

# INTERVIEW

with Eugene Garfield

## Eugene Garfield Turns 80

by PAULA J. HANE

The founder of ISI (Institute for Scientific Information), now part of Thomson Scientific, was in his office on Monday morning (as he is every day—at least, when he's not traveling the world giving talks to researchers).



Eugene Garfield

Eugene Garfield, known far and wide as the pioneer of citation indexing and analysis, was just days away from his 80th birthday (Sept. 16), when I caught up with him. Instead of partying with friends and family on his big day, he was going to Chicago to give a keynote address about journal impact factors to the 5th International Congress on Peer Review and Biomedical Publication.

"I'm not retired," he said. There seems to be no slowing down for this renaissance man, who has been a chemist, information scientist, editor, publisher, database producer, and "science communicator," as he described himself in our *Information Today* interview 5 years ago (<http://www.infotoday.com/it/nov00/hane.htm>).

### Groundbreaking Vision

Fifty years ago (on July 15, 1955), Garfield published his groundbreaking paper on citation indexing: "Citation Indexes for Science: A New Dimension in Documentation through Association of Ideas." His paper envisioned tools that would allow researchers to expedite their research process, evaluate the impact of their work, spot scientific trends, and trace the history of modern scientific thoughts.

In 1964, Garfield introduced the first *SCI* (*Science Citation Index*); it was a five-volume print edition that indexed 613 journals and 1.4 million citations. Two years later, *SCI* became available on magnetic tape and was later released on CD-ROM, along with the Social Sciences and Arts & Humanities citation indexes. These were later combined in a Web environment, and the Web of Science was born.

The Web of Science now provides access to current and retrospective bibliographic information, author abstracts, and cited references found in 8,700 scholarly, science, and technical journals covering more than 100 disciplines dating back to 1900. The Web of Science is a major component of the ISI Web of Knowledge (the integrated, Web-based platform from Thomson Scientific).

"Garfield's vision was ahead of its time," said Henry Small, chief scientist of Thomson Scientific. "He saw the potential of citation searching for researchers, but it took 40 years for the technology to advance to the point that allowed his vision to be fully realized."

### Visualize It

Since our interview in 2000, Garfield has been working with several colleagues on the development of HistCite, a software solution to aid researchers in visualizing the results of literature searches in the

Web of Science. It provides perspectives and information not available from the Web of Science.

HistCite creates informative data tables and graphs in an HTML format that are readable in a Web browser. Once a marked list of papers has been created, the resulting export file is processed by HistCite to create tables ordered by author, year, or citation frequency as well as historiographs, which include a small percentage of the most-cited papers and their citation links.

HistCite is a software implementation of algorithmic historiography, which Garfield first worked on back in 1964 for a genetics project. The computer technology has finally advanced to the point of making the analysis and visualization of such data feasible for researchers.

Garfield gave a presentation at the June ALA annual meeting in Chicago about HistCite and the Web of Science called "Identifying Core Literature Through Citation Analysis and Visualization." He provided interesting examples, including a keyword search on "digital librar\*." (The paper is available at Garfield's Web site.) The HistCite Web site also offers several dozen publicly available HistCite files.

Garfield said that evaluation copies have been sent to about 100 people, and he is developing another beta group now. He expects to commercialize the software in the next several months. He has talked with Thomson about the possibility of marketing it, but "there's no guarantee" this would happen. At this point, Thomson Scientific has not been involved with the software.

### In His Spare Time ...

As president and founding editor of *The Scientist*, a biweekly news journal for life scientists based in Philadelphia,

Garfield said he still sees all copy before it is published.

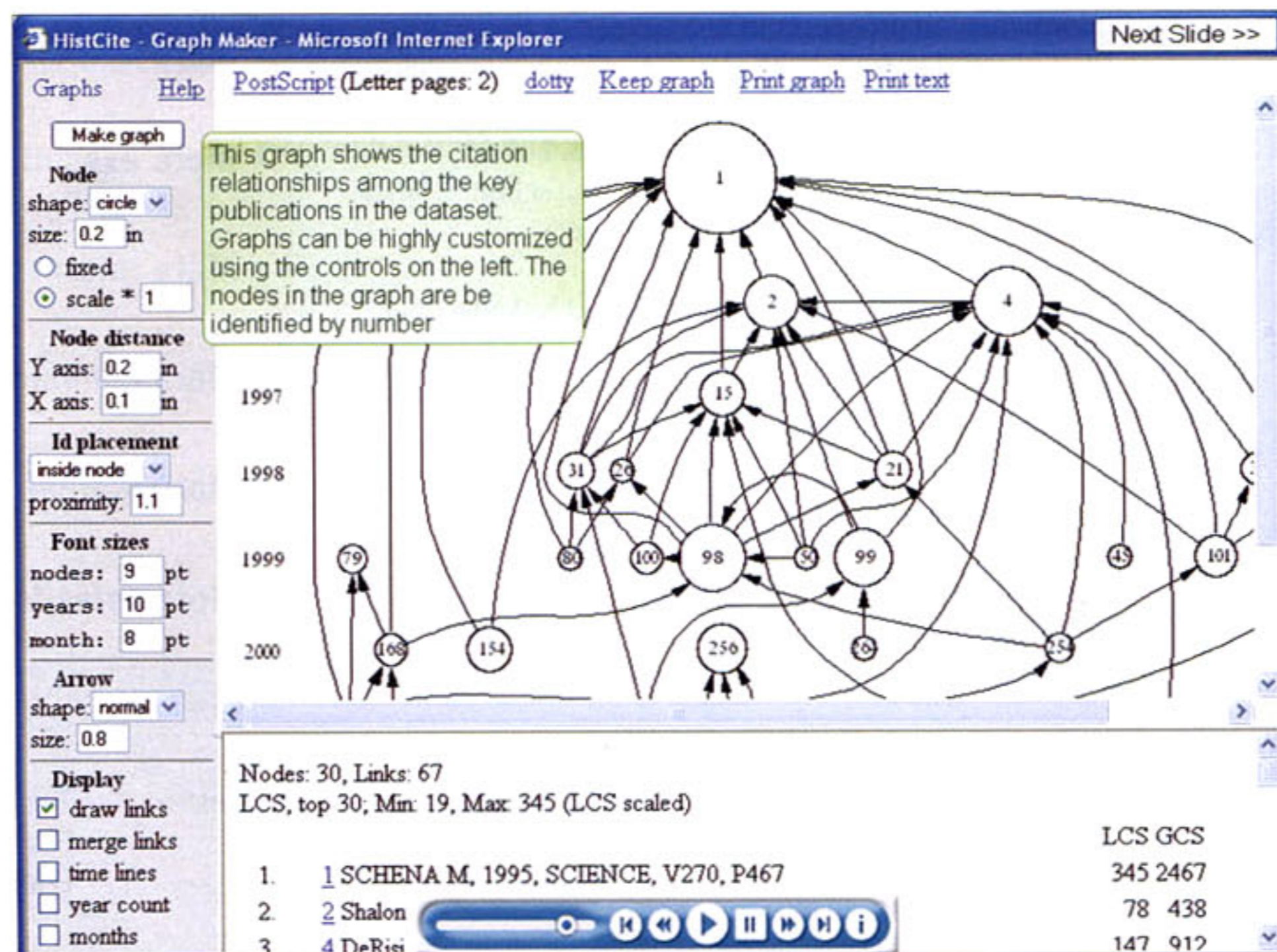
Garfield is also on the board of Research America, an advocacy group that seeks funding for medical and health research in both public and private sectors. The group also works "to raise awareness of the importance of effective collaboration among the nation's government, industry, academic, and philanthropic research sectors."

There's more: He's on the board of overseers for the University of Pennsylvania Libraries as well as the board of overseers of the Temple University Health System, Inc., not to mention that he's a recent past president of ASIST. The list goes on and on.

Just after admitting he has slowed down his travels just a bit, Garfield began talking about his recent trip to Stockholm for the 2005 meeting of the International Society for Scientometrics and Informetrics (ISSI). He said he had also taken time to go kayaking and swimming in Maine with friends this summer.

I told Garfield that I would call him again on his next big birthday. To that, he said, "I hope you'll still be around." I was actually tired when I got off the phone.

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HistCite: Software to visualize literature search in the Web of Science

### Links

**Garfield's Web site**  
<http://garfield.library.upenn.edu>

**HistCite**  
<http://www.histcite.com>

**The Scientist**  
<http://www.the-scientist.com>

**Research America**  
<http://www.researchamerica.org>

**Web of Science**  
<http://www.isinet.com/products/citation/wos>

**Thomson Scientific**  
<http://www.scientific.thomson.com>

**Fifth International Congress on Peer Review and Biomedical Publication**  
<http://www.ama-assn.org/public/peer/program.html>

**International Society for Scientometrics and Informetrics**  
<http://www.issi-society.info>