SCIENCE HISTORY INSTITUTE

LAWRENCE B. EVANS

Transcript of an Interview Conducted by

Richard Ulyrch and Robert O. Kenworthy

at Rive Technology Corporate Headquarters Cambridge, Massachusetts

> on 18 January 2012

(With Subsequent Corrections and Additions)

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LAWRENCE B. EVANS

LAWRENCE B. EVANS

1934 Born in Fort Sumner, New Mexico on 27 October

Education

1956	BS, Chemical Engineering, University of Oklahoma
1957	MSE, Chemical Engineering, University of Michigan

1962 PhD, Chemical Engineering, University of Michigan

Professional Experience

Massachusetts Institute of Technology

- 1962-1968Assistant Professor of Chemical Engineering
- 1968-1974Associate Professor of Chemical Engineering
- 1972-1974 Executive Officer Chemical Engineering Department
- 1974-1990 Professor of Chemical Engineering
- 1976-1981 Principal Investigator of the ASPEN (Advanced System for Process Engineering) Project at M.I.T.

Private Consultant

1962-1981 Consultant to numerous companies including: Arthur D. Little, The Badger Company, Cabot Corporation, Cities Service, EG&G, The Foxboro Company, General Electric, Kennecott Copper, Metcalf and Eddy Engineers, Mobil Research Laboratories, Norton Research Corporation, Occidental Research Corporation, Pittsburgh Chemical Company and Union Carbide Corporation.

Computer Aids for Chemical Engineering (CACHE)

- 1971-1974 Member, CACHE Committee, National Academy of Engineering1974 Cofounder, CACHE Corporation
- 1974-1980 Executive Officer and Treasurer, CACHE Corporation

Aspen Technology, Inc

- 1981-2002
 Chairman and CEO

 2002-2004
 Chairman
- 2005 Retirement

Rive Technology
Cofounder
CEO
Retirement

Honors

1966-1967	United Engineers and Constructors Preceptorship
1978	Elected Corresponding Member of the National Academy of Engineering of
	Mexico
1979	Merck, Sharp and Dohme Lecturer, University of Puerto Rico
1980	Donald L. Katz Lectureship, University of Michigan
1982	Computing and Systems Technology Division Award, American Institute of
	Chemical Engineers (AIChE)
1997	Entrepreneur of the Year, New England High Technology
1999	Named one of seven US. Heroes of Manufacturing, FORTUNE
1999	Alumni Society Merit Award, Department of Chemical Engineering, University
	of Michigan College of Engineering
2001	Elected to the National Academy of Engineering
2002	Award for Personal Achievement in Chemical Engineering, Chemical
	Engineering magazine
2003	Elected, University Of Oklahoma College Of Engineering Distinguished
	Graduates Society member
2003	Engineering Achievement Award, Engineering Construction Contracting
	Association
2011	Richard J. Bolte Sr. Award for Supporting Industrries, Science History Institute

ABSTRACT

In his oral history Lawrence Evans begins by describing his parents and early life in New Mexico and Oklahoma. He describes the important influence that his father, a pharmacist by training, had in shaping an interest in the sciences. He talks about his early education and the decision to major in chemical engineering at the undergraduate level and to eventually pursue graduate studies in chemical engineering at the University of Michigan. He describes the graduate program at UM and his early encounters with computers and computer programming.

Evans tells how after receiving his PhD he came to MIT as an Assistant Professor of Chemical Engineering with funding through a two-year fellowship from the Ford Foundation. He talks about his early teaching at MIT, his early graduate students, and some consulting work he did. He tells how he became increasingly more interested in discovering how computers can be used to solve chemical engineering problems, and talks about his efforts to increase his knowledge in this area through research and writing. He talks of the formation of the CACHE committee, the work of the committee, and how he eventually became president of the group. He discusses in detail the Aspen Project and his decision at the end of the project to form a company based on Aspen's work. He notes that he was inspired in this by the example of others at MIT who had successfully gone on to careers as entrepreneurs. He describes the formation of AspenTech and names many of the key early players and investors. He describes how AspenTech was able to expand; its early Europe focused strategy; its success against ChemShare and Simulation Sciences; its IPO, and other key events in the history of the firm. Evans provides a frank description of SEC actions with regard to him and several executives at AspenTech. He talks of his departure from AspenTech in 2005; his presidency of AIChE, his introduction to Javier Garcia-Martinez, and his decision to help establish a company based on Garcia-Martinez's technology, Rive Technology. The oral history concludes with Evans reflecting on what the future holds for him as well as reflecting back on the values/principles that have guided his life's work.

INTERVIEWERS

Richard Ulyrch is Director of Institutional Grants and Strategic Projects at the Chemical Heritage Foundation. He has studied history at the graduate level at Indiana University and Jagiellonian University. He also has an advanced degree in linguistics from Indiana University.

Bob Kenworthy is a chemist who, after over four decades of employment in the chemical industry at DuPont, Rollins Environmental Services and elsewhere, was retained by the Chemical Heritage Foundation as its Manager of Affiliate Relations.

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"I'm a native of New Mexico, but I grew up in Oklahoma." Born in Fort Sumner, New Mexico in 1934 to Marval Darrow and Ruby Lee Lyon Evans. Parents' backgrounds. Early years in New Mexico and Oklahoma. Household valuing education. Time in high school; graduated as valedictorian. Father nurturing Evans' love of chemistry; father's work at the drug store as well as teaching; father's experiments at home. High school chemistry and physics. Labs at the Central State University.

College Years

Father teaching at the Central State University. Reason for choosing chemical engineering as major. Transferring to University of Oklahoma. Pledging Phi Kappa Psi at OU. Influential professors. First job in chemical engineering during his junior year, Shell Oil. Deciding what path to take after graduation: to enter the workforce or to attend graduate school. Advice from father and peers to attend graduate school. Decision to pursue a doctoral degree.

Graduate School, University of Michigan

Traveling to Michigan without housing plans. Living in the Phi Kappa Psi house. Description of the Chemical Engineering Department at the University of Michigan: professors, students, fraternity, courses. Working at IBM's Applied Science Group in Houston, Texas, Summer 1957. Passing qualifying exam and selecting a thesis topic, 1958. Conducting thesis research without financial support.

"Michigan was great. MIT was terrific."

Fellowship position at MIT's Chemical Engineering Department as an assistant professor, Fall 1962. One of the only staff in his department without a PhD from MIT. Early research, courses, and graduate students at MIT. Marriage to Beverley Ann Broughton. Original two-year appointment at MIT extended one year, then for three years more. Obtaining tenure in 1970. Student protests, faculty reactions. Camaraderie among MIT faculty.

Establishing a Name for Himself While at MIT

Consulting work while at MIT. Aspen Project at MIT with Paul Gallier, Joe Boston, and Herb Britt. David Koch's role. Process Simulation Associates. Computer Aids for Chemical Engineering (CACHE); formation of and involvement with the CACHE Committee. Making FLOWTRAN system available for use in education. Development of CACHE Corporation. Programs submitted to CACHE. Comparing the early use of computers in industry versus academia.

Aspen to the Rescue – The Energy Crisis

1973 Energy Crisis. Department of Energy funding to develop a next-generation simulation software system for synthetic fuel plants. Beginning of the Aspen Project at MIT. Monsanto selling Aspen the rights to the FLOWTRAN program, putting

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FLOWTRAN in the public domain. Aspen housed in the historic Building 20 at MIT. Members of the Project. Aspen's Advisory Committee: representatives from 50 companies; their responses to the project. Evans takes the lead as the Principal Investigator. Overcoming obstacles.

AspenTech – "We captured people's imagination."
Founding AspenTech in 1981. Early subscriptions to Aspen Plus. Early competition. AspenTech expands outside the United States. Overcoming challenges in 1983.
AspenTech software entering the mainstream. AspenWorld conferences. Postponing an IPO in 1990. Successful IPO in 1994. Reflections on changes at MIT over the years. Decision to resign position at MIT and devote full-time to AspenTech. AspenTech acquires companies, 1994-2001. The Internet's effect on AspenTech.

Having the Mindset to Run a Company

Stepping down as CEO of AspenTech, 2002. Retirement from AspenTech's Board, 2005. Reflections on greatest accomplishments while at Aspen. Management style over the years. Investigation of AspenTech financial reporting 2004.

Breaking the Record as the Oldest Entrepreneur in the Room 84 Formation of Rive Technology, 2005. Javier García-Martínez and Zeolite. Setting up labs for Rive. Collaboration with W.R. Grace. Presidency of AIChE and implementing the AIChE strategic plan. Past involvement with AIChE. Future plans after a retirement from Rive. "If you look at my career, it hasn't had a laser-focused direction. It's been a series of different things."

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