- 12. CBI OH 336, p. 12.
- 13. CBI OH 336, p. 16.
- 14. CBI OH 336, p. 17.
- 15. B. Goldstein, "ADAPSO 25th Anniversary Speech," 1986, ADAPSO Records (CBI 172), Charles Babbage Inst., Univ. of Minnesota, Minneapolis, pp. 6-7. The resulting controversy spread beyond ADAPSO itself, and was reported on in D.R. Brousell, "The Domino Theory," Datamation, vol. 32, 1 Dec. 1986, pp. 20-21.

-Thomas Haigh

Biography



Frank Lautenberg

Frank Lautenberg's background was different from the technical experience as a programmer or data processing manager held by most founders of software product and timesharing firms. Indeed, he never learned much about computers. Lautenberg's firm, Automatic Data Processing, was never a general-purpose service bureau. Instead, it offered particular business services, initially payroll processing, and eventually began to use computer technology as a way to process this work more efficiently and benefit from economies of scale.

Lautenberg's story of his own life, polished to a fine sheen during his political campaigns, is that of the striving working class entrepreneur who never forgot where he came from. His own Web site unashamedly billed this as a "Classic American Tale." Born in 1924, Lautenberg grew up in Patterson, New Jersey, then a major center of silk production. His immigrant father, grandfather, and uncle all worked in this industry, and died early of diseases he believes were triggered by their working conditions.

After graduation from high school, Lautenberg seemed headed for a similar life of manual work in the neighborhood. He was diverted from this path through wartime enlistment in the Army Signal Corps—or more precisely, the government-funded college education that followed courtesy of the GI Bill. After graduating from Columbia, Lautenberg was working as a sales-management trainee for the Prudential Insurance company when he rereestablished contact with Henry Taub, a neighborhood acquaintance. Taub, a young accountant, was running a tiny and struggling business called Automatic Payrolls. Founded in 1949, its partners collected mountains of time sheets from their clients every week, and prepared the pay slips and checks together with whatever summary reports were needed. Each employee account brought in a fee of 25 cents for each weekly pay period, and processing was largely manual, which meant that their business model hinged on hard work, low margins, and long hours. The firm's only other edge over potential competitors was the ability of Joe Taub, Henry's younger brother, to read a time card at a glance.¹

Lautenberg began selling payroll service alongside insurance policies. This went well enough that in 1954 he went to work full-time for Automatic Payrolls as a third partner and its fifth employee. His sales skills and energy brought in enough new business to expand the company, but it remained arduous and repetitive work. Their only mechanical aid came from bookkeeping machines and Comptometer adding machines, both widely used since the 1910s.

Lautenberg recalls that he "used to sell during the daytime and then come in at night and do the payroll," often returning home well after midnight and rarely taking weekends off.² In 1957, however, the firm installed its first tabulating machines. At the same time, it changed its name to Automatic Tabulating Service, to capitalize on this technological edge. At this point the market for punched card machines was still growing rapidly, particularly in smaller businesses, despite increasing widespread use of computers among the largest firms.

With the electromechanical processing of punched cards came the separation of the dataentry task of punching employee information onto cards, handled mostly by young mothers working part time. The mathematical, reporting, and printing tasks that had formerly been inseparable from this work were now handled by tabulating equipment and a new kind of employee: the tabulating machine operator. Lautenberg, like the other partners, never got particularly involved with the machines, although he did appreciate the need to keep his "temperamental tabulating managers" happy and productive. As he recounts, "we almost shackled them to the machines because we couldn't afford to be without them."3

The next big technological step for Automatic Tabulating Service came in 1961. Its IBM account representative—traditionally a man who knew more about the working of a firm's tabulating department than any of its own employees—convinced the partners that they would be able to process an ever-rising tide of payroll cards more effectively if they added a model 1401 computer to their array of punched-card machinery. Though much less powerful than IBM's flagship computer lines, the 1401 was also far less expensive. This made it cost effective for busy punched card installations, because it came with a high-speed printer and could be integrated with conventional punched-card equipment.

Even a simple and practical programmable computer was, however, a programmable computer, and so Lautenberg and the Taubs found themselves newly reliant on programmers as well as tabulating managers. With the 1401, many of the procedures formerly carried out by punched-card machine operators manually shifting decks of cards between machines now took place automatically as the machine stepped through its program. Once a program was working, operators could run it with little knowledge of its inner workings.

This had important businesses implications for a fast-growing business with a need to standardize its services. Lautenberg remembers that once they finished the programming,

When we made an acquisition in Miami, Florida, or Boston, Massachusetts, or Cleveland, Ohio, or wherever, we could send the service process out and have it working. It standardized the market.⁴

In 1961, the firm went public. It was still very small, with little more than \$400,000 in annual revenues, about \$35,000 of which was pre-tax profit. The offering was inspired by the desire of the partners—Lautenberg included to "put their hands on some money" and thus actualize their escape from the threat of poverty. By selling Automatic Tabulating as a hot technology firm, they caught the tail end of a stock market boom, centered particularly on electronics firms. A second stock offering followed in 1965, when as Lautenberg recalls, it was aided by the ability of the underwriters to "blow up" the introduction of the IBM 360 range as "perhaps the coming of the space age."

While its steady flow of work meant that the company had no particular need of the cash to finance its operations, it did begin to use its stock as a way of acquiring other small service firms, with revenues of a few hundred thousand dollars. The deal would usually include stock options, giving the managers of the acquired center a personal incentive to contribute to its future prosperity. This process became crucial to the firm's success, so that by the mid-1970s, 40 percent of the firm's top managers had entered it through acquisitions.⁵ By the end of Lautenberg's reign in 1982, the company had successfully concluded more than 100 acquisitions.⁶

To promote its link with the new and alluring world of computer technology, the firm changed its name again. Automatic Tabulating Service became Automatic Data Processing (ADP). This formerly generic term, a variation of Electronic Data Processing (EDP)—used to describe the administrative use of computers and punched-card machines—became a protected corporate trademark. The new name was more modern than its suddenly passé predecessor, but was also less restrictive regarding the type of work performed.

In Lautenberg's view, the most important technological transition during his time with ADP came when the firm began to use the IBM 360 series in the second half of the 1960s. This shift required more programmers, prompting the firm to acquire a small programming company to recruit its talent. ADP also took on more managers with computer industry experience, including Bruce Anderson, an ex-IBM manager who rose during the 1970s to become executive vice president. While Lautenberg remembers giving high salaries and advanced technologies to the growing technical staff, he also emphasizes that service expertise in the firm's business had very little overlap with processing expertise, because "one didn't have to have that knowledge all bundled into one person."7

Though Lautenberg did not say so, it is clear that ADP looked for service rather than processing expertise in its top managers. Crucial as computer technology had become to his business, he retained his sense of technology as a tool, knowledge of which should be delegated to specialists. In this it was not so different from the fleets of agile Volkswagens ADP deployed to pick up time cards and deliver pay checks.

Lautenberg was active within ADAPSO during the 1960s. He had participated in the association's activities since its early days, attending its sixth Management Symposium in January 1963.⁸ He formally joined ADAPSO in August 1964.⁹ Lautenberg became ADAPSO president in 1967, after serving as vice president the previous year. It remained a small, informal organization at this point, and was still administered by its elderly founder W.H. Evans. Lautenberg recalls visiting Evans' home office "to see what it was that I was going to be president of" and feeling that "I wouldn't want to work there because it had no dynamic to it."¹⁰

In 1969, Lautenberg became president of



Figure 1. Lautenberg around his time as ADAPSO president.

ADP following the retirement of Joe Taub. His primary goal as the company's president was to broaden the scale of its activities beyond payroll operations and into other kinds of administrative processing services. The first major diversification was the creation of a back-office records service for brokerage firms. This ultimately became very successful, and provided a second major source of income for ADP. In the early 1980s, its financial services business expanded further as it built data networks designed for banking and electronic funds transfers, then a much-hyped new area with obvious connections to the direct bank deposit of payroll funds. ADP built a network to service banks offering their customers online banking (which developed much more slowly than initially expected), and to operate a system of ATMs.11

Lautenberg's role changed again in 1977, to chairman and chief executive. Acquisitions continued at a rapid pace, so that after more than 50 takeovers, ADP had a network of 45 computer centers and annual revenues of 250 million dollars.12 Five years later, when Lautenberg stepped down from ADP, this had risen further to 669 million dollars.¹³ At that point, its earnings per share had risen each year of the past decade, averaging a 22 percent annual increase.¹⁴ This, in turn, had made its stock attractive during a long period in which investors shunned computer-related stocks, underpinning a string of acquisitions at a time when few of its targets could expect to go public themselves.15

Throughout the 1970s, ADP continued to modernize its payroll operations, including a gradual shift toward online data entry from the late 1970s onward. This followed the 1975 acquisition of Cyphernetic Corp., giving ADP an entry into the world of online services.¹⁶ Unfortunately, remote data entry introduced its own problems, making it harder to correct mistakes.¹⁷ Continued acquisitions brought ADP into different areas of business, including estimation of the damage from auto collisions. This was a seed of what became a large and successful ADP division supplying many kinds of automated systems for auto dealers and for estimating insurance claims.

Lautenberg left ADP in 1982, when he won election to the US Senate from the state of New Jersey. This was his first run for elected office, and he prevailed in a chaotic primary by spending three and a half million of his own dollars. (In one of the scandals that regularly enliven politics in New Jersey, his predecessor had vacated the seat unexpectedly after accepting bribes from FBI agents posing as rich Arabs). This was not, however, Lautenberg's first trip to the Senate. Early in ADAPSO's political involvement, he had testified before a Senate committee concerning the entry of banks into the payroll-processing field.

Lautenberg built a campaign platform around his business success, arguing that the same skills would work in government. This was much the same message adopted by Ross Perot-another former ADAPSO member-a few years later. Given Lautenberg's standing as one of the Senate's most liberal members, this was a smart counterbalance to remind voters that he was no hippie. Lautenberg successfully blended the mythic appeal of the self-made businessman with eloquent descriptions of his family's suffering, emphasizing his blue-collar background and concern for working people. His scrappy version of success made him in many ways an ideal representative for New Jersey. Despite its reputation for tawdry industrial decline and gritty waterfronts, the state today boasts both a patchwork of thriving, small-business-heavy immigrant communities and the highest median household income of any of the United States.

As senator, Lautenberg did promote some measures of interest to ADAPSO and the computer services industry, although primarily as part of a more general advocacy for technology firms. These included support for research and development tax credits, new laws to extend patent protection to industrial processes, and the creation of stronger international systems for intellectual property protection. He was a cosponsor of the 1987 Information Age Commission Act, which was passed by the Senate but never adopted by the House. This would have created a national forum for discussion of the social implications of information technology. ADAPSO backed the bill, although most other computer-related trade associations opposed it. Lautenberg also pushed for greater use of computers in schools. Among his particular areas of interest were improvements to the Small Business Agency and support for microloans and training for small businesspeople.

He toiled to bring spending to and facilities for his own state, something all senators take very seriously but at which Lautenberg proved particularly adept. As well as housing projects, military bases, transportation improvements, and environmental cleanups, these included a particular emphasis on applied science research centers intended to boost New Jersey's standing as a technology center.

He sponsored a number of laws in other areas, including education, gun control, and drunk driving. Lautenberg himself feels that one of his most important successes was the banning of smoking on airplanes, which he sees as the spark of other public health measures to eliminate smoking in public places. While he never courted the limelight, and is seldom praised for his oratory, Lautenberg's quiet-yet-dogged style produced an impressive record of pragmatic legislation in pursuit of his liberal goals. Since Republicans controlled either the White House or Congress for most of this period, this is a testimony to his command of Senate procedures, his negotiating skills, and his ability to engineer legislation able to obtain a consensus.

Lautenberg's career as senator was granted an unusual second act in 2002. In September, as the election neared, it became apparent that New Jersey senator Jim Torricelli was about to become the first Democratic candidate to lose a Senate race in the state since 1972. Although voters had no particular fondness for his Republican challenger, persistent reports of ethical abuses by Torricelli had disillusioned even the long-suffering electorate of New Jersey. Afraid that the loss of even one seat would jeopardize their precarious control of the Senate, Democratic leaders persuaded Torricelli to withdraw from the race. Torricelli and Lautenberg had publicly feuded during their four years together in the Senate-a relationship that had contributed to his earlier decision to retire. In a chaotic process, and after waging a reported vigorous lobbying campaign, Lautenberg was drafted as a replacement candidate. Although the legal deadline for such replacements had passed, the move was ratified by the New Jersey

Background of Frank Lautenberg

Education: Columbia University, BSc 1949 (Economics). Professional experience: Army Signal Corps, 1942–1946; Prudential Insurance Company, salesman, 1949–1954; Automatic Payrolls/Automatic Tabulating Service/Automatic Data Processing, various positions, 1954–1969, president, 1969–1977, chairman and chief executive, 1977–1982; United States Senate, 1982–2000 and 2002–present.

Supreme Court. Lautenberg went on to win reelection after a truncated five-week campaign, during which his lead was never seriously challenged. Returned to the Senate, he now sits with the minority on the Commerce, Science, and Transportation and Government Affairs committees.

References and notes

- Like much of the material in this biography, this information is taken primarily from F. Lautenberg, "Oral History Interview by Paul Ceruzzi, 03 May, Washington DC," 2002, OH 369, Charles Babbage Inst., Univ. of Minnesota, Minneapolis. This source is cited hereafter as CHI OH 369.
- 2. CBI OH 369, p. 5.
- 3. CBI OH 369, p. 10.
- 4. CBI OH 369, p. 5.
- Anonoymous, "The Acquisition Binge in Computer Services," Business Week, 5 Sept. 1977, p. 82.
- 6. M. Hofman, "Frank Lautenberg: My Biggest Mistake," Inc. Magazine, Apr. 2001.
- 7. CBI OH 369, p. 10.
- 8. The proceedings of this symposium are held in ADAPSO Records (*CBI 172*).
- Anonymous, "Ten Year Membership Anniversary," *ADAPSO Newsletter (CBI 172)*, vol. 4, no. 5, Sept./Oct. 1974, pp. 2-3.
- 10. CBI OH 369, p. 6.
- 11. Anonymous, "Home Banking Moves Off the Drawing Board," *Business Week*, 20 Sept. 1982.
- 12. Anonoymous, "The Acquisition Binge in Computer Services," ibid, 5 Sept. 1977, p. 82.
- 13. Anonoymous, "ADP After Lautenberg," Business Week, Nov. 1982, p. 40.
- 14. Anonoymous, "Earnings That Go Up and Up," US News and World Report, 8 Nov. 1982, p. 70.
- Anonymous, "A Do-It-Yourself Approach That Proved Disastrous," *Business Week*, 8 Oct. 1984, p. 134.
- Anonymous, "The Acquisition Binge in Computer Services," ibid, 5 Sept. 1977, p. 82.
- 17. Anonymous, "A Do-It-Yourself Approach That Proved Disastrous," ibid, 8 Oct. 1984, p. 134. —Thomas Haigh *thaigh@acm.org*