heritage Foundation will enforce my wishes until the time of my death, when any restrictions will be removed.

This oral history is designated **Free Access**.

Please note: Users citing this interview for purposes of publication are obliged under the terms of the Center for Oral History, Science History Institute, to credit the Science History Institute using the format below:

John Woolston, interview by W. Boyd Rayward at CIMMYT, Texcoco de Mora, Mexico, 19 and 21 November 2001 (Philadelphia: Science History Institute, Oral History Transcript #0226).

Science
History
Institute



Chemistry · Engineering · Life Sciences

Formed by the merger of the Chemical Heritage Foundation and the Life Sciences Foundation, the Science History Institute collects and shares the stories of innovators and of discoveries that shape our lives. We preserve and interpret the history of chemistry, chemical engineering, and the life sciences. Headquartered in Philadelphia, with offices in California and Europe, the Institute houses an archive and a library for historians and researchers, a fellowship program for visiting scholars from around the globe, a community of researchers who examine historical and contemporary issues, and an acclaimed museum that is free and open to the public. For more information visit sciencehistory.org.

ABSTRACT

John Woolston grew up in a suburb of London, England. Though he originally intended to study humanities, he was assigned by his school to the science track. He entered King's College London, where he studied nuclear physics and radio electronics in his physics curriculum. He spent three years in National Service, devising practical solutions for the military effort against the Third Reich. After studying in Paris, France, for several months he returned to England to a job with the Department of Scientific and Industrial Research (DSIR). He and his new wife then moved to Washington, DC, to the British Science Mission, where he was responsible for evaluating designs of computers as a means of organizing information and technologies. Thus arose his interest in modern publication methods.

From DC to England and back to Chalk River, Canada, now working for Atomic Energy of Canada Limited (AECL), where he was Technical Information Officer, Woolston collected, collated, and copied documents; and he became secretary of the library committee, responsible for editing AECL publications and eventually for document security classification, at that point as Head of Technical Information Branch. When the International Atomic Energy Agency (IAEA) was established, Woolston began to attend annual meetings in Vienna, Austria, to discuss the work of the Scientific and Technical Information Division (STI), viz. running a library and documentation service for documents related to peaceful uses of atomic energy. Woolston became Director upon Bernard Gross's retirement. With Lev Issaev and Raymond Wakerling, he established INIS to replace and expand *Nuclear Science Abstracts*.

After three years at INIS, Woolston wanted to return to Canada. Committed to making sure scientific and technological information was managed effectively for the benefit of developing as well as developed nations, he accepted David Hopper's offer of the directorship of the Information Sciences Division in the International Development Research Centre (IDRC) newly established in Ottawa, Canada. There Woolston found that setting up the International System for Agricultural Science and Technology (AGRIS) was more difficult than INIS, even with help of Raymond Aubrac and John Sherrod of Food and Agricultural Organization of the United Nations (FAO). There were political implications and inter-agency debates, as well as intra-agency arguments over the philosophy of information collection, organization, and dissemination. Woolston's beloved mission-orientation and contributor-participation gave way to top-down discipline-orientation. FAO set up World Agricultural Information Centre (WAICENT) to replace AGRIS, which is now in severe decline, while INIS continues to grow.

His objections overruled, Woolston took early retirement and began work on Development Information Science System (DEVISIS), an information system for social and economic development. He spent three years working for the International Center for Agricultural Research in the Dry Areas (ICARDA) and then returned to DEVISIS. The study committee decided to default to INIS's format to perform functions for bibliographic information, abstracts, library information, acquisitions, and retrieval.

Integrated Scientific Information System (ISIS), the cataloging system IDRC had used from the beginning, was in the public domain, but it was too costly for most developing nations, as it required a mainframe computer, so Arthur and Marian Vespry and Kate Wild computerized

ISIS in the service bureau until Faye Daneliuk was able to develop a minicomputer version (MINISIS), and eventually Del Bigio produced a personal computer version called CDS/ISIS (Computerized Documentation Service/ISIS).

Woolston describes many fascinating people, incidents, and occasions during his varied career. He explains his desire to involve participating nations in the contributions to the systems they use. He praises his many colleagues, often adding interesting anecdotes that elucidate their characters. He maintains an optimistic outlook himself, and of course he continues to work in his retirement.

TABLE OF CONTENTS

First Career	1
<p>Growing up in suburbs of London, England, beginning years of World War II. Assigned to science by school administrator. Enters King's College London. National Service at Scientific Research to work on practical projects for military. Culture course in Paris. Job with Department of Scientific and Industrial Research (DSIR); introduction to hardware of early computers. Married, had first child. British Science Mission in Washington, DC. Responsible for evaluating designs of computers; also learning ways to organize information and technologies. Donald Urquhart. John Bernal's concept of separates. P.M.S. Blackett. Mary Alexander. At DSIR managing distribution of separates.</p>	
Atomic Energy	22
<p>Back to England, then to Canada. Working for Atomic Energy of Canada Limited. Takes job of Technical Information Officer, W.B. Lewis his boss, within National Research Council (NRC). Seven hundred scientists involved in Canadian nuclear program; processing fuels after irradiation. Responsible for editing AECL publications, eventually document security classification, at that point as Head of Technical Information Branch. Atoms for Peace Conference in Geneva, Switzerland. Meeting Dag Hammarskjöld. Homi Bhabha; collaboration on Indian reactor. Declassification of documents, increase in publication. Edward Brunenkant, Director of Technical Information US Atomic Energy Commission (AEC) and his dream of international cooperation; International Nuclear Information System. <i>Nuclear Science Abstracts</i>. International Atomic Energy Agency. Lev Issaev and Raymond Wakerling; birth of INIS. Political impediments, Cold War atmosphere at IAEA. Main responsibilities. Giampaolo Del Bigio and Gipsy computer programs. Helga Schmid. Philosophy of information systems; managing input, political considerations. INIS international, cooperative, mission-oriented. "Fairness" of distribution of input versus output.</p>	
Back to Canada	62
<p>After three years at INIS a few issues of Atomindex. International Development Research Centre (IDRC) established in Ottawa, Canada. IDRC set up to help developing nations' research capacities. Determining purpose and policy for new organization more interesting than continuing old. John Sherrod and International System for Agricultural Science and Technology (AGRIS). Sir Thomas Scrivener and Commonwealth Agricultural Bureaux (CAB). Advisory panel debating organization of information. Using IAEA's computer facilities for AGRIS; training, getting developing nations involved. Regional centers. Troubleshooters. Donald Leatherdale. Multilingual AGROVOC: cooperation between European Union and FAO. Links between FAO and INIS. National Agricultural Library (NAL). Disagreements over how to run AGRIS. Woolston's objections to change ignored; World Agricultural Information Centre (WAICENT) set up as sub-subset of FAO. Woolston's retirement from chair of Panel and Implementation Advisory Committee.</p>	

Working after Retirement

85

Devising Development Information Science System. Consists of planning institutions in developing nations and donor countries. Martha Stone successor to Woolston after his early retirement from IDRC. Woolston to International Center for Agricultural Research in the Dry Areas (ICARDA) for three years; then back to DEVSIS. Paul Marc Henry president of steering committee; Woolston director of DEVSIS study team in Geneva. Scope to be similar to INIS' scope; no funding from FAO. Defaulting to ISIS, set of software packages in International Labour Office (ILO); performs functions for bibliographic information, abstracts, library information, acquisitions, retrieval. ISIS in public domain. Arthur and Marian Vespry and Kate Wild computerized when ISIS needed mainframe, but smaller countries unable to afford mainframes. Faye Daneliuk developed minicomputer version (MINISIS); finally able to run ISIS in house and to offer to other countries. License for discount to public-sector organizations, free to developing nations.

Index

99

INDEX

A

AECL. *See* Atomic Energy of Canada Limited
Agricultural Vocabulary, 77, 78, 79
AGRIS. *See* International System for Agricultural Science
and Technology
AGROVOC. *See* Agricultural Vocabulary
Aries, Philippe, 70
Atomic Energy Commission, 1, 31, 34, 35, 43, 50, 67
Atomic Energy of Canada Limited, 22, 23, 24, 26, 27, 29,
30, 35, 36, 40, 61, 64, 66
Atomic Energy Research Establishment, 43
Aubrac, Lucie, 68, 69
Aubrac, Raymond, 67, 68, 69, 70, 72, 82, 84, 91
Avram, Henriette D., 43

B

Barbie, Nikolaus, 68
Bernal, John D., 9, 10, 12, 15, 18
Bhabha, Homi J., 28, 30
Binggeli, Marlene, 54
Brandreth, Michael, 66, 87
Bree, Rudolf, 46, 70
Brunenkant, Edward J., 31, 33, 35, 39, 61, 67, 73, 85
Brunt, Sir David, 7, 14
Buck, Isabella Robson (wife), 7
Buntrock, H., 67, 75, 81

C

CAB. *See* Commonwealth Agricultural Bureaux
Canada, 12, 13, 20, 21, 22, 23, 24, 28, 30, 31, 32, 33, 35,
36, 40, 44, 46, 50, 54, 60, 61, 63, 64, 66, 73, 74, 76, 82,
87, 88, 89, 90, 96
Canadian Institute for Scientific and Technical
Information, 67, 87, 88
Canadian International Development Agency, 64, 66, 85,
88, 91
Catholic University of America, 18
CDS/ISIS. *See* Computerized Documentation Service/ISIS
Chalk River, Ontario, Canada, 23, 24, 27, 28, 31, 34, 35, 36,
40, 42, 46, 61, 64
CIDA. *See* Canadian International Development Agency
CIMMYT. *See* International Maize and Wheat
Improvement Center
CISTI. *See* Canadian Institute for Scientific and Technical
Information
Commonwealth Agricultural Bureaux, 70, 71, 73, 76, 78,
79, 81
Computerized Documentation Service/ISIS, 97
Cornell University, 64
Cummins, John E., 34

D

Daneliuk, Faye, 95, 96
Day, Grace Mildred (mother), 2
de Chantal, Jean, 87, 88
Deep River, Ontario, Canada, 23, 60
Defense Industries Limited, 22
Del Bigio, Giampaolo, 43, 44, 47, 56, 97
Department of Scientific and Industrial Research, 7, 9, 10,
13, 14, 17, 19, 20, 21
Development Science Information System, 59, 85, 87, 88,
91, 92, 93, 94
DEVSI. *See* Development Science Information System
DSIR. *See* Department of Scientific and Industrial Research
Dubois, Gerard, 68, 75

E

Egan, Margaret, 18
Egypt, 71, 76, 90
Eisenhower, President Dwight D., 27
Eklund, Sigvard, 38, 40, 42, 49, 59
electronic numerical integrator and computer, 9, 11
England, 2, 6, 7, 8, 9, 11, 12, 15, 23, 24, 35, 36, 43, 46, 55,
68, 69, 71
ENIAC. *See* electronic numerical integrator and computer
Euratom [European Atomic Energy Community], 37, 44,
45, 46, 56

F

FAO. *See* Food and Agriculture Organization of the United
Nations
Fishenden, Martin, 31, 34, 35, 36, 40
Food and Agriculture Organization of the United Nations,
50, 54, 56, 60, 67, 69, 70, 71, 72, 73, 74, 75, 77, 78, 79,
80, 82, 83, 84, 89, 91, 93
France, 5, 6, 22, 27, 55, 68, 70, 71, 79, 82
Fry, Bernard M., 18

G

Geneva, Switzerland, 27, 28, 30, 31, 32, 33, 34, 59, 61, 64,
86, 91, 92, 95
Gilchrist, James, 47, 48
Gottschalk, Charles, 34
grants/funding, 5, 6, 75
Greenwood, Ward, 36, 38
Gross, Bernard, 34, 35, 36, 39, 40, 41, 58

H

Hammarskjöld, Dag H.A.C., 29

Harvard University, 8
Harwell Science and Innovation Campus, 31, 43
Head, Ivan, 88, 89, 90
Herner, Mary Alexander, 10, 17, 20, 21, 22
Herner, Saul, 20
Hopper, W. David, 63, 64, 65, 66, 70, 86, 88, 91, 92, 96
Hybner, Jiri, 54, 72

I

IAEA. *See* International Atomic Energy Agency
IBM. *See* International Business Machines
ICARDA. *See* International Center for Agricultural Research
in the Dry Areas
IDRC. *See* International Development Research Centre
ILO. *See* International Labour Office
India, 28, 32, 33, 42, 64, 65, 70
INIS. *See* International Nuclear Information System
International Atomic Energy Agency, 34, 35, 40, 43, 44, 45,
46, 47, 48, 49, 50, 51, 52, 53, 54, 59, 68, 77, 82, 93
International Business Machines, 8, 11, 25, 47, 48, 51, 56,
94, 95, 96, 97
International Center for Agricultural Research in the Dry
Areas, 84, 90
International Development Research Centre, 57, 60, 63,
64, 65, 66, 67, 70, 73, 74, 75, 76, 77, 82, 83, 84, 85, 86,
87, 88, 89, 90, 91, 92, 93, 95, 96, 97
International Labour Office, 59, 86, 91, 92, 94, 95, 97
International Maize and Wheat Improvement Center, 74,
86, 87, 93
International Nuclear Information System, 32, 34, 37, 38,
39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 50, 51, 52, 53, 54,
55, 56, 57, 58, 59, 60, 61, 65, 70, 71, 72, 78, 79, 80, 85,
92, 93, 94
International System for Agricultural Science and
Technology, 46, 50, 51, 54, 57, 67, 70, 71, 72, 73, 74,
75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 91, 92, 93, 94
Israel, 57, 83, 96
Issaev, Lev L., 36, 37, 38, 44
Italy, 33, 43, 67

J

Jackson, Eugene B., 18
Johnson, President Lyndon B., 69
Joliffe, Christopher, 8, 14
Joliot-Curie, Frédéric, 6
Journal of Documentation, 12

K

Kennedy, President John F., 33
Keren, Carl, 57
King, Alexander, 5, 10, 11, 17
King's College London, 4
Kissinger, Henry, 69

L

Leatherdale, Donald, 73, 77, 78, 83
Lebanon, 82, 92
Lebowitz, Abraham I., 43, 67, 83
Lendvay, Olga, 73
Lewis, Wilfred B., 24, 25, 27, 28, 29, 30, 61, 62, 63
Library of Congress, 35, 43
London, England, 2, 4, 5, 6, 10, 11, 12, 15, 18, 28, 46
Luxembourg, 47, 77, 78

M

Mangstl, Anton, 80, 81, 83
Manhattan Project, 22
Massachusetts Institute of Technology, 8, 68
McFarlane, Angus, 10
Mexico, 57, 62, 86, 95, 97
MINISIS, 96, 97
MIT. *See* Massachusetts Institute of Technology
Montréal, Québec, Canada, 13, 23, 30, 91
Moscow, Russia, 42, 54, 58, 59

N

NAL. *See* National Agricultural Library
National Agricultural Library, 67, 76, 77, 78, 79, 81, 83
National Research Council, 13, 22, 64, 65, 87
National Science Foundation, 10, 18
National Technical Information Service (NTIS), 18
NSF. *See* National Science Foundation
Nuclear Science Abstracts, 31, 32, 34, 39, 40, 52

O

Oak Ridge National Laboratory, 1, 31, 32, 65
OECD. *See* Organisation for Economic Co-operation and
Development
Organisation for Economic Co-operation and
Development, 11, 17, 66, 91, 92
Ottawa, Ontario, Canada, 21, 23, 26, 35, 36, 60, 63, 64, 73,
78, 86, 90, 91

P

Paris, France, 5, 6, 19, 27, 43, 45, 46, 66, 68, 82, 89, 91, 94,
97
patent, 11, 15, 26, 51
Pelzer, Charles, 61
Philadelphia, Pennsylvania, 8, 11
Prague, Czechoslovakia, 54, 72, 73, 74
publish/publication, 2, 10, 12, 13, 15, 16, 24, 26, 31, 35,
41, 42, 52, 68, 71, 74, 76, 85, 93

R

Rolling, Loll N., 37, 44
Rome, Italy, 67, 68, 69, 70, 72, 73, 74, 78, 80, 83, 84, 91

S

Samaha, Emile, 80, 82, 85
Schmid, Helga, 56, 73, 78, 81, 84
Scientific and Technical Information Division, 34, 35
Scientific Research-1, 5, 6, 17, 19
Scrivener, Sir Thomas, 70, 72, 76
Shannon, Robert, 32
Shapiro, Louis, 91, 93
Shaw, Ralph, 18
Shera, Jesse H., 18
Sherrod, John, 34, 35, 36, 37, 67, 70, 77
Singapore, 65, 85, 86, 88
STI. *See* Scientific and Technical Information Division
Stone, Martha, 87, 88, 89
Syria, 57, 90

T

Tell, Bjorn, 54
Tennessee, 31, 32
Thompson, George, 92, 94, 95
Thunder Bay, Ontario, Canada, 13
Tikhonov, Igor, 45, 54, 60
Todeschini, Claudio, 47, 78
Trinidad, 42, 70, 76
Trudeau, Prime Minister Pierre, 88

U

U.K.. *See* United Kingdom
U.S. Department of Commerce, 18
U.S. Department of State, 35
UNDP. *See* United Nations Development Programme
UNESCO. *See* United Nations Educational Scientific and Cultural Organization
Union of Soviet Socialist Republics, 32, 36, 37, 38, 39, 41, 42, 44, 45, 54, 56, 79
UNISIST. *See* United Nations International Scientific Information System
United Kingdom, 10, 21, 22, 27, 35, 36, 40, 44, 70, 81, 82

United Nations, 27, 28, 32, 44, 50, 59, 66, 67, 80, 82, 85, 91, 95
United Nations Development Programme, 91, 92, 93
United Nations Educational Scientific and Cultural Organization, 34, 43, 44, 60, 86, 97
United Nations International Scientific Information System, 44, 45, 46, 50, 51
United States of America, 1, 8, 9, 10, 17, 18, 22, 24, 28, 31, 33, 34, 35, 36, 37, 38, 39, 41, 43, 44, 48, 50, 51, 56, 59, 65, 67, 68, 76, 77, 79, 80, 96
University of Chicago, 18
University of London, 13
University of Manitoba, 36
Urquhart, Donald J., 9, 10, 11, 12, 13, 17, 19, 20, 21

V

Vaden, William M., 32, 44
Vespry, H. Arthur, 42, 86
Vespry, Marian, 86, 95
Vick, F.A., 19
Vienna, Austria, 32, 34, 35, 36, 37, 38, 40, 41, 42, 45, 46, 47, 48, 54, 55, 56, 57, 58, 59, 60, 61, 63, 67, 73, 78, 82, 85, 86, 95, 97

W

Wakerling, Raymond K., 32, 35, 37, 38
Wales, 4
Washington, D.C., 8, 10, 11, 12, 17, 18, 20, 21, 22, 23, 31, 33, 35, 74, 83
Weinberg, Alvin M., 1, 65, 71
Wenske, G., 45
Wild, Kate, 66, 92, 95, 96
Williams, Geoffrey, 54
Wong, Lang, 65, 85, 86
Woolston, Eric Claud (father), 2
World Bank, 88, 90, 94
World War I, 2, 7
World War II, 4, 5, 6, 7, 10, 11, 15, 19, 21, 22, 24, 32, 37, 46, 57, 67, 69
Wysocki, Adam, 44, 45

Z

Zheludev, Ivan S., 42, 54, 58